



**TOWN OF SUDBURY,
MASSACHUSETTS**

OTHER POSTEMPLOYMENT BENEFITS PROGRAM

FINANCIAL REPORTING AND DISCLOSURES
Governmental Accounting Standards Board
Statements 74 and 75

Disclosures as of
June 30, 2018

KMS Actuarial, LLC
814 Elm Street, Suite 204
Manchester, NH 03101

December, 2018



December 21, 2018

Mr. Dennis J. Keohane, CPA
Finance Director/Treasurer-Collector
Town of Sudbury, Massachusetts
278 Old Sudbury Road
Sudbury, MA 01776

Dear Dennis:

We are pleased to present the enclosed report of the July 1, 2017 actuarial valuation of the retiree health care benefits for the Town of Sudbury, Massachusetts. The valuation was prepared in accordance with, and for the purpose of financial reporting and disclosures as of June 30, 2018, under the following Government Accounting Standards Board (GASB) Statements:

- ◆ GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74)
- ◆ GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75)

The Principal Valuation Results, including assets, liabilities and the development of future contributions, are provided in Section 1. The Notes to the Financial Statements and the Required Supplementary Information are provided in Sections 2 and 3, respectively. Employer Reporting Amounts under GASB 75 are provided in Section 4. The Summary of Plan Provisions and Actuarial Assumptions and Methods are shown in Sections 5 and 6, respectively. Section 7 summarizes the demographic profile of active members and retired members, covered spouses and survivors. Finally, a Glossary of Terms is provided in Section 8.

Our calculations are based on member census data and other information provided by the Town of Sudbury, Massachusetts as well as health plan rates provided by the Town as of July 1, 2018. Although we did not audit the data used in the valuation and disclosure calculations, we believe that the information is complete and reliable.

Liabilities presented in this report are based on a discount rate of 4.3%, a long-term investment return rate of 6.85% and a municipal bond rate of 3.87%. The long-term investment return rate is based on expected long-term investment return rates provided by the Trust's investment consultant, Morgan Stanley.

K M S A C T U A R I E S

814 Elm Street, Suite 204 · Manchester, NH 03101 · p: (603) 792-9494 · f: (603) 792-9492 · lindab@kmsactuaries.com · kmsactuaries.com

Mr. Dennis J. Keohane, CPA

December 21, 2018

Page 2

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions other than those explicitly applicable to the postemployment benefit plans are consistent with those used by the Middlesex County and Massachusetts Teachers Retirement Systems' actuaries for the Retirement System pension valuations.

Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques.

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

This report is intended for the sole use of the Town of Sudbury, Massachusetts and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

The expected claims, cost trend rates, and analysis of regulatory changes have been developed based on the expertise of the undersigned health and welfare actuary, Christopher E. Bean, ASA, MAAA. The undersigned credentialed actuaries are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

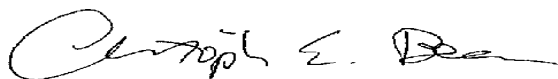
Respectfully submitted,



Linda L. Bournival, FSA, EA
Member, American Academy of Actuaries
(603) 792-9494



Amanda J. Makarevich, ASA
Member, American Academy of Actuaries
(603) 702-8009



Christopher E. Bean, ASA
Member, American Academy of Actuaries
(508) 628-9022

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
SECTION 1 PRINCIPAL VALUATION RESULTS	4
Exhibit 1.1 - OPEB Trust Assets	
Exhibit 1.2 - Total OPEB Liability	
Exhibit 1.3 - Development of Actuarially Determined Employer Contributions	
SECTION 2 NOTES TO THE FINANCIAL STATEMENTS	7
Exhibit 2.1 - Plan Description	
Exhibit 2.2 - Net OPEB Liability	
SECTION 3 SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION	11
Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios	
Exhibit 3.2 - Investment Returns	
Exhibit 3.3 - Schedule of Employer Contributions	
SECTION 4 EMPLOYER REPORTING AMOUNTS UNDER GASB 75	15
Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources	
Exhibit 4.2 - OPEB Expense	
SECTION 5 SUMMARY OF PLAN PROVISIONS	18
SECTION 6 ACTUARIAL ASSUMPTIONS AND METHODS	20
SECTION 7 PLAN MEMBER INFORMATION	28
Exhibit 7.1 - Active Members by Age and Years of Service	
Exhibit 7.2 - Retired Members, Covered Spouses and Survivors	
SECTION 8 GLOSSARY OF TERMS	31
SECTION 9 BREAKOUT OF RESULTS BY DEPARTMENT	33
Appendix A CALCULATION OF SINGLE DISCOUNT RATE	
Appendix B SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES and DEFERRED INFLOWS OF RESOURCES	

EXECUTIVE SUMMARY

This report presents the results of the actuarial valuation of the Town of Sudbury, Massachusetts's retiree health care benefits as of July 1, 2017. The valuation was prepared in accordance with, and for the purpose of financial reporting and disclosures as of June 30, 2018, under the following Government Accounting Standards Board (GASB) Statements:

- ◆ GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74)
- ◆ GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75)

The results as of the measurement date are based on a roll forward of the liabilities developed in the most recent actuarial valuation.

New Accounting Standards

In June 2015, the GASB approved two related Statements that significantly changed the way other postemployment benefits (OPEB) plans and governments account and report OPEB liabilities. Effective for plans with fiscal years beginning after June 15, 2016, GASB Statement No. 74 (GASB 74), *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, replaced the requirements of Statement No. 43 and effective for employers with fiscal years beginning after June 15, 2017, GASB Statement No. 75 (GASB 75), *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, replaced the requirements of Statement No. 45.

GASB 74 requires OPEB plans to present a statement of fiduciary net position (OPEB plan assets) and a statement of changes in fiduciary net position. Further, the statement requires that notes to financial statements include descriptive information such as the types of benefits provided, the classes of plan members covered and the authority under which benefit terms are established or may be amended. Finally, GASB 74 requires OPEB plans to present in required supplementary information the sources of the changes in the net OPEB liability and information about the actuarially determined contributions compared with the actual contributions made to the plan and related ratios.

GASB 74 and GASB 75 require projected benefit payments be discounted to their actuarial present value using the single rate that reflects:

- (1) a long-term expected rate of return on OPEB plan investments *to the extent that the OPEB plan's assets are sufficient to pay benefits and OPEB plan assets are expected to be invested using a strategy to achieve that return and*
- (2) a tax-exempt, high-quality municipal bond rate *to the extent that the conditions for use of the long-term expected rate of return are not met.*

GASB 75 establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources and OPEB expense by state and local governments.

EXECUTIVE SUMMARY

Town of Sudbury, Massachusetts Other Postemployment Benefits Program

The effective date for GASB 74 is for plan years beginning after June 15, 2016, which is the fiscal year ending June 30, 2017 for the Town of Sudbury, Massachusetts. The effective date for GASB 75 is for fiscal years beginning after June 15, 2017, which is the fiscal year ending June 30, 2018 for the Town of Sudbury, Massachusetts.

Summary of Results

A summary of principal results from the current and prior measurement dates follows:

Measurement Date	<u>June 30, 2018</u>	<u>June 30, 2017</u>	<u>Increase/ (Decrease)</u>
Valuation Date	July 1, 2017	July 1, 2015	
Membership Data			
Active Plan Members	527	575	(8.3%)
Inactive Plan Members	301	287	4.9%
Total Plan Members	828	862	(3.9%)
 Covered Payroll	 35,461,031	 38,721,911	 (8.4%)
Valuation Results (GASB 74)			
Discount rate	4.30%	4.75%	
Total OPEB Liability	\$56,715,686	\$50,682,122	11.9%
Fiduciary Net Position	\$6,429,146	\$5,880,200	9.3%
Net OPEB Liability	\$50,286,540	\$44,801,922	12.2%
Funded Ratio	11.3%	11.6%	(2.6%)
Valuation Results (GASB 75)			
OPEB Expense	\$4,643,288	N/A	
Deferred Outflows	\$8,047,942	N/A	
Deferred Inflows	\$5,218,855	N/A	
Valuation Results (GASB 45)			
Actuarial Accrued Liability	N/A	57,863,363	
Market Value of Assets	N/A	5,880,200	
Unfunded Actuarial Accrued Liability	N/A	51,983,163	
Funded Ratio	N/A	10.2%	
 Annual Required Contribution	 N/A	 \$4,244,275	
Net OPEB Obligation	N/A	\$17,594,670	

Town of Sudbury, Massachusetts Postemployment Benefits Other Than Pensions
Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

EXECUTIVE SUMMARY

Experience Gain and Loss

In developing the Total OPEB Liability, various assumptions are made regarding future premium rates, mortality, retirement, disability and turnover rates. A comparison of the results of the current and prior measurements is made to determine how closely actual experience relates to expected. For the current measurement period, the difference between expected and actual experience resulted in an actuarial gain of approximately \$6,261,000, mostly attributed to health insurance premium rates lower than expected from the prior valuation.

Changes of Assumptions

The discount rate changed from 4.75% as of June 30, 2017 to 4.3% as of June 30, 2018. The discount rate is developed using the long term rate of return and the municipal bond rate, both of which changed from the prior measurement. In addition, the health cost trend rates, payroll growth rate, mortality rates and mortality improvement rates were updated from those used in the previous measurement. The Actuarial Assumptions and Methods used in the valuation are summarized in Section 6.

