

Town of Reading

**Actuarial Valuation and Review of Other
Postemployment Benefits (OPEB) as of
June 30, 2017 in Accordance with
GASB Statements No. 45 and 74 - Revised**





116 Huntington Avenue 8th Floor Boston, MA 02116-5744
T 617.424.7300 www.segalco.com

November 2, 2017

*Mr. Robert W. LeLacheur Jr., CFA
Town Manager
16 Lowell Street
Town Hall
Reading, MA 01867*

Dear Mr. LeLacheur:

We are pleased to submit this report on our actuarial valuation of postemployment welfare benefits as of June 30, 2017 under Governmental Accounting Standards Board (GASB) Statements Number 45 and 74. It establishes the liabilities and disclosure information of the postemployment welfare benefit plan in accordance with GASB Statements Number 45 and 74 for the fiscal year beginning July 1, 2016 and summarizes the actuarial data.

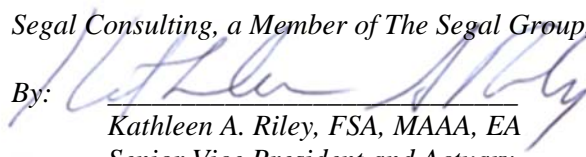
This report is based on information received from the Town of Reading. The actuarial projections were based on the assumptions and methods described in Exhibit II and on the plan of benefits as summarized in Exhibit III.

We look forward to discussing this with you at your convenience.

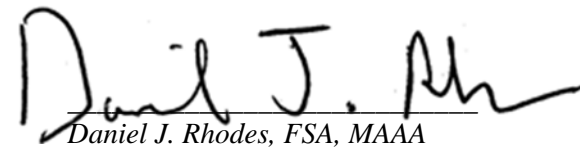
Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:


*Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary*

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*Daniel J. Rhodes, FSA, MAAA
Vice President and Consulting Actuary*

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IMPORTANT INFORMATION ABOUT ACTUARIAL VALUATIONS

An actuarial valuation is an estimate of future uncertain obligations of a postretirement health plan. As such, it will never forecast the precise future stream of benefit payments. It is an estimated forecast – the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare a valuation, Segal Consulting (“Segal”) relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. For example, a plan may provide health benefits to post-65 retirees that coordinate with Medicare. If so, changes in the Medicare law or administration may change the plan’s costs without any change in the terms of the plan itself. It is important for the Town of Reading to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the plan. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is not necessary to have perfect data for an actuarial valuation: the valuation is an estimated forecast, not a prediction. The uncertainties in other factors are such that even perfect data does not produce a “perfect” result. Notwithstanding the above, it is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** Part of the cost of a plan will be paid from existing assets – the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, provided by the Town of Reading. Some plans include assets, such as private equity holdings, real estate, or hedge funds, that are not subject to valuation by reference to transactions in the marketplace. A snapshot as of a single date may not be an appropriate value for determining a single year’s contribution requirement, especially in volatile markets.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. To determine the future costs of benefits, Segal collects claims, premiums, and enrollment data in order to establish a baseline cost for the valuation measurement, and then develops short- and long-term health care cost rates to project increases in costs in future years. This forecast also requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year, as well as forecasts of the plan’s benefits for each of those events. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved the plan’s assets, or if there are no assets, a rate of return on the assets of the employer. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. That is, there is no right answer (except with hindsight). It is important

**SECTION 1: Executive Summary for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

for any user of an actuarial valuation to understand and accept this constraint. The actuarial model necessarily uses approximations and estimates that may lead to significant changes in our results but will have no impact on the actual cost of the plan. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Given the above, the user of Segal's actuarial valuation (or other actuarial calculations) needs to keep the following in mind:

- The actuarial valuation is prepared for use by the Town of Reading. It includes information for compliance with accounting standards. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- Sections of this report may include actuarial results that are not rounded, but that does not imply precision.
- Critical events for a plan include, but are not limited to, decisions about changes in benefits and contributions. The basis for such decisions needs to consider many factors such as the risk of changes in plan enrollment, emerging claims experience and health care cost trend, not just the current valuation results.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Town of Reading should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the Town of Reading upon delivery and review. The Town of Reading should notify Segal immediately of any questions or concerns about the final content.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

**SECTION 1: Executive Summary for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

PURPOSE

This report presents the results of our actuarial valuation of the Town of Reading (the “Employer”) postemployment welfare benefit plan as of June 30, 2017. The results are in accordance with the Governmental Accounting Standards, which prescribe an accrual methodology for accumulating the value of other postemployment benefits (OPEB) over participants’ active working lifetimes. The accounting standard supplements cash accounting, under which the expense for postemployment benefits is equal to benefit and administrative costs paid on behalf of retirees and their dependents (*i.e.*, a pay-as-you-go basis).

HIGHLIGHTS OF THE VALUATION

During the fiscal year ending June 30, 2017, we project the Town of Reading will pay benefits (net of retiree contributions) on behalf of retired employees of about \$3,476,000. This amount is less than the annual “cost” (the “Annual Required Contribution,” or ARC) of approximately \$6,480,000.

Based on the asset allocation of the OPEB Trust assets, We recommend an expected rate of return on the OPEB Trust assets of 7.50%. The expected rate of return used in the prior valuation was 7.75%.

We have changed the funding method to the Entry Age Normal funding method which will be required for the year-end GASB Statement Number 74 disclosures. The funding method used in the prior valuation was the Projected Unit Credit funding method.

