

TOWN OF GREENFIELD OPEB PLAN
GASB 45 AND GASB 74 DISCLOSURE
REPORTING AS OF JUNE 30, 2017

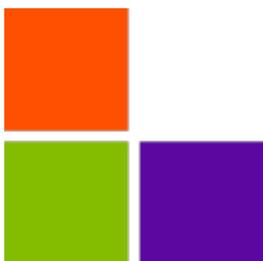




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All the items listed below are required by GASB 74 but are not included in this report:

- Statement of Changes in Fiduciary Net Position
- Statement of Fiduciary Net Position
- Investments That Represent 5% or More of the Plan’s Fiduciary Net Position
- Investment Policy
- OPEB Board Composition
- Authority to Amend Plan

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Certification

This report presents the results of the June 30, 2017 GASB 45 and GASB 74 Disclosure for the Town of Greenfield OPEB Plan (the Plan). The report is intended to satisfy the requirements of both GASB 45 and GASB 74. This report may not be appropriate for any other purpose.

The report has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with the Actuarial Standards Board Standards of Practice.

I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

In preparing this disclosure report, I have relied on employee data provided by the Plan Sponsor, and on asset and contribution information provided by the Plan Sponsor or Trustee. I have audited neither the employee data nor the financial information, although I have reviewed them for reasonableness.

The results in this disclosure report are based on the Plan as summarized in the Summary of Plan Provisions section of this report and the actuarial methods and assumptions detailed in the Description of Actuarial Methods and Procedures and Description of Actuarial Assumptions sections of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

I have no relationship with the employer or the Plan that would impair, or appear to impair, my objectivity in performing the work presented in this report. I am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.


Evan W. Woollacott, Jr., FCA, MAAA
Enrolled Actuary 17-04513

July 25, 2018



Schedule of Investment Returns Last Fiscal Year

Year Ended June 30:	Annual Money-Weighted Rate of Return, Net of Investment Expense
2017	11.50%



Contributions Compared to ADEC and Payroll Schedule of Contributions for Last Fiscal Year

	2017
Actuarially determined employer contribution (ADEC)	\$ 5,938,000
Contributions in relation to the ADEC	<u>2,695,705</u>
Contribution deficiency (excess)	<u>\$ 3,242,295</u>
Covered payroll	\$ 22,740,011
Contributions as a % of covered payroll	11.85%



Discount Rate Calculation

The long-term expected rate of return on investments may be used to discount liabilities to the extent that the plan's fiduciary net position and future contributions are projected to be sufficient to cover expected benefit payments and administrative expenses for current plan members. Projections of the plan's fiduciary net position incorporate all cash flows for contributions from the employer and employee and administrative expenses. Professional judgment should be applied to the projections of contributions in circumstances where (a) contributions amounts are established by statute or contract or (b) a formal written policy exists. Consideration should also be given to the most recent five-year contribution history as key indicators of future contributions. It should not include cash flows for future plan members.

If the amount of the plan's fiduciary net position is projected to be greater than or equal to the benefit payments and administrative expenses made in that period, the actuarial present value of payments should be discounted using the long-term expected rate of return on those investments. A 20-year, high quality (AA/Aa or higher), tax-exempt municipal bond yield or index rate must be used to discount benefit payments for periods where the fiduciary net position is not projected to cover expected benefit payments and administrative expenses.

Plans that are projected to have sufficient fiduciary net position indefinitely will use the long-term expected return on investments to determine liabilities but will have to substantiate their projected solvency.

Since the plan's fiduciary net position as of the measurement date is not sufficient to cover the first year of expected benefit payments for current plan members, a discount rate of 3.58% was used to discount liabilities. This discount rate is the published Bond Buyer GO 20-Bond Municipal Index as of the measurement date.