Changes of Benefit Terms

The Patient Protection and Affordable Care Act (PPACA) applies a 40% excise tax, commonly referred to as the "Cadillac Tax", to the cost of plan benefits in excess of statutory thresholds beginning in 2022. Previously, the tax was effective in 2020. All other benefit terms are the same as those used in the prior valuation. A Summary of the Principal Plan Provisions is provided in Section 5.

Total OPEB Liability

The Total OPEB Liability as of the current measurement date, June 30, 2018, is \$56,715,686. The Total OPEB Liability as of the prior measurement date, June 30, 2017, was \$50,682,122. The development of the Total OPEB Liability for the current measurement date is shown in Section 1, Exhibit 1.2.

Fiduciary Net Position

The Fiduciary Net Position is equal to the market value of assets and as of the current measurement date, June 30, 2018, is \$6,429,146. The Fiduciary Net Position as of the prior measurement date, June 30, 2017, was \$5,880,200. The Fiduciary Net Position is shown in Section 1, Exhibit 1.1.

Employer Future Period Contributions

The Town is assumed to contribute \$500,000 annually to the OPEB trust.

Discount Rate

As of the June 30, 2018 measurement date, the OPEB plan's fiduciary net position was projected to be insufficient to make all projected benefit payments of current plan members. Therefore, the 6.85% long-term expected rate of return on OPEB plan investments was applied to the first 19 periods of projected future benefit payments and, the 3.87% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability, resulting in a blended discount rate of 4.3%.

OPEB Expense

The OPEB Expense as of the current measurement date, June 30, 2018, is \$4,643,288. The development of the OPEB expense for the current measurement date is shown in Section 4, Exhibit 4.2.

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.1 - OPEB Trust Assets

The Town has established an irrevocable trust pursuant to Chapter 72 of the Acts of 2006 of the Massachusetts General Laws for the purpose of accumulating assets to prefund the OPEB liabilities. Plan assets segregated and restricted in an OPEB trust must be dedicated to providing plan benefits to retirees and beneficiaries in accordance with the terms of the plan and must be legally protected from creditors of the employer. Further, employer contributions to the trust must be irrevocable. Asset information for the current and prior fiscal years was provided by the Town and is presented below:

Fiscal Year Ended June 30	2018	2017
Trust Fund Composition at Fiscal Year-End		
Equities	\$3,345,064	\$2,587,288
Fixed Income	2,478,033	2,116,872
Cash & Equivalents	606,049	1,176,040
Total Market Value of Assets	\$6,429,146	\$5,880,200
Asset Activity		
Market value, beginning of year	\$5,880,200	\$5,238,714
Employer Premiums	1,411,650	1,417,777
OPEB Trust Contributions	576,107	442,920
Benefit Payments	(1,411,650)	(1,417,777)
Administrative Expenses	-	-
Investment Return	(27,161)	198,566
Market value, end of year	\$6,429,146	\$5,880,200
Money-Weighted Rate of Return	-0.39%	3.26%
(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$462,619	\$409,513
Actual earnings	(27,161)	198,566
(Gain) / Loss on OPEB plan investments	\$489,780	\$210,947

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.2 - Total OPEB Liability

The Total OPEB Liability, developed using the Entry Age Normal funding method, is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service. The total OPEB liability as of the June 30, 2018 measurement date was developed from an actuarial valuation as of July 1, 2017 and rolled forward to the OPEB plan's fiscal year-end.

The Service Cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year. Only active employees who have not reached the age at which the probability of retirement is 100% incur a service cost.

Actuarial gains and losses arise from the difference between estimates and actual experience, excluding amounts related to benefit changes and changes in assumptions or other inputs.

The development of the Total OPEB Liability from the beginning of the measurement period, June 30, 2017 to the end of the measurement period, June 30, 2018 is shown below:

<u>Measurement Date</u>	<u>June 30, 2018</u>
1. Total OPEB Liability, beginning of year:	
a. Actives	\$26,475,125
b. Retirees, Covered Spouses and Survivors	24,206,997
c. Total OPEB Liability at 4.75% (a. + b.)	\$50,682,122
2. Service Cost	\$2,050,213
3. Expected Benefit Payments	
a. Current retirees	(\$1,326,774)
b. Future retirees	(84,876)
c. Total (a. + b.)	(\$1,411,650)
4. Interest [4.75% x (1.c. + 2. + .5 x 3.c)]	\$2,471,259
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	(\$6,260,543)
7. Changes of assumptions or other inputs	\$9,184,285
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$29,324,456
b. Retirees, Covered Spouses and Survivors	27,391,230
c. Total OPEB Liability at 4.3% (a. + b.)	\$56,715,686

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

The Town is assumed to contribute \$500,000 annually to the OPEB trust.

The Actuarially Determined Employer Contribution (ADEC) equals the Normal Cost plus a provision for amortizing the Unfunded Actuarial Accrued Liability. We have assumed increasing dollar amortization over an amortization period of 30 years.

Fiscal Year Ending	June 30, 2018
Discount Rate	4.75%
1. Normal Cost	\$2,050,213
2. Unfunded Actuarial Accrued Liability	
a. Actuarial Accrued Liability	\$50,682,122
b. Actuarial Value of Plan Assets	\$5,880,200
c. Unfunded Actuarial Accrued Liability	\$44,801,922
3. Amortization of Unfunded Actuarial Accrued Liability	
a. Unfunded Actuarial Accrued Liability	\$44,801,922
b. Amortization Period in years	30
c. Payroll Growth Rate	3.5%
d. Amortization Factor	25.34
e. Amortization Amount (3.a. / 3.d.)	\$1,768,032
4. Interest on 1. and 3.e.	\$181,367
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$3,999,612
6. Actual Employer Contribution to OPEB Trust	\$576,107
7. Expected Benefit Payments	\$1,411,650
8. Total Contribution (6. + 7.)	\$1,987,757

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.1 - Plan Description

Plan administration:

The Town of Sudbury, Massachusetts administers the retiree health care benefits program - a single-employer defined benefit plan that is used to provide postemployment benefits other than pensions (OPEB) for all permanent full-time employees.

Plan membership:

At June 30, 2018, OPEB plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments ¹	301
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	527
	<hr/>
	828
	<hr/>

¹Per paragraph 34a of GASB 74 and further clarified by Question 4.67 of the 2017-2 GASB 74 Implementation Guide, the total shown for inactive plan members or beneficiaries currently receiving benefit payments does not include covered spouses or other dependents.

Benefits provided:

The Town provides health care benefits for retirees and their dependents. Benefits are provided through the GIC, and the full cost of benefits is shared between the Town and retirees.

Contributions:

The Town is assumed to contribute \$500,000 annually to the OPEB trust.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

The components of the net OPEB liability at June 30, 2018, were as follows:

Total OPEB liability	\$ 56,715,686
Fiduciary net position	(6,429,146)
Net OPEB liability	<u>\$ 50,286,540</u>

Fiduciary net position as a percentage of the total OPEB liability 11.34%

Actuarial assumptions:

The total OPEB liability was determined by an actuarial valuation as of July 1, 2017, rolled forward to the measurement date and using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.6 percent
Discount rate	4.3%, net of investment expenses, including inflation
Healthcare cost trend rate	8 percent for 2017, decreasing 0.5 percent per year to 5.5 percent, then grading down to an ultimate trend rate of 3.8 percent, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical inflation rate is reached in 2075.
Pre-Retirement Mortality - General and Public Safety employees:	RP-2000 Employees Mortality Table, base year 2009, projected with generational mortality improvement using scale BB2D.
Post-Retirement Mortality - General and Public Safety employees:	RP-2000 Healthy Annuitant Mortality Table, base year 2009, projected with generational mortality improvement using scale BB2D.
Pre-Retirement Mortality - Teachers:	RP-2014 White Collar Mortality Table, base year 2014, projected with generational mortality improvement using scale MP-2016.
Post-Retirement Mortality - Teachers:	RP-2014 White Collar Mortality Table, base year 2014, projected with generational mortality improvement using scale MP-2016.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of June 30, 2018 are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation¹</u>	<u>Long-Term Expected Real Rates of Return¹</u>
Equities	55%	5.20%
Fixed Income	45%	1.40%
Cash & Equivalents	0%	0.00%
Total	100%	

¹ provided by the Trust's investment consultant, Morgan Stanley.