The Town’s funding policy for General Government is to contribute \$500,000 for fiscal years 2017 through 2029. At this time the Retirement System is projected to be fully funded and contributions will be diverted to the OPEB Trust. For this report, we have assumed that the contribution to the OPEB Trust will increase to \$5,000,000 in fiscal year ending 2030 and each year thereafter until the General Government OPEB obligation is fully funded. The Town will continue to pay benefits on behalf of retired participants until the OPEB obligation is fully funded.

The funding policy for the Reading Municipal Light Department (RMLD), Sewer, Storm Water and Water Departments is to fully fund the ARC.

Because current and future assets are projected to be sufficient to pay all benefits, we have used a discount rate of 7.50%. In the prior valuation, the discount rate was 6.00% for General Government and 7.75% for all other departments.

To determine the amortization payment on the unfunded actuarial accrued liability (UAAL), an amortization period and amortization method must be selected. We have reset the amortization period to 30 years with payments increasing at 2.50% per year for General Government. For all other departments we have used a 14-year closed amortization with payments increasing 2.50% per year.

We have included funding schedules for General Government, Sewer, Storm Water, Water and RMLD on pages 9 – 13 of this report. General Government is expected to be fully funded by fiscal year 2043 and all other departments will be fully funded by fiscal year 2030.

**SECTION 1: Executive Summary for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

As of June 30, 2017, the Town of Reading has \$6,478,298 in assets. The table below shows the increase in assets since the prior valuation.

Reconciliation of OPEB Trust Fund	
	Total
Balance as of June 30, 2013	\$2,860,432
Fiscal year 2014 OPEB contributions	851,994
Net investment income	<u>10,126</u>
Balance as of June 30, 2014	\$3,722,552
Fiscal year 2015 OPEB contributions	551,000
Net investment income	<u>15,612</u>
Balance as of June 30, 2015	\$4,289,164
Fiscal year 2016 OPEB contributions	1,230,177
Net investment income	<u>24,211</u>
Balance as of June 30, 2016	\$5,543,552
Fiscal year 2017 OPEB contributions	884,746
Net investment income	<u>50,000</u>
Balance as of June 30, 2017	\$6,478,298

This valuation does not include the potential impact of any future changes due to the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 other than the excise tax on high cost health plans beginning in 2020 (reflected in this valuation) and those previously adopted as of the valuation date.

Employer decisions regarding plan design, cost sharing between the Employer and its retirees, actuarial cost method, amortization techniques, and integration with Medicare are just some of the decisions that affect the magnitude of OPEB obligations. We are available to assist you with any investigation of such options you may wish to undertake.

The employer contributions shown for each department in Charts 1 and 3 in Section 3 reflect projected benefit payments and OPEB Trust contributions.

Section 3 shows the disclosure information required by GASB Statement Number 45 and Section 4 shows the disclosure information required by GASB Statement Number 74.

**SECTION 1: Executive Summary for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

KEY VALUATION RESULTS

➤ The **unfunded actuarial accrued liability (UAAL)** as of June 30, 2017 is \$68,815,000 based on an actuarial accrued liability of \$75,293,000 and an actuarial value of assets of \$6,478,000. Going forward, net unfunded plan obligations will be expected to change due to normal plan operations, which consist of continuing accruals for active members, plus interest on the total actuarial accrued liability, less expected benefit payments made by the Employer and contributions to the Trust. Future valuations will analyze the difference between actual and expected unfunded actuarial accrued liabilities.

- As of June 30, 2017 the ratio of assets to the AAL (the funded ratio) is 8.60%.

The funded percentage is not necessarily appropriate for assessing the sufficiency of OPEB assets to cover the estimated cost of settling the benefit obligations or the need for or the amount of future contributions.

➤ The **Annual Required Contribution (ARC)** for fiscal year 2017 is \$6,480,000. The ARC is expected to remain relatively level as a percentage of payroll, as long as the ARC is fully funded each year. If the ARC is not fully funded, it may be expected to increase as a percentage of payroll over time.

The unfunded liability of \$68,815,000 as of June 30, 2017 represents an increase of \$5,778,000 from \$63,037,000 as shown in the June 30, 2014 valuation.

The unfunded liability had been expected to increase \$4,551,000 due to normal plan operations. The increase was the net effect of the following:

- An **actuarial experience loss** increased obligations by \$3,506,000. This was the net result of gains and losses due to demographic changes and an investment loss.
- **Valuation assumption changes** decreased obligations by \$2,279,000. This was the net result of an *increase* in obligations due to 1) updating the demographic assumptions, 2) lowering the discount rate from 7.75% to 7.5% for RMLD, Sewer, Storm Water and Water Departments, 3) adjusting the valuation year per capita health costs and contributions, offset by a *decrease* in obligations due to 4) changing the actuarial cost method from Projected Unit Credit to Entry Age Normal, 5) revising the trend on medical costs, 6) revising the excise tax on high cost health plans beginning in 2020 and 7) increasing the discount rate from 6.0% to 7.5% for General Government. The complete set of assumptions is shown in Exhibit II.

**SECTION 1: Executive Summary for the Town of Reading June 30, 2017
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Actuarial computations under GASB statements are for purposes of fulfilling certain welfare plan accounting requirements. The calculations shown in this report have been made on a basis consistent with our understanding of GASB. Determinations for purposes other than meeting the financial accounting requirements of GASB may differ significantly from the results reported here.

Calculations are based on the benefits provided under the terms of the substantive plan in effect at the time of the valuation and on the pattern of sharing costs between the employer and plan members. The projection of benefits does not incorporate the potential effect of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future.

Actuarial calculations reflect a long-term perspective, and the methods and assumptions use techniques designed to reduce short term volatility in accrued liabilities and the actuarial value of assets, if any.