Schedule of Changes in Net OPEB Liability Last Fiscal Years

	2017
Total OPEB liability	
Service cost	\$ 1,893,385
Interest	3,505,423
Changes of benefit terms	-
Differences between expected and actual experience	44,908
Changes of assumptions	21,983,665
Benefit payments, including refunds of member contributions	(2,595,705)
Net change in total OPEB liability	<u>24,831,676</u>
Total OPEB liability - beginning	<u>63,099,901</u>
Total OPEB liability - ending: (a)	<u><u>\$ 87,931,577</u></u>
Plan fiduciary net position	
Contributions - employer	\$ 2,695,705
Contributions - active member	-
Contributions - TRB subsidy	-
Net investment income	122,946
Benefit payments, including refunds of member contributions	(2,595,705)
Administrative expenses	-
Other	-
Net change in plan fiduciary net position	<u>222,946</u>
Plan fiduciary net position - beginning	<u>1,020,180</u>
Plan fiduciary net position - ending: (b)	<u><u>1,243,126</u></u>
Net OPEB liability - ending: (a) - (b)	<u><u>\$ 86,688,451</u></u>
Plan fiduciary net position as a % of total OPEB liability	1.41%
Covered payroll	\$ 22,740,011
Net OPEB liability as a % of covered payroll	381.22%



Schedule of Net OPEB Liability Last 2 Fiscal Years

	2017	2016
Total OPEB liability	\$ 87,931,577	\$ 63,099,901
Plan fiduciary net position	1,243,126	1,020,180
Net OPEB liability (asset)	\$ 86,688,451	\$ 62,079,721
Plan fiduciary net position as a % of total OPEB liability	1.41%	1.62%
Covered payroll	\$ 22,740,011	\$ 22,077,681
Net OPEB liability as a % of covered payroll	381.22%	281.19%



Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

	Current Discount Rate (3.58%)	1% Decrease (2.58%)	1% Increase (4.58%)
Net OPEB liability as of June 30, 2017	\$ 86,688,451	\$ 102,699,224	\$ 74,056,068

Sensitivity of the Net OPEB Liability in the Healthcare Cost Trend Rates

	Healthcare Cost Trend Rates (8.00% decreasing to 5.00%)	1% Decrease (7.00% decreasing to 4.00%)	1% Increase (9.00% decreasing to 6.00%)
Net OPEB liability as of June 30, 2017	\$ 86,688,451	\$ 71,690,307	\$ 106,409,334

Participant Breakdown as of July 1, 2015

	Participant Count
Inactive plan members or beneficiaries currently receiving benefits	479
Inactive plan members entitled to but not yet receiving benefits	0
Active plan members	525
Total members	<u>1,004</u>



Calculation of Net OPEB Obligation

Calculation of Net OPEB Obligation	
Annual required contribution	\$5,938,000
Interest on net OPEB obligation	1,811,313
Adjustment to annual required contribution	<u>(2,147,835)</u>
Annual OPEB cost (expense)	5,601,478
Contributions made	<u>(2,695,705)</u>
Increase in net OPEB obligation	2,905,773
Net OPEB obligation - June 30, 2016	<u>32,932,968</u>
Net OPEB obligation - June 30, 2017	35,838,741

History of AOC and NOO				
Fiscal Year Ending	Annual OPEB Cost (AOC)	Actual Contribution	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
June 30, 2013	\$6,463,389	\$2,929,377	45%	\$22,820,049
June 30, 2014	6,503,570	2,565,803	39%	26,757,816
June 30, 2015	5,873,177	2,919,008	50%	29,711,985
June 30, 2016	5,908,416	2,687,433	45%	32,932,968
June 30, 2017	5,601,478	2,695,705	48%	35,838,741



Description of Significant Changes Prior to Year End

There were no significant plan changes since the last published valuation.

Valuation Date and Roll Forward Process

The Plan Sponsor uses the July 1, 2015 Actuarial Valuation to calculate the ADEC for the fiscal year ending 2017.

The July 1, 2015 Actuarial Valuation directly calculated the July 1, 2015 Total OPEB Liability (TOL). The July 1, 2015 TOL was increased by service cost and interest and decreased by benefit payments to estimate the TOL as of June 30, 2017. The TOL as of June 30, 2017 was also adjusted to reflect any material plan changes after the valuation, if applicable.