Discount rate:

The discount rate used to measure the total OPEB liability was 4.3%. The projection of cash flows used to determine the discount rate assumed that contributions from the Town will be made in accordance with the plan's funding policy. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be insufficient to make all projected benefit payments of current plan members. Therefore, the 6.85% long-term expected rate of return on OPEB plan investments was applied to the first 19 periods of projected future benefit payments and, the 3.87% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability, resulting in a blended discount rate of 4.3%.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

Sensitivity of the net OPEB liability to changes in the discount rate:

The following presents the net OPEB liability calculated using the current discount rate of 4.3 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (3.3 percent) or 1-percentage point higher (5.3 percent) than the current rate:

	1% Decrease (3.3%)	Discount Rate (4.3%)	1% Increase (5.3%)
Net OPEB Liability	\$ 61,489,233	\$ 50,286,540	\$ 41,594,035

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates:

The following presents the net OPEB liability calculated using the current healthcare cost trend rates as well as what the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower (7% year 1 decreasing to 2.8%) or 1-percentage point higher (9% year 1 decreasing to 4.8%) than the current healthcare cost trend rates:

	1% Decrease 7% Year 1 Decreasing to 2.8%	Healthcare Cost Trend Rates 8% Year 1 Decreasing to 3.8%	1% Increase 9% Year 1 Decreasing to 4.8%
Net OPEB Liability	\$ 39,898,048	\$ 50,286,540	\$ 64,904,791

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios

Fiscal Year Ended June 30	2018	2017
Total OPEB Liability		
Service cost	\$ 2,050,213	\$ 2,554,435
Interest	2,471,259	2,248,478
Changes of benefit terms	-	-
Differences between expected and actual experience	(6,260,543)	-
Changes of assumptions	9,184,285	(6,789,769)
Benefit payments	(1,411,650)	(1,417,777)
Net change in total OPEB liability	\$ 6,033,564	\$ (3,404,633)
Total OPEB liability—beginning	\$ 50,682,122	\$ 54,086,755
Total OPEB liability—ending (a)	\$ 56,715,686	\$ 50,682,122
Plan fiduciary net position		
Contributions—employer	\$ 1,987,757	\$ 1,860,697
Net investment income	(27,161)	198,566
Benefit payments	(1,411,650)	(1,417,777)
Administrative expenses	-	-
Other	-	-
Net change in plan fiduciary net position	\$ 548,946	\$ 641,486
Plan fiduciary net position—beginning	\$ 5,880,200	\$ 5,238,714
Plan fiduciary net position—ending (b)	\$ 6,429,146	\$ 5,880,200
Net OPEB liability—ending (a) – (b)	\$ 50,286,540	\$ 44,801,922
Plan fiduciary net position as a percentage of the total OPEB liability	11.34%	11.60%
Covered payroll	\$ 35,461,031	\$ 38,721,911
Net OPEB liability as a percentage of covered payroll	141.81%	115.70%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Fiscal Year Ended June 30	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expenses	-0.39%	3.26%

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of OPEB plan investments by the proportion of time they are available to earn a return during that period. The rate of return is then calculated by solving, through an iterative process, for the rate that equates the sum of the weighted external cash flows into and out of the OPEB plan investments to the ending fair value of OPEB plan investments.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Calculation of Money-Weighted Rate of Return

	Plan Investments/ Net External Cash Flows (a)	Periods Invested (b)	Period Weight (c)=(b)÷12	(d)=(a) x (1+r _{mw}) ^(c)
Beginning value - July 1, 2017	\$ 5,880,200	12	1.00	\$ 5,857,106
Monthly net external cash flows:				
July	1,543,789	11	0.92	1,538,230
August	(53)	10	0.83	(53)
September	(94,660)	9	0.75	(94,381)
October	(94,056)	8	0.67	(93,809)
November	(186,988)	7	0.58	(186,559)
December	(94,998)	6	0.50	(94,811)
January	(24,663)	5	0.42	(24,622)
February	(94,849)	4	0.33	(94,725)
March	(94,040)	3	0.25	(93,947)
April	(94,935)	2	0.17	(94,873)
May	(94,211)	1	0.08	(94,180)
June	(94,230)	0	0.00	(94,230)
Ending value - June 30, 2018				\$ 6,429,146
			Money-weighted rate of return:	-0.39%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Schedule of Employer Contributions

Fiscal Year Ended June 30	2018	2017
Actuarially determined contribution	\$ 3,999,612	\$ 4,244,275
Contributions in relation to the actuarially determined contribution	1,987,757	1,860,697
Contribution deficiency (excess)	\$ 2,011,855	\$ 2,383,578
Covered payroll	\$ 35,461,031	\$ 38,721,911
Contributions as a percentage of covered payroll	5.61%	4.81%
Discount rate	4.75%	4.00%

Notes to Schedule

Valuation date:

Actuarially determined contributions are determined as of July 1, one year prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used in calculations of actuarially determined contributions:

Actuarial cost method	Entry Age Normal
Amortization method	Increasing at 3.5% over 30 years on an open amortization period
Amortization period	30 years
Asset valuation method	Market value
Inflation	2.6 percent
Healthcare cost trend rates	8 percent for 2017, decreasing 0.5 percent per year to 5.5 percent, then grading down to an ultimate trend rate of 3.8 percent, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical inflation rate is reached in 2075.

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between expected and actual experience are recognized in OPEB Expense over the average expected remaining service life of all active and inactive participants.

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in OPEB Expense through June 30, 2018 (c)	Balances at June 30, 2018	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ -	\$ 6,260,543	\$ (1,041,688)	\$ -	\$ 5,218,855
Total				<u>\$ -</u>	<u>\$ 5,218,855</u>

Deferred Outflows of Resources and Deferred Inflows of Resources arising from changes of assumptions are recognized in OPEB Expense over the average expected remaining service life of all active and inactive participants.

Year	Increases in the Total OPEB Liability (a)	Decreases in the Total OPEB Liability (b)	Amounts Recognized in OPEB Expense through June 30, 2018 (c)	Balances at June 30, 2018	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ 9,184,285	\$ -	\$ 1,528,167	\$ 7,656,118	\$ -
Total				<u>\$ 7,656,118</u>	<u>\$ -</u>

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between projected and actual earnings on OPEB Plan investments are recognized in OPEB Expense over five years.

Year	Investment Earnings Less Than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in OPEB Expense through June 30, 2018 (c)	Balances at June 30, 2018	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ 489,780	\$ -	\$ 97,956	\$ 391,824	\$ -
Total				\$ 391,824	\$ -
Net				\$ 391,824	\$ -

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources will be recognized in OPEB expense as follows:

Year ended June 30		
2019	\$	584,435
2020	\$	584,435
2021	\$	584,435
2022	\$	584,435
2023	\$	486,479
Thereafter		4,868

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.2 - OPEB Expense

The OPEB Expense and deferred outflows and inflows of resources primarily result from changes in the components of the net OPEB liability (NOL). Most changes in the NOL are included in the OPEB Expense in the period of the change, including service cost, interest on total OPEB liability, changes in benefit terms and projected earnings on the OPEB plan's investments. Other changes in the net OPEB liability are included in OPEB Expense over the current and future periods. These include the effects on the total OPEB liability of changes of economic and demographic assumptions and differences between expected and actual experience. In addition, the effect on the net OPEB liability of differences between the projected earnings on OPEB plan investments and actual experience with regard to those earnings are included in OPEB expense over the current and future periods. The OPEB Expense for the reporting period ending June 30, 2018 is presented below:

Fiscal Year Ended June 30	<u>2018</u>
Measurement date	<u>6/30/2018</u>
1. Service cost	\$ 2,050,213
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	50,682,122
b. Service cost, beginning of year	2,050,213
c. Benefit payments	<u>(1,411,650)</u>
d. Interest on total OPEB liability = 4.75% times (a. + b. + .5 times c.)	2,471,259
3. Differences between expected and actual experience	(1,041,688)
4. Changes of benefit terms	-
5. Changes of assumptions	1,528,167
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	5,880,200
b. Contributions - Employer	1,987,757
c. Benefit payments	(1,411,650)
d. Administrative expenses and other	-
e. Total projected earnings = 7.5% times (a. + .5 times (b. + c. + d.))	(462,619)
7. Differences between projected and actual earnings on OPEB plan investments	<u>97,956</u>
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense	<u>\$ 4,643,288</u>

Town of Sudbury, Massachusetts Postemployment Benefits Other Than Pensions
Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Eligibility for Postemployment Benefits: Employees of the Town and their dependents are eligible for postemployment medical and life insurance based on the eligibility requirements under the Middlesex County and Massachusetts Teachers Retirement Systems.

Retirement Eligibility: General employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service

General employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service

Public Safety employees hired before April 2, 2012: retire after attaining age 55 or any age with 20 or more years of service

Public Safety employees hired after April 1, 2012: retire after attaining age 55

Ordinary Disability Eligibility: Any member who is unable to perform his or her duties due to a non-occupational disability and has ten or more years of creditable service.

Accidental Disability Eligibility: Any member who is unable to perform his or her duties due to a job-related disability.

Medical Premiums: The total monthly premiums by plan are shown below:

<u>Non-Medicare Plans - July 1, 2018</u>	<u>Individual</u>	<u>Family</u>
Fallon Direct	\$566.29	\$1,422.99
Fallon Select	\$765.62	\$1,855.55
HP Independence	\$826.68	\$2,009.40
HP Primary Choice	\$603.23	\$1,529.10
Health New England	\$550.97	\$1,306.54
NHP Prime	\$580.43	\$1,496.10
Tufts Health Navigator	\$743.45	\$1,811.87
Tufts Health Spirit	\$564.24	\$1,355.43
UniCare Basic with CIC	\$1,058.39	\$2,343.45
UniCare Basic without CIC	\$1,009.67	\$2,232.53
UniCare Community Choice	\$502.16	\$1,236.52
UniCare PLUS	\$696.09	\$1,654.54

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Medical Premiums (continued):	<u>Medicare Plans - July 1, 2018</u>	
	HP Medicare Enhance	\$382.59
	Health New England MedPlus	\$386.82
	Tufts Medicare Complement	\$361.73
	Tufts Medicare Preferred*	\$332.01
	UniCare OME with CIC	\$379.67
	UniCare OME with CIC	\$368.59
	*rates effective January 1, 2018	

Participant Contributions: Retired employees contribute 50% of the total medical premium.