The calculation of an accounting obligation does not, in and of itself, imply that there is any legal liability to provide the benefits valued, nor is there any implication that the Employer is required to implement a funding policy to satisfy the projected expense.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

**SECTION 2: Valuation Results for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

**DEPARTMENT RESULTS
FOR DISCLOSURE PURPOSES**

Actuarial Accrued Liability (AAL) and Annual Required Contribution

The key results are shown on a funded basis.

	Sewer	Storm Water	Water	RMLD	General Government	Total
1. Current retirees, beneficiaries and dependents	\$359,546	\$0	\$1,590,439	\$6,136,779	\$34,607,798	\$42,694,562
2. Current active employees	<u>227,500</u>	<u>99,532</u>	<u>469,831</u>	<u>3,878,646</u>	<u>27,922,883</u>	<u>32,598,392</u>
3. Total as of June 30, 2017: (1) + (2)	\$587,046	\$99,532	\$2,060,270	\$10,015,425	\$62,530,681	\$75,292,954
4. Total as of June 30, 2016:	\$573,951	\$86,242	\$1,995,778	\$9,557,814	\$59,287,875	\$71,501,661
5. Actuarial value of assets as of June 30, 2016	<u>57,743</u>	<u>23,379</u>	<u>193,488</u>	<u>2,525,843</u>	<u>2,743,099</u>	<u>5,543,552</u>
6. Unfunded actuarial accrued liability (UAAL) as of June 30, 2016: (4) – (5)	\$516,208	\$62,863	\$1,802,290	\$7,031,971	\$56,544,776	\$65,958,109
Annual Required Contribution for Fiscal Year Ending June 30, 2017						
7. Normal Cost as of June 30, 2017	\$5,086	\$6,618	\$21,166	\$234,572	\$1,685,108	\$1,952,550
8. Normal Cost as of June 30, 2016	4,926	6,410	20,500	227,188	1,632,066	1,891,090
9. Adjustment for timing	<u>181</u>	<u>236</u>	<u>755</u>	<u>8,366</u>	<u>60,096</u>	<u>69,634</u>
10. Normal Cost adjusted for timing: (8) + (9)	\$5,107	\$6,646	\$21,255	\$235,554	\$1,692,162	\$1,960,724
11. 30-year or 14-year amortization (2.5%) of the UAAL as of June 30, 2016	49,337	6,008	172,255	672,085	3,458,631	4,358,316
12. Adjustment for timing	<u>1,817</u>	<u>221</u>	<u>6,343</u>	<u>24,748</u>	<u>127,354</u>	<u>160,483</u>
13. Amortization payment adjusted for timing: (11) + (12)	\$51,154	\$6,229	\$178,598	\$696,833	\$3,585,985	\$4,518,799
14. Total Annual Required Contribution (ARC): (10) + (13)	56,261	12,875	199,853	932,387	5,278,147	6,479,523
15. Projected Benefit Payments	33,995	66	103,420	485,573	2,853,195	3,476,250

Note: Assumes payment in the middle of the fiscal year.

Sewer, Storm Water, Water and RMLD are calculated on a fully funded basis with a 7.50% discount rate and amortized over 14 years.

General Government is calculated on a fully funded basis with a 7.50% discount rate and amortized over 30 years.

SECTION 2: Valuation Results for the Town of Reading June 30, 2017 Measurement Under GASB 43 and 45

DEPARTMENT RESULTS (CONTINUED)

Actuarial Accrued Liability (AAL) and Annual Required Contribution

	Town	School	General Government
1. Current retirees, beneficiaries and dependents	\$11,984,658	\$22,623,140	\$34,607,798
2. Current active employees	<u>10,237,316</u>	<u>17,685,567</u>	<u>27,922,883</u>
3. Total as of June 30, 2017: (1) + (2)	\$22,221,974	\$40,308,707	\$62,530,681
4. Total as of June 30, 2016:	\$21,143,889	\$38,143,987	\$59,287,875
5. Actuarial value of assets as of June 30, 2016	<u>978,189</u>	<u>1,764,910</u>	<u>2,743,099</u>
6. Unfunded actuarial accrued liability (UAAL) as of June 30, 2016: (4) – (5)	\$20,165,700	\$36,379,077	\$56,544,776
Annual Required Contribution for Fiscal Year Ending June 30, 2017			
7. Normal Cost as of June 30, 2017	\$541,706	\$1,143,402	\$1,685,108
8. Normal Cost as of June 30, 2016	524,655	1,107,411	1,632,066
9. Adjustment for timing	<u>19,319</u>	<u>40,777</u>	<u>60,096</u>
10. Normal Cost adjusted for timing: (8) + (9)	\$543,974	\$1,148,188	\$1,692,162
11. 30-year amortization (2.5%) of the UAAL as of June 30, 2016	1,233,460	2,225,171	3,458,631
12. Adjustment for timing	<u>45,419</u>	<u>81,935</u>	<u>127,354</u>
13. Amortization payment adjusted for timing: (11) + (12)	\$1,278,879	\$2,307,106	\$3,585,985
14. Total Annual Required Contribution (ARC): (10) + (13)	1,822,853	3,455,294	5,278,147
15. Projected Benefit Payments	1,033,649	1,819,546	2,853,195

Note: Assumes payment in the middle of the fiscal year.