Funding Policy

The Plan Sponsor's Funding Policy is to contribute a percentage of the ADEC.

Assumption Selection

The selections of all assumptions used in determining the total OPEB liability were made in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board.

The actuarial assumptions used in the valuation were based on standard tables modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor. The plan does not have credible data on which to perform an experience study. As a result, a full actuarial experience study is not applicable.



Description of Actuarial Methods

Asset Valuation Method

Plan Assets equal the Market Value of assets.

Actuarial Cost Method

Entry Age Normal Actuarial Cost Method (level percentage of salary).

Normal Cost: Under this method, the total normal cost is the sum of amounts necessary to fund each active member's normal retirement benefit if paid annually from entry age to assumed retirement age. Entry age is the age at which the employee would have been first eligible for the plan, if it had always been in effect. The normal cost for each participant is expected to remain a level percentage of the employee's salary. The normal cost for the plan is the difference between the total normal cost for the year and the anticipated member contributions for that year.

Past Service Liability: The present value of future benefits that relates to service before the valuation date is the total past service liability. The unfunded past service liability is the difference between the total past service liability and any assets (including accumulated member contributions). This amount is amortized over 30 years on an open basis.



Description of Actuarial Assumptions All But Certified Staff

Interest

3.58%.

Prior: 5.5%.

Since the OPEB plan's fiduciary net position is less than the first year expected benefit payments for current plan members, the selection of the discount rate is consistent with the GASB 74 and GASB 75 standards linking the discount rate to the 20-year AA municipal bond index for unfunded OPEB plans. The discount rate used for this disclosure is equal to the published Bond Buyer GO 20-Bond Municipal Index effective as of June 30, 2017.

Inflation

3%.

Prior: 3.5%.

This assumption is based on long-term historical inflation. While near-term averages have been lower, we do not believe this trend will continue indefinitely and expect that there will be a reversion to the long-term average.

Mortality

RP-2000 Mortality Table with separate male and female rates, with no collar adjustment (Blue Collar for Police and Fire), combined table for non-annuitants and annuitants, projected to the valuation date using Scale BB.

Prior: RP-2000 Mortality Table with no collar adjustment (Blue Collar for Police and Fire), combined table for non-annuitants and annuitants, projected to the valuation date using Scale AA.

Mortality Improvement

Projected to date of decrement using Scale BB (generational mortality).

Prior: Projected to date of decrement using Scale AA (generational mortality).

We have selected this mortality assumption and mortality improvement scale because it is used by the State of Massachusetts.

Sample Withdrawal Rates (from Franklin Regional Retirement System 2014 OPEB Valuation)

Years of Service	Town and Other BOE	Fire and Police
0	15.00%	1.50%
5	10.20%	1.50%
10	5.40%	1.50%
15	3.70%	0.75%
20	2.00%	0.00%
25	1.00%	0.00%
>=30	0.00%	0.00%



Sample Withdrawal Rates (continued)

Prior Valuation:

Age	Town and Other BOE	Fire and Police
20	37.5%	3.2%
25	28.2%	2.9%
30	17.4%	2.5%
35	10.1%	1.9%
40	7.2%	0.8%
45	5.7%	0.1%
50	4.6%	0.0%
55 and over	0.0%	0.0%

Assumed Rates of Retirement (from Franklin Regional Retirement System 2014 Pension Valuation)

Town and Other BOE		Fire and Police	
Age	Rate	Age	Rate
<55	0%	<50	0%
55	10%	50-54	2%
56-58	3%	55-59	5%
59-61	5%	60-61	10%
62-64	10%	62-64	20%
65	50%	65	100%
66-69	35%		
70	100%		

Prior Valuation:

Age	Town and Other BOE	Fire and Police
50	0.0%	2.0%
55	10.0%	5.0%
60	5.0%	10.0%
65	50.0%	100.0%
70	100.0%	100.0%

The actuarial assumption in regards to rates of retirement and withdrawal shown above is based on a standard table modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor.