Continuation of Coverage to Spouse After Death of Retiree: Surviving spouse may continue coverage for lifetime by paying the required medical premium.

Dental Coverage: Dental coverage is not offered to retirees.

Life Insurance Coverage: Retirees are eligible for a \$1,000 life insurance benefit. The total monthly cost is \$1.50. Retirees contribute \$.75 towards the monthly premiums.

PPACA Excise Tax: The Patient Protection and Affordable Care Act (PPACA) applies a 40% excise tax, commonly referred to as the "Cadillac Tax", to the cost of plan benefits in excess of statutory thresholds beginning in 2022. The 2018 thresholds are assumed to be \$10,200 for individual and \$27,500 for family coverage, increasing by chained CPI plus one percentage point in 2019 and by chained CPI thereafter. The annual limits are increased by \$1,650 for individual and \$3,450 for family coverage for retirees not eligible for Medicare benefits.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date:	July 1, 2017
Disclosure Date:	June 30, 2018
GASB 75 Reporting Date:	June 30, 2018
Long-Term Expected Rate of Return:	6.85%, compounded annually, net of fees. A long-term assumption based on capital market expectations by asset class, historical returns and professional judgment. A building block approach was used that considered the target asset allocation, expected returns by asset class and risk analysis to determine a long-term expected average annual rate of return.
Municipal Bond Rate:	3.87%, based on the Bond Buyer 20-Bond GO Index published on June 28, 2018.
Discount Rate (GASB):	4.3%, compounded annually, for the measurement as of June 30, 2018. 4.75%, compounded annually, for the measurement as of June 30, 2017. The single rate that reflects the long-term expected rate of return on OPEB plan investments to the extent that the OPEB plan's assets, which are expected to be invested using a strategy to achieve that return, are sufficient to pay benefits, and a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.
Discount Rate (ADEC):	4.75%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2018.
Amortization Method:	Increasing at 3.5% over 30 years on an open amortization period for partial pre-funding.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Trend Rates:

<u>Year</u>	<u>Trend</u>
1	8.00%
2	7.50%
3	7.00%
4	6.50%
5	6.00%
6	5.50%
Ultimate	3.80%

Trend rates after year 6 grade down to the ultimate rate utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate trend rate is reached in 2075.

Health care trend assumptions begin at current levels and grade down over a period of years to a lower level equal to some real rate plus inflation. The principal components of health trend are medical inflation, deductible erosion, cost shifting, utilization, technology and catastrophic claims. The overall effect of these components are expected to decline year by year.

Dental Trend Rates: Not applicable (no dental coverage).

Inflation: 2.6% per year, based on the 2017 Social Security Trustees Report.

Chained Consumer Price Index: 2.35% per year, based on assumed CPI of 2.6% and historical data trends of chained CPI approximately 0.25% lower than standard CPI.

Payroll Growth: 3.5% per year.

Participation Rates: Medical - 70% of eligible retired employees will elect to participate.
Dental - Not offered to retired employees.
Life - 65% of eligible retirees will elect to participate.
Medicare - all retired employees are assumed to enroll in Medicare at age 65.

Dependent Status: Male spouses are assumed to be three years older and female spouses are assumed to be three years younger than the retired employee.

50% of employees are assumed to retire with a covered spouse.

For current retirees, the actual census information is used.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Per Capita Costs: The following annual per capita costs are for the fiscal year beginning July 1, 2017 and are applicable to retirees, survivors and spouses. Annual costs for current and future retirees are based on the blended curve shown below, developed using the plan coverages elected by current retirees and survivors and premium rates currently in effect. Future years' costs are based on the first year cost adjusted with trend.

<u>Age</u>	<u>Medicare-Eligible</u>		<u>Medicare-Ineligible</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Under 20	\$2,832	\$3,325	\$2,832	\$3,325
20-24	2,232	3,541	2,232	3,541
25-29	2,323	5,223	2,323	5,223
30-34	2,917	6,600	2,917	6,600
35-39	3,659	6,798	3,659	6,798
40-44	4,560	6,962	4,560	6,962
45-49	5,755	7,642	5,755	7,642
50-54	7,585	8,990	7,585	8,990
55-59	9,857	10,395	9,857	10,395
60-64	12,650	12,372	12,650	12,372
65-69	3,389	3,300	15,782	14,831
70-74	4,061	3,893	18,909	17,487
75-79	4,796	4,517	22,336	20,308
80-84	5,512	5,181	25,673	23,282
85-89	6,141	5,791	29,384	26,579
90-94	6,685	6,180	29,384	26,579
95+	7,105	5,977	29,384	26,579

Retiree Contributions: Annual per capita participant contributions for the fiscal year beginning July 1, 2017 are as follows:

<u>Plan</u>	<u>Contribution</u>
Non-Medicare	\$ 4,532
Medicare	2,074

PPACA Excise Tax: For purposes of estimating the Patient Protection and Affordable Care Act (PPACA) excise tax, per capita plan costs are developed for individual and family coverage for both Medicare and non-Medicare members. These plan costs are compared to the thresholds stipulated in the PPACA. Beginning in 2022, a 40% excise tax is applied on the excess of the plan costs over the thresholds. The thresholds increase annually by chained CPI.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Cost Method: Entry Age Normal. The costs of each employee's postemployment benefits are allocated as a level basis over the earnings of the employee between the employee's date of hire and the assumed exit ages.

Employee Data: Employee and retiree data were submitted by the Town. We made reasonable adjustments for missing or invalid data.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Post-Retirement Mortality: Post-retirement mortality rates for General and Public Safety employees are based on the RP-2000 Healthy Annuitant Mortality Table, base year 2009, projected with generational mortality improvement using scale BB2D.

Pre-Retirement Mortality: Pre-retirement mortality rates for General and Public Safety employees are based on the RP-2000 Employees Mortality Table, base year 2009, projected with generational mortality improvement using scale BB2D.

Turnover Rates: Turnover rates for General and Public Safety employees are as follows:

General Employees		Public Safety	
Service	Rate	Service	Rate
0	15.00%	0	1.50%
1	12.00%	1	1.50%
2	10.00%	2	1.50%
3	9.00%	3	1.50%
4	8.00%	4	1.50%
5	7.60%	5	1.50%
10	5.40%	10	1.50%
15	3.30%	15	0.00%
20	2.00%	20	0.00%
25	1.00%	25	0.00%
30	0.00%	30	0.00%

Disability Rates: Disability rates for General and Public Safety employees are as follows:

General Employees		Public Safety	
Age	Rate	Age	Rate
25	0.02%	25	0.20%
30	0.03%	30	0.30%
35	0.06%	35	0.30%
40	0.10%	40	0.30%
45	0.15%	45	1.00%
50	0.19%	50	1.25%
55	0.24%	55	1.20%
60	0.28%	60	0.85%

55% of the General employee disabilities are job-related.

90% of the Public Safety employee disabilities are job-related.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Retirement Rates:

Retirement rates for General and Public Safety employees are as follows:

<u>Age</u>	<u>General Employees</u>		<u>Public Safety</u>
	Male	Female	All
45	0.00%	0.00%	1.00%
50	0.00%	0.00%	2.00%
55	2.00%	5.50%	15.00%
60	12.00%	5.00%	20.00%
62	30.00%	15.00%	25.00%
65	40.00%	15.00%	100.00%
69	50.00%	20.00%	
70	100.00%	100.00%	

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Post-Retirement Mortality: Post-retirement mortality rates for Teachers are based on the RP-2014 White Collar Mortality Table, base year 2014, projected with generational mortality improvement using scale MP-2016.

Pre-Retirement Mortality: Pre-retirement mortality rates for Teachers are based on the RP-2014 White Collar Mortality Table, base year 2014, projected with generational mortality improvement using scale MP-2016.