SECTION 2: Valuation Results for the Town of Reading June 30, 2017 Measurement Under GASB 43 and 45

FUNDING SCHEDULES

30 Years Closed (7.50% discount rate)

General Government

Fiscal Year Ended June 30	(1) Projected Benefit Payments	(2) Normal Cost with Interest	(3) Amortization of UAAL	(4) Total Funding Requirement (2) + (3)	(5) Additional Funding	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) – (6)
2017	\$2,853,195	\$1,692,162	\$3,585,985	\$5,278,147	\$500,000	\$3,269,435	\$62,530,681	\$59,261,246
2018	3,067,185	1,747,157	3,816,922	5,564,079	500,000	4,033,053	65,851,848	61,818,795
2019	3,436,282	1,803,940	4,047,918	5,851,858	500,000	4,853,943	69,098,288	64,244,345
2020	3,763,179	1,862,568	4,281,477	6,144,045	500,000	5,736,400	72,310,064	66,573,664
2021	4,077,875	1,923,101	4,520,945	6,444,046	500,000	6,685,041	75,499,202	68,814,161
2022	4,368,078	1,985,602	4,768,034	6,753,636	500,000	7,704,830	78,691,438	70,986,608
2023	4,651,141	2,050,134	5,025,642	7,075,776	500,000	8,801,103	81,896,514	73,095,411
2024	4,889,578	2,116,763	5,295,860	7,412,623	500,000	9,979,597	85,163,837	75,184,240
2025	5,135,292	2,185,558	5,584,044	7,769,602	500,000	11,246,478	88,492,775	77,246,297
2026	5,296,241	2,256,589	5,892,448	8,149,037	500,000	12,608,375	91,978,155	79,369,780
2027	5,456,667	2,329,928	6,231,278	8,561,206	500,000	14,072,414	95,634,645	81,562,231
2028	5,702,217	2,405,651	6,605,770	9,011,421	500,000	15,646,256	99,389,291	83,743,035
2029	5,958,817	2,483,835	7,014,897	9,498,732	500,000	17,338,136	103,240,550	85,902,414
2030	6,226,964	2,564,560	7,464,137	10,028,697	5,000,000	23,822,607	107,186,330	83,363,723
2031	6,507,177	2,647,908	7,538,394	10,186,302	5,000,000	30,793,413	111,223,929	80,430,516
2032	6,800,000	2,733,965	7,597,489	10,331,454	5,000,000	38,287,029	115,349,969	77,062,940
2033	7,106,000	2,822,819	7,636,543	10,459,362	5,000,000	46,342,667	119,560,320	73,217,653
2034	7,425,770	2,914,561	7,649,096	10,563,657	5,000,000	55,002,477	123,850,023	68,847,546
2035	7,759,929	3,009,284	7,626,457	10,635,741	5,000,000	64,311,773	128,213,201	63,901,428
2036	8,109,126	3,107,086	7,556,672	10,663,758	5,000,000	74,319,266	132,642,966	58,323,700
2037	8,474,037	3,208,066	7,422,905	10,630,971	5,000,000	85,077,321	137,131,314	52,053,993
2038	8,855,369	3,312,328	7,200,711	10,513,039	5,000,000	96,642,230	141,669,015	45,026,785
2039	9,253,860	3,419,979	6,853,279	10,273,258	5,000,000	109,074,508	146,245,495	37,170,987
2040	9,670,284	3,531,128	6,322,599	9,853,727	5,000,000	122,439,206	150,848,695	28,409,489
2041	10,105,447	3,645,890	5,511,784	9,157,674	5,000,000	136,806,257	155,464,936	18,658,679
2042	10,560,192	3,764,381	4,246,192	8,010,573	5,000,000	152,250,837	160,078,759	7,827,922
2043	11,035,400	3,886,723	2,176,216	6,062,939	967,486	164,672,760	164,672,760	-

Note: Assumes payment in the middle of the fiscal year.

SECTION 2: Valuation Results for the Town of Reading June 30, 2017 Measurement Under GASB 43 and 45

FUNDING SCHEDULES (CONTINUED)

**14 Years Closed (7.50% discount rate)
Reading Municipal Light Department**

Fiscal Year Ended June 30	(1) Projected Benefit Payments	(2) Normal Cost with Interest	(3) Amortization of UAAL	(4) Total Funding Requirement (2) + (3)	(5) Additional Funding (4) - (1)	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) - (6)
2017	\$485,573	\$235,554	\$696,833	\$932,387	\$446,814	\$2,857,072	\$10,015,425	\$7,158,353
2018	521,991	243,210	747,838	991,048	469,057	3,557,681	10,477,536	6,919,855
2019	582,711	251,114	766,534	1,017,648	434,937	4,275,459	10,919,544	6,644,085
2020	658,118	259,275	785,697	1,044,972	386,854	4,997,217	11,324,981	6,327,764
2021	738,650	267,701	805,340	1,073,041	334,391	5,718,712	11,686,064	5,967,352
2022	827,326	276,401	825,473	1,101,874	274,548	6,432,273	11,991,308	5,559,035
2023	837,876	285,384	846,110	1,131,494	293,618	7,219,123	12,317,820	5,098,697
2024	884,119	294,659	867,263	1,161,922	277,803	8,048,589	12,630,491	4,581,902
2025	887,014	304,235	888,944	1,193,179	306,165	8,969,672	12,973,540	4,003,868
2026	882,031	314,123	911,168	1,225,291	343,260	9,998,297	13,357,736	3,359,439
2027	913,834	324,332	933,947	1,258,279	344,445	11,105,298	13,748,358	2,643,060
2028	885,706	334,873	957,296	1,292,169	406,463	12,359,625	14,208,369	1,848,744
2029	925,563	345,756	981,228	1,326,984	401,421	13,702,799	14,672,840	970,041
2030	967,213	356,993	1,005,759	1,362,752	395,539	15,140,613	15,140,613	-

Note: Assumes payment in the middle of the fiscal year.