Current Monthly Premium

Pre 65:

	Employee	Dual	Family
HMO	\$522.19	\$1,092.41	\$1,514.48
PPO	\$789.22	\$1,651.03	\$2,288.92

Premiums were used as the basis for per capita costs.



Current Monthly Premium (continued)

Post 65:

	Employee	Spouse
UA	\$349.00	\$349.00
Medicare Part B	\$104.90	\$104.90

Premiums were used as the basis for per capita costs.

Expected per Capita claims (without Medicare Coordination)

We assume that actual claims will be distributed according to the following morbidity table:

Sample Age	Expected Claim
45	\$5,316
50	6,163
55	7,250
60	8,652
64	10,199

The sample per capita claims for plans not integrated with Medicare were developed as follows: Using the total count of active employees and retired participants currently electing medical coverage, we calculate the total projected claims by multiplying the total count by the average annual premium or allocation rate. Using the cost increases derived from a study sponsored by the Society of Actuaries Section prepared by J.P. Peteril from August 1, 2003: "Aging Curves for Health Care Costs in Retirement", we allocate the total projected claims by age.

For plans integrated with Medicare, the premium is assumed to be unaffected by age.

Election Assumptions

100% of future retirees eligible for coverage are assumed to elect postretirement benefits.

For pre-65 retirees, 90% are assumed to elect the HMO and 10% are assumed to elect the PPO. For post-65 retirees, 100% are assumed to elect the UA supplement plan.

Trend

Medical trend starts at 8.0% in 2015, decreases by 0.5% per year down to 5.0% in 2021 and beyond.

Health care trend rates reflect both the current and long-term outlook for increases in health care costs. The short term trend rate is based on recent industry surveys, plan experience and near-term expectations. The long term trend rate is based on our general inflation assumption plus 2% to reflect expectations for long-term medical inflation.

For Medicare Part B, a 4% trend assumption was used.

Marriage Rates at Retirement

We assume 40% of active male employees and 40% of active female employees will be married at retirement and elect dual coverage and that husbands will be 3 years older than wives.



Patient Protection and Affordable Care Act (PPACA)

High Cost Plan Excise Tax (“Cadillac Tax”):

Effective in 2020 there will be a 40% excise tax on per capita medical benefit costs in excess of certain thresholds, which (in 2018) are \$10,200 for single coverage and \$27,500 for family coverage for Medicare eligible retirees. Thresholds (in 2018) for retirees who are between ages 55 and 65 are \$11,850 and \$30,950 for single and family coverage respectively.

After 2018, the thresholds are indexed by CPI (CPI +1% in 2018 only). CPI is assumed to be 3.0% in all future years. The impact of this future excise tax has been reflected in plan liabilities.

Other Requirements of PPACA:

Extended coverage for adult children and 100% coverage of preventive care are assumed to be reflected in per capita costs.

Elimination of lifetime maximum benefits and removal of the limits on essential healthcare are assumed to have no impact on plan liabilities.



Description of Actuarial Assumptions Certified Staff

Interest

3.58%.

Prior: 5.5%.

Since the OPEB plan's fiduciary net position is less than the first year expected benefit payments for current plan members, the selection of the discount rate is consistent with the GASB 74 and GASB 75 standards linking the discount rate to the 20-year AA municipal bond index for unfunded OPEB plans. The discount rate used for this disclosure is equal to the published Bond Buyer GO 20-Bond Municipal Index effective as of June 30, 2017.

Inflation

3%.

This assumption is based on long-term historical inflation. While near-term averages have been lower, we do not believe this trend will continue indefinitely and expect that there will be a reversion to the long-term average.

Mortality

RP-2000 Mortality Table with separate male and female rates, with no collar adjustment, combined table for non-annuitants and annuitants, projected to the valuation date using Scale BB.

Prior: RP-2000 Mortality Table with no collar adjustment, combined table for non-annuitants and annuitants, projected to the valuation date using Scale AA.