Turnover Rates: Turnover rates for Teachers are as follows:

<u>Age</u>	<u>Service</u>					
	0		5		10+	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	13.0%	10.0%	5.5%	7.0%	1.5%	5.0%
30	15.0%	15.0%	5.4%	8.8%	1.5%	4.5%
40	13.3%	10.5%	5.2%	5.0%	1.7%	2.2%
50	16.2%	9.8%	7.0%	5.0%	2.3%	2.0%

Disability Rates: Disability rates for Teachers are as follows:

<u>Age</u>	<u>Rate</u>
20	0.004%
30	0.006%
40	0.010%
50	0.050%
60	0.070%

35% of the disabilities are job-related.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Retirement Rates:

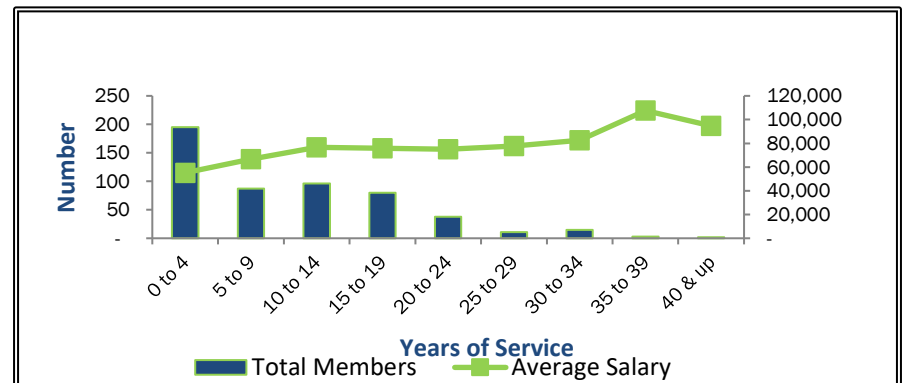
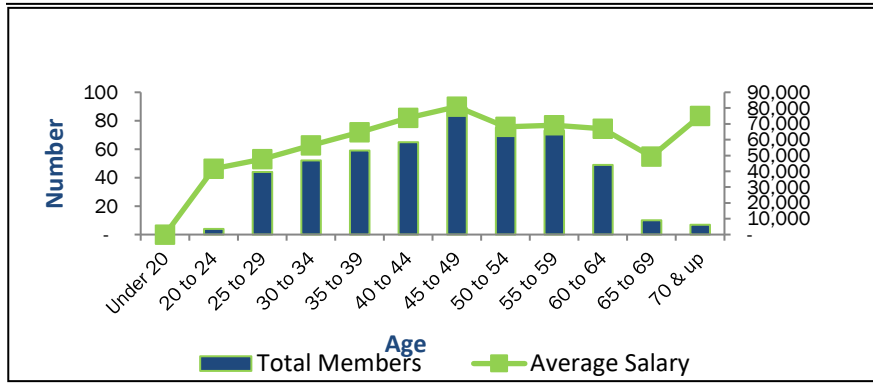
Retirement rates for Teachers are as follows:

<u>Age</u>	<u>Years of Service</u>					
	<u>Less than 20</u>		<u>20-29</u>		<u>30+</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
50	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
51	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
52	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
53	0.0%	0.0%	1.5%	1.0%	2.0%	1.5%
54	0.0%	0.0%	2.5%	1.0%	2.0%	2.0%
55	5.0%	3.0%	3.0%	3.0%	6.0%	5.0%
56	5.0%	3.0%	6.0%	5.0%	20.0%	15.0%
57	5.0%	4.0%	10.0%	8.0%	40.0%	35.0%
58	5.0%	8.0%	15.0%	10.0%	50.0%	35.0%
59	10.0%	8.0%	20.0%	15.0%	50.0%	35.0%
60	10.0%	10.0%	25.0%	20.0%	40.0%	35.0%
61	20.0%	12.0%	30.0%	25.0%	40.0%	35.0%
62	20.0%	12.0%	35.0%	30.0%	35.0%	35.0%
63	25.0%	15.0%	40.0%	30.0%	35.0%	35.0%
64	25.0%	20.0%	40.0%	30.0%	35.0%	35.0%
65	25.0%	25.0%	40.0%	40.0%	35.0%	35.0%
66	30.0%	25.0%	30.0%	30.0%	40.0%	35.0%
67	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
68	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
69	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
70	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

SECTION 7 - PLAN MEMBER INFORMATION

TABLE 7.1 - ACTIVE MEMBERS BY AGE and YEARS OF SERVICE AS OF JULY 1, 2017

Age	Years of Service										Total	Total Salary	Average Salary
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up				
Under 20	-	-	-	-	-	-	-	-	-	-	-	-	-
20 to 24	4	-	-	-	-	-	-	-	-	-	4	166,375	41,594
25 to 29	40	4	-	-	-	-	-	-	-	-	44	2,101,017	47,750
30 to 34	29	18	5	-	-	-	-	-	-	-	52	2,930,027	56,347
35 to 39	28	16	12	3	-	-	-	-	-	-	59	3,814,472	64,652
40 to 44	24	9	17	14	1	-	-	-	-	-	65	4,792,997	73,738
45 to 49	27	12	12	24	12	2	-	-	-	-	89	7,200,687	80,907
50 to 54	20	13	14	11	7	6	4	-	-	-	75	5,106,765	68,090
55 to 59	17	11	18	14	3	2	7	1	-	-	73	5,051,669	69,201
60 to 64	5	2	16	11	9	1	2	2	1	-	49	3,278,140	66,901
65 to 69	1	2	1	2	4	-	-	-	-	-	10	493,111	49,311
70 & up	-	-	1	1	2	-	2	-	1	1	7	525,771	75,110
Total	195	87	96	80	38	11	15	3	2	2	527	35,461,031	67,288
Total Salary	10,765,098	5,804,754	7,369,584	6,058,723	2,855,244	855,917	1,239,135	322,869	189,707	189,707			
Average Salary	55,206	66,721	76,767	75,734	75,138	77,811	82,609	107,623	94,854	94,854			
Average Age: 46.7										Average Service: 10.6			



SECTION 7 - PLAN MEMBER INFORMATION

TABLE 7.2 - RETIRED MEMBERS, COVERED SPOUSES and SURVIVORS AS OF JULY 1, 2017

Non-Medicare Plans:

Age	Fallon Direct	Fallon Select	HP Independence	HP Primary Choice	Health New England	NHP Prime	Tufts Health Navigator	Tufts Health Spirit	UniCare Basic with CIC	UniCare Basic without CIC	UniCare Community Choice	UniCare PLUS	Total
Under 40	0	0	0	0	0	0	0	0	0	0	1		1
40 to 44	0	0	0	0	0	0	0	0	0	0	0		0
45 to 49	0	0	0	0	0	0	0	0	0	0	0		0
50 to 54	0	0	0	0	0	0	0	0	1	0	0		1
55 to 59	0	1	0	0	1	1	2	0	0	0	0		5
60 to 64	0	1	1	6	0	0	9	1	6	0	0	3	27
65 to 69	0	0	0	2	0	0	1	0	0	0	1	1	5
70 to 74	0	0	0	0	0	0	0	0	0	0	0	0	0
75 to 79	1	0	0	0	0	0	1	0	1	0	0	1	4
80 to 84	0	0	0	0	0	0	2	0	0	0	0	0	2
85 to 89	0	0	0	0	0	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	1	8	1	1	15	1	8	0	1	6	45
Covered Spouses	0	1	1	5	1	1	5	0	3	0	0	2	19
Average Age:						72.9							

In addition, there are 50 retirees, survivors and covered spouses that are not covered under any medical plan but are covered under a life insurance policy which the Town contributes to.

SECTION 7 - PLAN MEMBER INFORMATION

TABLE 7.2 - RETIRED MEMBERS, COVERED SPOUSES and SURVIVORS AS OF JULY 1, 2017

Medicare Plans:

Age	Fallon Senior*	HP Medicare Enhance	Health New England MedPlus	Tufts Medicare Complement	Tufts Medicare Preferred	UniCare OME with CIC	Total
Under 40	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0	0
60 to 64	1	1	0	1	1	5	9
65 to 69	0	16	0	5	8	24	53
70 to 74	1	15	0	1	16	36	69
75 to 79	0	8	0	1	6	21	36
80 to 84	0	1	0	0	3	13	17
85 to 89	0	5	0	1	2	10	18
90+	0	1	0	0	1	2	4
Total	2	47	0	9	37	111	206
Covered Spouses	2	27	0	9	19	72	129

*Retirees and spouses covered under the Fallon Senior plan were assumed to move to the Tufts Medicare Complement Plan effective July 1, 2018. Per the GIC website, the Fallon Senior plan is no longer offered as of this date and the Tufts Medicare Complement Plan is the default election for retirees who were previously covered under this plan.

SECTION 8 - GLOSSARY OF TERMS

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting OPEB costs, such as mortality, withdrawal, disability and retirement; changes in compensation and OPEB benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

Actuarial Cost Method (or Funding Method) – A procedure for allocating the Actuarial Present Value of projected benefit payments to the current year (Service Cost) and the past (Total OPEB Liability).

Actuarial Gain or Loss (or Experience Gain or Loss) – A measure of the difference between actual experience and that expected based upon the set of Actuarial Assumptions during the period between the valuation date and the most recent immediately preceding valuation date.

Actuarial Present Value of Projected Benefit Payments – The dollar value on the valuation date of all benefits expected to be paid to current members based upon the Actuarial Assumptions and the terms of the Plan.

Actuarially Determined Contribution – A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Actuarial Valuation Date – The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

Deferred Inflow of Resources – Acquisition of resources by a governmental entity that is applicable to future reporting periods. Under GASB 75, deferred inflows of resources are made up of experience gains, assumption changes reducing the Total OPEB Liability and investment gains that are recognized in future reporting periods.

Deferred Outflow of Resources – Consumption of resources by a governmental entity that is applicable to future reporting periods. Under GASB 75, deferred outflows of resources are made up of experience losses, assumption changes increasing the Total OPEB Liability and investment losses that are recognized in future reporting periods.