SECTION 2: Valuation Results for the Town of Reading June 30, 2017 Measurement Under GASB 43 and 45

FUNDING SCHEDULES (CONTINUED)

14 Years Closed (7.50% discount rate)

Sewer

Fiscal Year Ended June 30	(1) Projected Benefit Payments	(2) Normal Cost with Interest	(3) Amortization of UAAL	(4) Total Funding Requirement (2) + (3)	(5) Additional Funding (4) - (1)	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) - (6)
2017	\$33,995	\$5,107	\$51,154	\$56,261	\$22,266	\$77,998	\$587,046	\$509,048
2018	36,545	5,273	53,181	58,454	21,909	106,564	598,651	492,087
2019	42,902	5,444	54,511	59,955	17,053	132,237	604,713	472,476
2020	50,807	5,621	55,874	61,495	10,688	153,236	603,217	449,981
2021	45,170	5,804	57,271	63,075	17,905	183,293	607,643	424,350
2022	49,767	5,993	58,703	64,696	14,929	212,519	607,830	395,311
2023	42,206	6,188	60,171	66,359	24,153	253,500	616,073	362,573
2024	44,270	6,389	61,675	68,064	23,794	297,183	623,003	325,820
2025	45,930	6,597	63,217	69,814	23,884	344,235	628,947	284,712
2026	39,683	6,811	64,797	71,608	31,925	403,153	642,036	238,883
2027	40,498	7,032	66,417	73,449	32,951	467,554	655,490	187,936
2028	41,756	7,261	68,077	75,338	33,582	537,439	668,887	131,448
2029	43,635	7,497	69,779	77,276	33,641	612,627	681,585	68,958
2030	45,599	7,741	71,523	79,264	33,665	693,452	693,452	-

Note: Assumes payment in the middle of the fiscal year.

SECTION 2: Valuation Results for the Town of Reading June 30, 2017 Measurement Under GASB 43 and 45

FUNDING SCHEDULES (CONTINUED)

**14 Years Closed (7.50% discount rate)
Storm Water**

Fiscal Year Ended June 30	(1) Projected Benefit Payments	(2) Normal Cost with Interest	(3) Amortization of UAAL	(4) Total Funding Requirement (2) + (3)	(5) Additional Funding (4) - (1)	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) - (6)
2017	\$66	\$6,646	\$6,229	\$12,875	\$12,809	\$29,418	\$99,532	\$70,114
2018	71	6,862	7,325	14,187	14,116	46,260	114,038	67,778
2019	2,616	7,085	7,508	14,593	11,977	62,148	127,224	65,076
2020	2,095	7,315	7,696	15,011	12,916	80,201	142,178	61,977
2021	3,024	7,553	7,888	15,441	12,417	99,090	157,537	58,447
2022	5,101	7,798	8,085	15,883	10,782	117,701	172,149	54,448
2023	5,421	8,051	8,287	16,338	10,917	137,848	187,787	49,939
2024	5,724	8,313	8,494	16,807	11,083	159,678	204,555	44,877
2025	6,048	8,583	8,706	17,289	11,241	183,309	222,525	39,216
2026	6,380	8,862	8,924	17,786	11,406	208,883	241,788	32,905
2027	6,854	9,150	9,147	18,297	11,443	236,414	262,303	25,889
2028	7,364	9,447	9,376	18,823	11,459	266,026	284,135	18,109
2029	7,696	9,754	9,610	19,364	11,668	298,076	307,579	9,503
2030	8,042	10,071	9,850	19,921	11,879	332,751	332,751	-

Note: Assumes payment in the middle of the fiscal year.

SECTION 2: Valuation Results for the Town of Reading June 30, 2017 Measurement Under GASB 43 and 45

FUNDING SCHEDULES (CONTINUED)

14 Years Closed (7.50% discount rate)

Water

Fiscal Year Ended June 30	(1) Projected Benefit Payments	(2) Normal Cost with Interest	(3) Amortization of UAAL	(4) Total Funding Requirement (2) + (3)	(5) Additional Funding (4) - (1)	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) - (6)
2017	\$103,421	\$21,255	\$178,598	\$199,853	\$96,432	\$244,375	\$2,060,270	\$1,815,895
2018	111,177	21,946	189,708	211,654	100,477	366,880	2,122,274	1,755,394
2019	104,204	22,659	194,451	217,110	112,906	511,459	2,196,897	1,685,438
2020	114,590	23,395	199,312	222,707	108,117	661,917	2,267,111	1,605,194
2021	120,626	24,155	204,295	228,450	107,824	823,355	2,337,121	1,513,766
2022	131,852	24,940	209,402	234,342	102,490	991,371	2,401,556	1,410,185
2023	142,106	25,751	214,637	240,388	98,282	1,167,625	2,461,033	1,293,408
2024	132,858	26,588	220,003	246,591	113,733	1,373,118	2,535,427	1,162,309
2025	142,812	27,452	225,503	252,955	110,143	1,590,301	2,605,976	1,015,675
2026	155,227	28,344	231,141	259,485	104,258	1,817,671	2,669,869	852,198
2027	168,983	29,265	236,920	266,185	97,202	2,054,778	2,725,246	670,468
2028	181,854	30,216	242,843	273,059	91,205	2,303,450	2,772,418	468,968
2029	190,038	31,198	248,914	280,112	90,074	2,569,599	2,815,661	246,062
2030	198,590	32,212	255,137	287,349	88,759	2,854,331	2,854,331	-

Note: Assumes payment in the middle of the fiscal year.