Mortality Improvement

Projected to date of decrement using Scale BB (generational mortality).

Prior: Projected to date of decrement using Scale AA (generational mortality).

We have selected this mortality assumption and mortality improvement scale because it is used by the State of Massachusetts.



Sample Withdrawal Rates (Based on Massachusetts State Teachers Plan experience)

Years of Service						
Age	Males			Females		
	0	5	10+	0	5	10+
20	13.0%	5.5%	1.5%	10.0%	7.0%	5.0%
30	15.0%	5.4%	1.5%	15.0%	8.8%	4.5%
40	13.3%	5.2%	1.7%	10.5%	5.0%	2.2%
50	16.2%	7.0%	2.3%	9.8%	5.0%	2.0%

Prior Valuation:

Years of Service						
Age	Males			Females		
	0	5	10+	0	5	10+
20	12.0%	4.5%	1.0%	10.0%	9.0%	5.0%
30	11.4%	4.5%	1.0%	12.0%	9.0%	5.0%
40	9.7%	5.4%	1.7%	11.0%	6.5%	2.9%
50	10.0%	4.8%	2.2%	8.2%	4.2%	2.1%

Assumed Rates of Retirement (Based on Massachusetts State Teachers Plan experience)

Years of Service						
Age	Males			Females		
	Under 20 Years	20 – 30 Years	Over 30 Years	Under 20 Years	20 – 30 Years	Over 30 Years
50	0.0%	1.0%	2.0%	0.0%	1.0%	1.5%
55	5.0%	3.0%	6.0%	3.0%	3.0%	5.0%
60	10.0%	25.0%	40.0%	10.0%	20.0%	35.0%
65	25.0%	40.0%	35.0%	25.0%	40.0%	35.0%
70	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Prior Valuation:

Years of Service						
Age	Males			Females		
	Under 20 Years	20 – 30 Years	Over 30 Years	Under 20 Years	20 – 30 Years	Over 30 Years
50	0.0%	1.0%	2.0%	0.0%	1.5%	2.0%
55	3.0%	3.0%	6.0%	2.0%	3.0%	6.0%
60	15.0%	20.0%	50.0%	20.0%	16.0%	35.0%
65	40.0%	40.0%	50.0%	30.0%	30.0%	35.0%
70	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The actuarial assumption in regards to rates of retirement and withdrawal shown above is based on a standard table modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor.



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For Medicare Part B, a 4% trend assumption was used.



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We assume 40% of active male employees and 40% of active female employees will be married at retirement and elect dual coverage and that husbands will be 3 years older than wives.

Patient Protection and Affordable Care Act (PPACA)

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After 2018, the thresholds are indexed by CPI (CPI +1% in 2018 only). CPI is assumed to be 3.0% in all future years. The impact of this future excise tax has been reflected in plan liabilities.

Other Requirements of PPACA:

Extended coverage for adult children and 100% coverage of preventive care are assumed to be reflected in per capita costs.

Elimination of lifetime maximum benefits and removal of the limits on essential healthcare are assumed to have no impact on plan liabilities.



Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Plan identification

Single-employer OPEB plan

Eligibility for Medical and Life Coverage

Retirement on or after attaining age 55 with 10 years of service or after 20 years of service.

Medical Plan of Coverage

Health New England HMO and PPO for Non-Medicare eligible retirees.

United American (UA) Medicare Supplement plan for Medicare eligible retirees.

Coverage for lifetime of retiree or spouse.

Retiree/Spouse Medical Cost Share

HMO – Retiree or Spouse pay 20% of Premium

PPO – Retiree or Spouse pay 40% of Premium

UA – Retiree or Spouse pay 40% of Premium

Surviving spouses pay 50% of Premium, regardless of plan.

Medicare Part B Premium

Coverage for lifetime of Medicare eligible retirees and spouses.

Cost Share same as UA coverage.

Life Insurance Benefit

\$10,000 for most retirees.

Coverage for retiree only, ceases at age 75.