Entry Age Normal Actuarial Cost Method – A method under which the actuarial present value of the projected benefits of each individual in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age.

Explicit Subsidy – The difference between (a) the blended rates based on combined active and retired member experience and (b) actual cash contributions made by the employer.

Fiduciary Net Position – The fair market value of assets as of the measurement date.

Funded Ratio – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

SECTION 8 - GLOSSARY OF TERMS

GASB – Governmental Accounting Standards Board.

Health Cost Trend Rate – The rate of change in per capita health claims cost over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Implicit Subsidy – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group and (b) the blended rates based on combined active and retired member experience.

Measurement Date – The date as of which the Total OPEB Liability and Fiduciary Net Position are measured.

Net OPEB Liability – The liability of the employer for benefits provided through an OPEB plan. It is calculated as the Total OPEB Liability less the Fiduciary Net Position.

OPEB – Other Postemployment Benefits including medical, dental, vision, hearing and life insurance benefits.

Pay-As-You-Go – A method of financing an OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Present Value of Future Benefits – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

Reporting Date – The last day of the Plan or employer's fiscal year.

Service Cost – The portion of the actuarial present value of projected benefit amounts that is attributed to a valuation year.

Substantive Plan – The terms of an OPEB plan as understood by the employer and plan members.

Total OPEB Liability – The portion of the actuarial present value of projected benefit amounts that is attributed to past periods of employee service.

Unfunded Actuarial Accrued Liability – The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	Town	School	Pool	Transfer	Field Maintenance	Total
Summary of Member Data Used in Valuation						
Active Members	163	360	2	2	0	527
Average Age	46.3	46.8	43.4	55.1	0.0	46.6
Average Service	11.7	10.1	19.6	14.5	0.0	10.6
Retired Members and Survivors	107	193	0	0	1	301
Average Age	71.3	73.7	0.0	0.0	75.8	72.9
Covered Spouses	50	98	0	0	0	148
Expected Benefit Payments	488,068	920,717	3	137	2,725	1,411,650
OPEB Trust contributions	186,100	386,063	1,690	1,757	497	576,107
Total Employer Contributions	674,168	1,306,780	1,693	1,894	3,222	1,987,757
Beginning Net OPEB Liability - June 30, 2017						
Total OPEB Liability	17,893,253	32,297,355	272,149	175,153	44,212	50,682,122
Fiduciary Net Position	2,075,711	3,746,863	31,753	20,581	5,292	5,880,200
Net OPEB Liability	15,817,542	28,550,492	240,396	154,572	38,920	44,801,922
Ending Net OPEB Liability - June 30, 2018						
Total OPEB Liability	18,105,285	38,213,138	178,696	173,141	45,426	56,715,686
Fiduciary Net Position	2,076,812	4,308,324	18,859	19,607	5,544	6,429,146
Net OPEB Liability	16,028,473	33,904,814	159,837	153,534	39,882	50,286,540
Total Deferred Outflows of Resources						
Differences between Expected and Actual Expe	0	0	0	0	0	0
Changes in Assumptions	2,702,982	4,878,887	41,111	26,459	6,679	7,656,118
Differences between Expected and Actual						
Earnings on OPEB Plan Investments	138,314	249,670	2,116	1,371	353	391,824
Total Deferred Outflows of Resources	2,841,296	5,128,558	43,227	27,830	7,031	8,047,942
Total Deferred Inflows of Resources						
Differences between Expected and Actual Expe	1,842,510	3,325,733	28,024	18,036	4,553	5,218,855
Changes in Assumptions	0	0	0	0	0	0
Differences between Expected and Actual						
Earnings on OPEB Plan Investments	0	0	0	0	0	0
Total Deferred Inflows of Resources	1,842,510	3,325,733	28,024	18,036	4,553	5,218,855
Total OPEB Expense	(113,687)	4,858,278	(94,069)	(8,939)	1,705	4,643,288

SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	Town	School	Pool	Transfer	Field Maintenance	Total
Sensitivity of the Net OPEB Liability to Changes in the Discount Rate						
Current Discount Rate: 4.3%	16,028,473	33,904,814	159,837	153,534	39,882	50,286,540
1% Decrease in the Discount Rate: 3.3%	19,599,251	41,458,033	195,445	187,737	48,767	61,489,233
1% Increase in the Discount Rate: 5.3%	13,257,800	28,044,046	132,208	126,994	32,988	41,594,035
Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates						
Current Trend Rates	16,028,473	33,904,814	159,837	153,534	39,882	50,286,540
1% Decrease in Trend Rates	12,717,216	26,900,556	126,817	121,816	31,643	39,898,048
1% Increase in Trend Rates	20,687,936	43,760,913	206,301	198,166	51,476	64,904,791
Deferred Outflows of Resources and Deferred Inflows of Resources recognized in OPEB Expense						
2018	206,330	372,429	3,141	2,023	512	584,435
2019	206,330	372,429	3,141	2,023	512	584,435
2020	206,330	372,429	3,141	2,023	512	584,435
2021	206,330	372,429	3,141	2,023	512	584,435
2022	171,747	310,008	2,614	1,684	426	486,479
Thereafter	1,718	3,103	26	17	4	4,868

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Under GASB 74, a series of projections and calculations are used to determine the discount rate for the purpose of the measurement of the Total OPEB Liability. The discount rate is the single rate that reflects (1) the long-term expected rate of return on OPEB plan investments that are expected to be used to finance the payment of benefits, to the extent that the OPEB plan's fiduciary net position is projected to be sufficient to make projected benefit payments and OPEB plan assets are expected to be invested using a strategy to achieve that return, and (2) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher, to the extent that the conditions for use of the long-term expected rate of return are not met.

Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. The OPEB plan's projected fiduciary net position at the beginning of each period is compared to the amount of benefit payments projected to occur in that period.

It is assumed that the OPEB plan's fiduciary net position is expected to always be invested using a strategy to achieve the long-term expected rate of return on OPEB plan investments.

The benefit payments that are projected to occur in a period are discounted using the long-term expected rate of return on OPEB plan investments if the amount of the OPEB plan's beginning fiduciary net position is projected to be sufficient to make the benefit payments in that period. In periods in which benefit payments are projected to be greater than the amount of the OPEB plan's fiduciary net position, they are discounted using a municipal bond rate as required by GASB 74.

For purposes of this valuation, the long-term expected rate of return on OPEB plan investments is 6.85%; the municipal bond rate is 3.87%, based on the Bond Buyer 20-Bond GO Index published on June 28, 2018. The OPEB plan's fiduciary net position was projected to be insufficient to make all projected benefit payments of current plan members. Therefore, the 6.85% long-term expected rate of return on OPEB plan investments was applied to the first 19 periods of projected future benefit payments and, the 3.87% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability, resulting in a blended discount rate of 4.3%.

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 4.56%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2018	35,461,031	-	35,461,031	1,411,650	500,000	-	1,911,650
2019	33,518,847	3,183,320	36,702,167	1,509,308	500,000	145,077	1,864,231
2020	32,174,494	5,812,249	37,986,743	1,614,171	500,000	264,887	1,849,284
2021	31,020,982	8,295,297	39,316,279	1,706,215	500,000	378,050	1,828,165
2022	29,800,705	10,891,644	40,692,349	1,817,396	500,000	496,375	1,821,021
2023	28,654,207	13,462,374	42,116,581	1,969,708	500,000	613,534	1,856,174
2024	27,513,076	16,077,585	43,590,661	2,097,204	500,000	732,719	1,864,485
2025	26,512,469	18,603,865	45,116,334	2,273,294	500,000	847,852	1,925,442
2026	25,388,262	21,307,144	46,695,406	2,386,658	500,000	971,051	1,915,607
2027	24,172,651	24,157,094	48,329,745	2,571,942	500,000	1,100,935	1,971,007
2028	22,963,107	27,058,179	50,021,286	2,718,522	500,000	1,233,149	1,985,373
2029	21,596,311	30,175,720	51,772,031	2,886,772	500,000	1,375,227	2,011,545
2030	20,180,463	33,403,589	53,584,052	3,080,514	500,000	1,522,334	2,058,180
2031	18,844,477	36,615,017	55,459,494	3,307,095	500,000	1,668,692	2,138,403
2032	17,531,620	39,868,956	57,400,576	3,485,835	500,000	1,816,987	2,168,848
2033	16,283,613	43,125,983	59,409,596	3,632,458	500,000	1,965,422	2,167,036
2034	15,068,193	46,420,739	61,488,932	3,776,287	500,000	2,115,577	2,160,710
2035	13,919,615	49,721,430	63,641,045	3,870,597	500,000	2,266,003	2,104,594
2036	12,733,634	53,134,848	65,868,482	3,944,274	500,000	2,421,566	2,022,708
2037	11,696,321	56,477,558	68,173,879	3,989,156	500,000	2,573,907	1,915,249
2038	10,640,382	59,919,583	70,559,965	4,133,140	500,000	2,730,773	1,902,367
2039	9,641,421	63,388,143	73,029,564	4,229,544	500,000	2,888,849	1,840,695
2040	8,752,098	66,833,501	75,585,599	4,292,277	500,000	3,045,868	1,746,409
2041	7,769,526	70,461,569	78,231,095	4,469,581	500,000	3,211,214	1,758,367
2042	6,872,006	74,097,177	80,969,183	4,605,832	500,000	3,376,903	1,728,929
2043	6,091,540	77,711,564	83,803,104	4,688,947	500,000	3,541,625	1,647,322
2044	5,408,060	81,328,153	86,736,213	4,781,876	500,000	3,706,447	1,575,429
2045	4,714,416	85,057,564	89,771,980	4,903,584	500,000	3,876,411	1,527,173
2046	4,114,373	88,799,626	92,913,999	5,011,104	500,000	4,046,952	1,464,152
2047	3,597,364	92,568,625	96,165,989	4,995,981	500,000	4,218,720	1,277,261
2048	3,152,266	96,379,533	99,531,799	5,086,795	500,000	4,392,398	1,194,397
2049	2,731,760	100,283,652	103,015,412	5,166,825	500,000	4,570,324	1,096,501
2050	2,346,406	104,274,545	106,620,951	5,118,915	500,000	4,752,205	866,710
2051	1,967,460	108,385,224	110,352,684	5,215,830	500,000	4,939,545	776,285