**SECTION 2: Valuation Results for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

November 2, 2017

ACTUARIAL CERTIFICATION

This is to certify that Segal Consulting, a Member of The Segal Group, Inc. has conducted an actuarial valuation of certain benefit obligations of the Town of Reading other postemployment benefit programs as of June 30, 2017, in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Number 45 and 74 for the determination of the liability for postemployment benefits other than pensions.

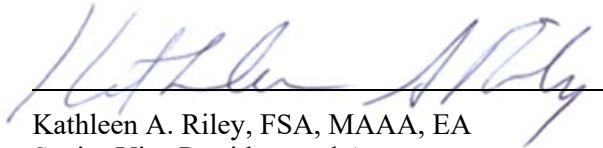
The actuarial valuation is based on the plan of benefits verified by the Town of Reading and on asset, participant, premium data and claims experience provided by the Town of Reading or from vendors employed by the Town of Reading. Segal Consulting does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. Segal, however, does review the data for reasonableness and consistency.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported here. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination or adequacy of funding an ongoing plan.

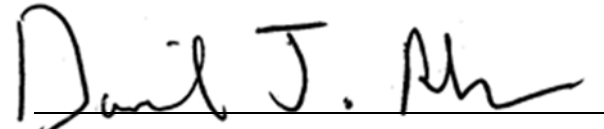
Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. The scope of the assignment did not include performing an analysis of the potential range of such future measurements.

**SECTION 2: Valuation Results for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

The signing actuaries are members of the American Academy of Actuaries and collectively meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, this report is complete and accurate and in our opinion presents the information necessary to comply with GASB Statements Number 45 and 74 with respect to the benefit obligations addressed. Further, in our opinion, the assumptions are reasonably related to the experience and expectations of the postemployment benefit programs.



Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary



Daniel J. Rhodes, FSA, MAAA
Vice President and Consulting Actuary

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

CHART 1
Required Supplementary Information – Schedule of Employer Contributions

Fiscal Year Ended June 30,	Annual OPEB Costs	Actual Contributions	Percentage Contributed
Total			
2009	\$6,326,701	\$3,457,966	54.7%
2010	6,483,108	3,812,158	58.8%
2011	6,994,599	2,765,276	39.5%
2012	6,953,068	3,980,453	57.2%
2013	5,346,430	5,363,364	100.3%
2014	5,684,967	4,042,494	71.1%
2015	5,698,342	4,050,731	71.1%
2016	5,920,789	4,278,048	72.3%
2017	6,672,684	4,360,996	65.4%
General Government			
2009	\$5,291,340	\$2,956,498	55.9%
2010	5,454,731	3,254,143	59.7%
2011	5,895,856	2,128,025	36.1%
2012	6,164,328	3,469,961	56.3%
2013	4,586,635	3,261,632	71.1%
2014	4,758,629	3,108,563	65.3%
2015	4,775,301	3,121,427	65.4%
2016	4,969,944	3,319,309	66.8%
2017	5,481,445	3,353,195	61.2%

Note: Historical information matches audited financial statements.

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

CHART 1
Required Supplementary Information – Schedule of Employer Contributions

Fiscal Year Ended June 30,	Annual OPEB Costs	Actual Contributions	Percentage Contributed
Reading Municipal Light Department			
2009	\$890,140	\$453,738	51.0%
2010	878,668	501,609	57.1%
2011	905,981	553,642	61.1%
2012	587,945	418,656	71.2%
2013	604,987	1,940,076	320.7%
2014	768,378	768,378	100.0%
2015	758,525	758,525	100.0%
2016	782,939	782,939	100.0%
2017	932,387	794,319	85.2%
Sewer			
2009	\$41,191	\$13,156	31.9%
2010	42,510	15,905	37.4%
2011	49,680	29,557	59.5%
2012	51,408	32,469	63.2%
2013	45,505	43,642	95.9%
2014	46,753	44,594	95.4%
2015	41,924	43,531	103.8%
2016	42,753	44,779	104.7%
2017	53,660	53,995	100.6%

Note: Historical information matches audited financial statements.

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

**CHART 1
Required Supplementary Information – Schedule of Employer Contributions**

Fiscal Year Ended June 30,	Annual OPEB Costs	Actual Contributions	Percentage Contributed
Storm Water			
2009	\$0	\$0	N/A
2010	0	0	N/A
2011	10,950	0	N/A
2012	11,966	45	0.4%
2013	4,446	5,619	126.4%
2014	4,522	5,835	129.0%
2015	6,561	6,854	104.5%
2016	6,781	7,151	105.5%
2017	12,399	6,066	48.9%
Water			
2009	\$104,030	\$34,574	33.2%
2010	107,199	40,501	37.8%
2011	132,132	54,052	40.9%
2012	137,421	59,322	43.2%
2013	104,857	112,395	107.2%
2014	106,685	115,124	107.9%
2015	116,031	120,394	103.8%
2016	118,372	123,870	104.6%
2017	192,792	153,420	79.6%

Note: Historical information matches audited financial statements.

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

This schedule of funding progress presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

CHART 2
Required Supplementary Information – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll* (c)	UAAL as a Percentage of Covered Payroll [(b) - (a) / (c)]
Total						
06/30/2008	\$0	\$83,501,922	\$83,501,922	0.00%	N/A	N/A
06/30/2011	1,167,161	94,458,486	93,291,325	1.24%	N/A	N/A
06/30/2013	2,860,432	67,170,840	64,310,408	4.26%	N/A	N/A
06/30/2014	3,722,552	66,759,344	63,036,792	5.58%	N/A	N/A
06/30/2017	6,478,298	75,292,954	68,814,656	8.60%	N/A	N/A
General Government						
06/30/2008	\$0	\$73,255,193	\$73,255,193	0.00%	N/A	N/A
06/30/2011	0	82,667,461	82,667,461	0.00%	N/A	N/A
06/30/2013	1,302,020	57,967,929	56,665,909	2.25%	N/A	N/A
06/30/2014	1,754,578	57,379,746	55,625,168	3.06%	N/A	N/A
06/30/2017	3,269,435	62,530,681	59,261,246	5.23%	N/A	N/A
Reading Municipal Light Department						
06/30/2008	\$0	\$8,085,388	\$8,085,388	0.00%	N/A	N/A
06/30/2011	1,167,161	8,643,438	7,476,277	13.50%	N/A	N/A
06/30/2013	1,495,511	7,588,993	6,093,482	19.71%	N/A	N/A
06/30/2014	1,846,042	7,726,667	5,880,625	23.89%	N/A	N/A
06/30/2017	2,857,072	10,015,425	7,158,353	28.53%	N/A	N/A

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

**CHART 2
Required Supplementary Information – Schedule of Funding Progress**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll* (c)	UAAL as a Percentage of Covered Payroll [(b) - (a) / (c)]
Sewer						
06/30/2008	\$0	\$565,987	\$565,987	0.00%	N/A	N/A
06/30/2011	0	791,319	791,319	0.00%	N/A	N/A
06/30/2013	9,667	474,514	464,847	2.04%	N/A	N/A
06/30/2014	17,602	421,654	404,052	4.17%	N/A	N/A
06/30/2017	77,998	587,046	509,048	13.29%	N/A	N/A
Storm Water						
06/30/2008	\$0	\$0	\$0	0.00%	N/A	N/A
06/30/2011	0	38,722	38,722	0.00%	N/A	N/A
06/30/2013	5,570	15,691	10,121	35.50%	N/A	N/A
06/30/2014	11,355	31,092	19,737	36.52%	N/A	N/A
06/30/2017	29,418	99,532	70,114	29.56%	N/A	N/A
Water						
06/30/2008	\$0	\$1,595,354	\$1,595,354	0.00%	N/A	N/A
06/30/2011	0	2,317,546	2,317,546	0.00%	N/A	N/A
06/30/2013	47,664	1,123,713	1,076,049	4.24%	N/A	N/A
06/30/2014	92,975	1,200,185	1,107,210	7.75%	N/A	N/A
06/30/2017	244,375	2,060,270	1,815,895	11.86%	N/A	N/A

Note: Historical information matches audited financial statements.

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

**CHART 3
Required Supplementary Information – Net OPEB Obligation/(Asset) (NOO/NOA)**

Fiscal Year Ended June 30,	Annual Required Contribution (a)	Interest on Existing NOO (b)	ARC Adjustment (c)	Annual OPEB Cost (a) + (b) + (c) (d)	Actual Contribution Amount (e)	Net Increase in NOO (d) - (e) (f)	NOO as of Following Date (g)
Total							
2009	\$6,326,701	\$0	\$0	\$6,326,701	\$3,457,966	\$2,868,735	\$2,868,735
2010	6,483,108	0	0	6,483,108	3,812,158	2,670,950	5,539,685
2011	6,759,799	492,954	-258,154	6,994,599	2,765,276	4,546,186	10,085,871
2012	6,938,990	423,703	-409,625	6,953,068	3,980,453	2,972,615	13,058,486
2013	5,287,713	683,082	-624,365	5,346,430	5,363,364	-16,934	13,041,552
2014	5,620,260	758,739	-694,032	5,684,967	4,042,494	1,642,473	14,684,025
2015	5,612,740	888,652	-803,050	5,698,342	4,050,731	1,647,611	16,331,636
2016	5,826,155	987,399	-892,765	5,920,789	4,278,048	1,642,741	17,974,377
2017	6,479,523	1,348,078	-1,154,917	6,672,684	4,360,996	2,311,688	20,286,065
General Government							
2009	\$5,291,340	\$0	\$0	\$5,291,340	\$2,956,498	\$2,334,842	\$2,334,842
2010	5,454,731	0	0	5,454,731	3,254,143	2,200,588	4,535,430
2011	5,887,367	256,026	-247,537	5,895,856	2,128,025	4,044,289	8,579,719
2012	6,150,815	407,537	-394,024	6,164,328	3,469,961	2,694,367	11,274,086
2013	4,524,423	648,260	-586,048	4,586,635	3,261,632	1,325,003	12,599,089
2014	4,689,105	724,448	-654,924	4,758,629	3,108,563	1,650,066	14,249,155
2015	4,683,436	854,949	-763,084	4,775,301	3,121,427	1,653,874	15,903,029
2016	4,867,416	954,182	-851,654	4,969,944	3,319,309	1,650,635	17,553,664
2017	5,278,147	1,316,525	-1,113,227	5,481,445	3,353,195	2,128,250	19,681,914