Town of Sudbury, Massachusetts Postemployment Benefits Other Than Pensions
Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 4.56%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2052	1,634,350	112,580,678	114,215,028	5,323,875	500,000	5,130,749	693,126
2053	1,293,063	116,919,491	118,212,554	5,292,019	500,000	5,328,485	463,534
2054	934,411	121,415,582	122,349,993	5,295,010	500,000	5,533,390	261,620
2055	677,075	125,955,168	126,632,243	5,380,122	500,000	5,740,277	139,845
2056	496,289	130,568,083	131,064,372	5,244,536	500,000	5,950,506	-
2057	332,376	135,319,249	135,651,625	5,277,187	500,000	6,167,036	-
2058	233,249	140,166,183	140,399,432	5,261,503	500,000	6,387,930	-
2059	150,639	145,162,773	145,313,412	5,207,942	500,000	6,615,644	-
2060	82,488	150,316,893	150,399,381	5,234,227	500,000	6,850,538	-
2061	47,478	155,615,881	155,663,359	5,222,279	500,000	7,092,034	-
2062	25,404	161,086,173	161,111,577	5,212,415	500,000	7,341,337	-
2063	12,640	166,737,842	166,750,482	5,204,123	500,000	7,598,906	-
2064	740	172,586,009	172,586,749	5,187,169	500,000	7,865,430	-
2065	-	178,627,285	178,627,285	5,160,714	500,000	8,140,755	-
2066	-	184,879,240	184,879,240	5,096,152	500,000	8,425,681	-
2067	-	191,350,013	191,350,013	5,025,306	500,000	8,720,580	-
2068	-	198,047,263	198,047,263	4,943,908	500,000	9,025,800	-
2069	-	204,978,917	204,978,917	4,842,842	500,000	9,341,703	-
2070	-	212,153,179	212,153,179	4,719,443	500,000	9,668,663	-
2071	-	219,578,540	219,578,540	4,572,355	500,000	10,007,066	-
2072	-	227,263,789	227,263,789	4,411,206	500,000	10,357,313	-
2073	-	235,218,022	235,218,022	4,244,073	500,000	10,719,819	-
2074	-	243,450,653	243,450,653	4,073,549	500,000	11,095,013	-
2075	-	251,971,426	251,971,426	3,879,120	500,000	11,483,338	-
2076	-	260,790,426	260,790,426	3,680,073	500,000	11,885,255	-
2077	-	269,918,091	269,918,091	3,456,031	500,000	12,301,239	-
2078	-	279,365,224	279,365,224	3,239,061	500,000	12,731,783	-
2079	-	289,143,007	289,143,007	3,023,807	500,000	13,177,395	-
2080	-	299,263,012	299,263,012	2,792,980	500,000	13,638,604	-
2081	-	309,737,217	309,737,217	2,580,066	500,000	14,115,955	-
2082	-	320,578,020	320,578,020	2,350,867	500,000	14,610,013	-
2083	-	331,798,251	331,798,251	2,131,961	500,000	15,121,364	-
2084	-	343,411,190	343,411,190	1,918,278	500,000	15,650,612	-
2085	-	355,430,582	355,430,582	1,713,218	500,000	16,198,383	-

Town of Sudbury, Massachusetts Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) +(e)
2018	5,880,200	1,911,650	1,411,650	-	48,946	6,429,146
2019	6,429,146	1,864,231	1,509,308	-	452,553	7,236,622
2020	7,236,622	1,849,284	1,614,171	-	503,761	7,975,496
2021	7,975,496	1,828,165	1,706,215	-	550,498	8,647,944
2022	8,647,944	1,821,021	1,817,396	-	592,508	9,244,077
2023	9,244,077	1,856,174	1,969,708	-	629,331	9,759,874
2024	9,759,874	1,864,485	2,097,204	-	660,581	10,187,736
2025	10,187,736	1,925,442	2,273,294	-	685,946	10,525,830
2026	10,525,830	1,915,607	2,386,658	-	704,886	10,759,665
2027	10,759,665	1,971,007	2,571,942	-	716,455	10,875,185
2028	10,875,185	1,985,373	2,718,522	-	719,840	10,861,876
2029	10,861,876	2,011,545	2,886,772	-	714,062	10,700,711
2030	10,700,711	2,058,180	3,080,514	-	697,984	10,376,361
2031	10,376,361	2,138,403	3,307,095	-	670,753	9,878,422
2032	9,878,422	2,168,848	3,485,835	-	631,565	9,193,000
2033	9,193,000	2,167,036	3,632,458	-	579,530	8,307,108
2034	8,307,108	2,160,710	3,776,287	-	513,703	7,205,234
2035	7,205,234	2,104,594	3,870,597	-	433,073	5,872,304
2036	5,872,304	2,022,708	3,944,274	-	336,439	4,287,177
2037	4,287,177	1,915,249	3,989,156	-	222,640	2,435,910
2038	2,435,910	1,902,367	4,133,140	-	90,456	295,593
2039	295,593	1,840,695	4,229,544	-	-	-
2040	-	1,746,409	4,292,277	-	-	-
2041	-	1,758,367	4,469,581	-	-	-
2042	-	1,728,929	4,605,832	-	-	-
2043	-	1,647,322	4,688,947	-	-	-
2044	-	1,575,429	4,781,876	-	-	-
2045	-	1,527,173	4,903,584	-	-	-
2046	-	1,464,152	5,011,104	-	-	-
2047	-	1,277,261	4,995,981	-	-	-
2048	-	1,194,397	5,086,795	-	-	-
2049	-	1,096,501	5,166,825	-	-	-
2050	-	866,710	5,118,915	-	-	-
2051	-	776,285	5,215,830	-	-	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) +(e)
2052	-	693,126	5,323,875	-	-	-
2053	-	463,534	5,292,019	-	-	-
2054	-	261,620	5,295,010	-	-	-
2055	-	139,845	5,380,122	-	-	-
2056	-	-	5,244,536	-	-	-
2057	-	-	5,277,187	-	-	-
2058	-	-	5,261,503	-	-	-
2059	-	-	5,207,942	-	-	-
2060	-	-	5,234,227	-	-	-
2061	-	-	5,222,279	-	-	-
2062	-	-	5,212,415	-	-	-
2063	-	-	5,204,123	-	-	-
2064	-	-	5,187,169	-	-	-
2065	-	-	5,160,714	-	-	-
2066	-	-	5,096,152	-	-	-
2067	-	-	5,025,306	-	-	-
2068	-	-	4,943,908	-	-	-
2069	-	-	4,842,842	-	-	-
2070	-	-	4,719,443	-	-	-
2071	-	-	4,572,355	-	-	-
2072	-	-	4,411,206	-	-	-
2073	-	-	4,244,073	-	-	-
2074	-	-	4,073,549	-	-	-
2075	-	-	3,879,120	-	-	-
2076	-	-	3,680,073	-	-	-
2077	-	-	3,456,031	-	-	-
2078	-	-	3,239,061	-	-	-
2079	-	-	3,023,807	-	-	-
2080	-	-	2,792,980	-	-	-
2081	-	-	2,580,066	-	-	-
2082	-	-	2,350,867	-	-	-
2083	-	-	2,131,961	-	-	-
2084	-	-	1,918,278	-	-	-
2085	-	-	1,713,218	-	-	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) +(e)
2086	-	-	1,518,905	-	-	-
2087	-	-	1,333,612	-	-	-
2088	-	-	1,160,823	-	-	-
2089	-	-	1,000,702	-	-	-
2090	-	-	854,734	-	-	-
2091	-	-	723,778	-	-	-
2092	-	-	607,418	-	-	-
2093	-	-	505,676	-	-	-
2094	-	-	417,203	-	-	-
2095	-	-	341,139	-	-	-
2096	-	-	276,342	-	-	-
2097	-	-	221,914	-	-	-
2098	-	-	176,603	-	-	-
2099	-	-	139,110	-	-	-
2100	-	-	108,541	-	-	-
2101	-	-	83,834	-	-	-
2102	-	-	63,988	-	-	-
2103	-	-	48,211	-	-	-
2104	-	-	35,879	-	-	-
2105	-	-	26,343	-	-	-
2106	-	-	19,030	-	-	-
2107	-	-	13,547	-	-	-
2108	-	-	9,447	-	-	-
2109	-	-	6,431	-	-	-
2110	-	-	4,243	-	-	-
2111	-	-	2,822	-	-	-
2112	-	-	1,764	-	-	-
2113	-	-	1,111	-	-	-
2114	-	-	627	-	-	-
2115	-	-	262	-	-	-
2116	-	-	126	-	-	-
2117	-	-	56	-	-	-
2118	-	-	-	-	-	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g)
2019	6,429,146	1,509,308	1,509,308	-	1,460,127	-	1,477,846
2020	7,236,622	1,614,171	1,614,171	-	1,461,463	-	1,515,316
2021	7,975,496	1,706,215	1,706,215	-	1,445,764	-	1,535,642
2022	8,647,944	1,817,396	1,817,396	-	1,441,248	-	1,568,225
2023	9,244,077	1,969,708	1,969,708	-	1,461,896	-	1,629,533
2024	9,759,874	2,097,204	2,097,204	-	1,456,736	-	1,663,430
2025	10,187,736	2,273,294	2,273,294	-	1,477,819	-	1,728,709
2026	10,525,830	2,386,658	2,386,658	-	1,452,049	-	1,740,039
2027	10,759,665	2,571,942	2,571,942	-	1,464,461	-	1,797,763
2028	10,875,185	2,718,522	2,718,522	-	1,448,688	-	1,821,825
2029	10,861,876	2,886,772	2,886,772	-	1,439,726	-	1,854,765
2030	10,700,711	3,080,514	3,080,514	-	1,437,858	-	1,897,588
2031	10,376,361	3,307,095	3,307,095	-	1,444,658	-	1,953,116
2032	9,878,422	3,485,835	3,485,835	-	1,425,118	-	1,973,743
2033	9,193,000	3,632,458	3,632,458	-	1,389,857	-	1,971,909
2034	8,307,108	3,776,287	3,776,287	-	1,352,259	-	1,965,413
2035	7,205,234	3,870,597	3,870,597	-	1,297,174	-	1,931,387
2036	5,872,304	3,944,274	3,944,274	-	1,237,123	-	1,886,952
2037	4,287,177	3,989,156	3,989,156	-	1,170,988	-	1,829,690
2038	2,435,910	4,133,140	-	4,133,140	-	1,971,163	1,817,519
2039	295,593	4,229,544	-	4,229,544	-	1,941,985	1,783,179
2040	-	4,292,277	-	4,292,277	-	1,897,361	1,734,969
2041	-	4,469,581	-	4,469,581	-	1,902,124	1,732,101
2042	-	4,605,832	-	4,605,832	-	1,887,079	1,711,264
2043	-	4,688,947	-	4,688,947	-	1,849,554	1,670,270
2044	-	4,781,876	-	4,781,876	-	1,815,934	1,633,098
2045	-	4,903,584	-	4,903,584	-	1,792,772	1,605,573
2046	-	5,011,104	-	5,011,104	-	1,763,822	1,573,086
2047	-	4,995,981	-	4,995,981	-	1,692,981	1,503,634
2048	-	5,086,795	-	5,086,795	-	1,659,531	1,467,805
2049	-	5,166,825	-	5,166,825	-	1,622,836	1,429,388
2050	-	5,118,915	-	5,118,915	-	1,547,885	1,357,710
2051	-	5,215,830	-	5,215,830	-	1,518,428	1,326,340
2052	-	5,323,875	-	5,323,875	-	1,492,136	1,297,962

Town of Sudbury, Massachusetts Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments			
		Projected Benefit Payments (b)	"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g)
2053	-	5,292,019	-	5,292,019	-	1,427,946	1,236,966
2054	-	5,295,010	-	5,295,010	-	1,375,521	1,186,604
2055	-	5,380,122	-	5,380,122	-	1,345,558	1,155,936
2056	-	5,244,536	-	5,244,536	-	1,262,778	1,080,317
2057	-	5,277,187	-	5,277,187	-	1,223,298	1,042,195
2058	-	5,261,503	-	5,261,503	-	1,174,220	996,228
2059	-	5,207,942	-	5,207,942	-	1,118,963	945,405
2060	-	5,234,227	-	5,234,227	-	1,082,710	910,975
2061	-	5,222,279	-	5,222,279	-	1,039,991	871,398
2062	-	5,212,415	-	5,212,415	-	999,351	833,869
2063	-	5,204,123	-	5,204,123	-	960,587	798,195
2064	-	5,187,169	-	5,187,169	-	921,785	762,772
2065	-	5,160,714	-	5,160,714	-	882,915	727,573
2066	-	5,096,152	-	5,096,152	-	839,385	688,829
2067	-	5,025,306	-	5,025,306	-	796,877	651,230
2068	-	4,943,908	-	4,943,908	-	754,760	614,249
2069	-	4,842,842	-	4,842,842	-	711,785	576,869
2070	-	4,719,443	-	4,719,443	-	667,804	538,977
2071	-	4,572,355	-	4,572,355	-	622,885	500,635
2072	-	4,411,206	-	4,411,206	-	578,543	463,065
2073	-	4,244,073	-	4,244,073	-	535,884	427,139
2074	-	4,073,549	-	4,073,549	-	495,189	393,063
2075	-	3,879,120	-	3,879,120	-	453,984	358,860
2076	-	3,680,073	-	3,680,073	-	414,643	326,400
2077	-	3,456,031	-	3,456,031	-	374,891	293,883
2078	-	3,239,061	-	3,239,061	-	338,264	264,070
2079	-	3,023,807	-	3,023,807	-	304,019	236,350
2080	-	2,792,980	-	2,792,980	-	270,349	209,301
2081	-	2,580,066	-	2,580,066	-	240,435	185,369
2082	-	2,350,867	-	2,350,867	-	210,914	161,934
2083	-	2,131,961	-	2,131,961	-	184,147	140,796
2084	-	1,918,278	-	1,918,278	-	159,517	121,458
2085	-	1,713,218	-	1,713,218	-	137,157	103,999
2086	-	1,518,905	-	1,518,905	-	117,070	88,400

Town of Sudbury, Massachusetts Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments			
		Projected Benefit Payments (b)	"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g)
2087	-	1,333,612	-	1,333,612	-	98,959	74,413
2088	-	1,160,823	-	1,160,823	-	82,928	62,100
2089	-	1,000,702	-	1,000,702	-	68,826	51,325
2090	-	854,734	-	854,734	-	56,596	42,030
2091	-	723,778	-	723,778	-	46,139	34,122
2092	-	607,418	-	607,418	-	37,279	27,455
2093	-	505,676	-	505,676	-	29,878	21,913
2094	-	417,203	-	417,203	-	23,732	17,334
2095	-	341,139	-	341,139	-	18,683	13,589
2096	-	276,342	-	276,342	-	14,570	10,553
2097	-	221,914	-	221,914	-	11,264	8,125
2098	-	176,603	-	176,603	-	8,630	6,199
2099	-	139,110	-	139,110	-	6,545	4,682
2100	-	108,541	-	108,541	-	4,916	3,502
2101	-	83,834	-	83,834	-	3,656	2,593
2102	-	63,988	-	63,988	-	2,686	1,898
2103	-	48,211	-	48,211	-	1,949	1,371
2104	-	35,879	-	35,879	-	1,396	978
2105	-	26,343	-	26,343	-	987	689
2106	-	19,030	-	19,030	-	686	477
2107	-	13,547	-	13,547	-	470	325
2108	-	9,447	-	9,447	-	316	218
2109	-	6,431	-	6,431	-	207	142
2110	-	4,243	-	4,243	-	131	90
2111	-	2,822	-	2,822	-	84	57
2112	-	1,764	-	1,764	-	51	34
2113	-	1,111	-	1,111	-	31	21
2114	-	627	-	627	-	17	11
2115	-	262	-	262	-	7	4
2116	-	126	-	126	-	3	2
2117	-	56	-	56	-	1	1
2118	-	-	-	-	-	-	-

APPENDIX B - SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ (6,260,543)	6.01	(1,041,688)	(1,041,688)	(1,041,688)	(1,041,688)	(1,041,688)	(1,041,688)	(10,415)	-	-	-
Net Increase (Decrease) in OPEB Expense			(1,041,688)	(1,041,688)	(1,041,688)	(1,041,688)	(1,041,688)	(1,041,688)	(10,415)	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ 9,184,285	6.01	1,528,167	1,528,167	1,528,167	1,528,167	1,528,167	1,528,167	15,283	-	-	-
Net Increase (Decrease) in OPEB Expense			1,528,167	1,528,167	1,528,167	1,528,167	1,528,167	1,528,167	15,283	-	-	-

Year	Differences between Projected and Actual Earnings on OPEB Plan Investments	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ 489,780	5	97,956	97,956	97,956	97,956	97,956	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			97,956	97,956	97,956	97,956	97,956	-	-	-	-	-

Town of Sudbury, Massachusetts Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018