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

**CHART 3
Required Supplementary Information – Net OPEB Obligation/(Asset) (NOO/NOA)**

Fiscal Year Ended June 30,	Annual Required Contribution (a)	Interest on Existing NOO (b)	ARC Adjustment (c)	Annual OPEB Cost (a) + (b) + (c) (d)	Actual Contribution Amount (e)	Net Increase in NOO (d) - (e) (f)	NOO as of Following Date (g)
Reading Municipal Light Department							
2009	\$890,140	\$0	\$0	\$890,140	\$453,738	\$436,402	\$436,402
2010	878,668	0	0	878,668	501,609	377,059	813,461
2011	680,035	225,946	0	905,981	553,642	352,339	1,165,800
2012	587,945	0	0	587,945	418,656	169,289	1,335,089
2013	604,987	0	0	604,987	1,940,076	-1,335,089	0
2014	768,378	0	0	768,378	768,378	0	0
2015	758,525	0	0	758,525	758,525	0	0
2016	782,939	0	0	782,939	782,939	0	0
2017	932,387	0	0	932,387	794,319	138,068	138,068
Sewer							
2009	\$41,191	\$0	\$0	\$41,191	\$13,156	\$28,035	\$28,035
2010	42,510	0	0	42,510	15,905	26,605	54,640
2011	49,572	3,254	-3,146	49,680	29,557	33,994	88,634
2012	51,239	4,210	-4,041	51,408	32,469	18,939	107,573
2013	46,342	8,337	-9,174	45,505	43,642	1,863	109,436
2014	47,945	8,481	-9,673	46,753	44,594	2,159	111,595
2015	43,531	8,649	-10,256	41,924	43,531	-1,607	109,988
2016	44,779	8,524	-10,550	42,753	44,779	-2,026	107,962
2017	56,261	8,097	-10,698	53,660	53,995	-336	107,626

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

**CHART 3
Required Supplementary Information – Net OPEB Obligation/(Asset) (NOO/NOA)**

Fiscal Year Ended June 30,	Annual Required Contribution (a)	Interest on Existing NOO (b)	ARC Adjustment (c)	Annual OPEB Cost (a) + (b) + (c) (d)	Actual Contribution Amount (e)	Net Increase in NOO (d) - (e) (f)	NOO as of Following Date (g)
Storm Water							
2009	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2010	0	0	0	0	0	0	0
2011	10,950	0	0	10,950	0	10,950	10,950
2012	11,949	520	-503	11,966	45	11,921	22,871
2013	4,623	1,773	-1,950	4,446	5,619	-1,173	21,698
2014	4,758	1,682	-1,918	4,522	5,835	-1,313	20,385
2015	6,854	1,580	-1,873	6,561	6,854	-293	20,092
2016	7,151	1,557	-1,927	6,781	7,151	-370	19,722
2017	12,875	1,479	-1,954	12,399	6,066	6,333	26,055
Water							
2009	\$104,030	\$0	\$0	\$104,030	\$34,574	\$69,456	\$69,456
2010	107,199	0	0	107,199	40,501	66,698	136,154
2011	131,875	7,728	-7,471	132,132	54,052	104,614	240,768
2012	137,042	11,436	-11,057	137,421	59,322	78,099	318,867
2013	107,338	24,712	-27,193	104,857	112,395	-7,538	311,329
2014	110,074	24,128	-27,517	106,685	115,124	-8,439	302,890
2015	120,394	23,474	-27,837	116,031	120,394	-4,363	298,527
2016	123,870	23,136	-28,634	118,372	123,870	-5,498	293,029
2017	199,853	21,977	-29,038	192,792	153,420	39,372	332,401

Note: Historical information matches audited financial statements.

SECTION 3: GASB No. 45 Information for the Town of Reading June 30, 2017

**CHART 4
Summary of Required Supplementary Information**

Valuation date	June 30, 2017
Actuarial cost method	Entry Age Normal – Level percentage of payroll
Amortization method	Payments increasing at 2.50%
Remaining amortization period	30-year closed for General Government and 14-year closed for all other Departments
Asset valuation method	Market value
Actuarial assumptions:	
Investment rate of return	7.50%
Discount rate	7.50%
Inflation rate	2.50%
Projected salary increases	6.00% decreasing to 4.25% based on service for Group 1 and Group 2 7.00% decreasing to 4.75% based on service for Group 4 7.50% decreasing to 4.0% based on service for Teachers
Medical/Prescription drug trend rate	7.0% decreasing by 0.5% for 5 years to an ultimate level of 4.5% per year
Plan membership:	
Current retirees, beneficiaries, and dependents	711
Current active participants	<u>639</u>
Total	1,350

SECTION 4: GASB No. 74 Information for the Town of Reading June 30, 2017

EXHIBIT 1

Plan Membership

Plan membership: At June 30, 2017, The Town of Reading plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	711
Active members	<u>639</u>
Total	1,350

Note: We have assumed other general information about the Plan will be provided by the Town's auditors.

SECTION 4: GASB No. 74 Information for the Town of Reading June 30, 2017

**EXHIBIT 2
Net OPEB Liability**

The components of the Net OPEB Liability of the Town of Reading are as follows:

	June 30, 2017
Total OPEB liability	\$75,292,954
Plan fiduciary net position	6,478,298
Net OPEB Liability	68,814,656
Plan fiduciary net position as a percentage of the total OPEB liability*	8.60%

* *These funded percentages are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.*

Actuarial assumptions. The total OPEB liability was measured by an actuarial valuation as of June 30, 2017 using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50%
Salary increases	6.00% decreasing to 4.25% based on service for Group 1 and Group 2 7.00% decreasing to 4.75% based on service for Group 4 7.50% decreasing to 4.00% based on service for Teachers
Discount rate	7.50%
Investment rate of return	7.50%
Health care trend rates	
<i>Medical/Prescription Drug</i>	7.0% decreasing by 0.5% for 5 years to an ultimate level of 4.5% per year

SECTION 4: GASB No. 74 Information for the Town of Reading June 30, 2017

Mortality tables

<i>Pre-Retirement (Non-Teachers)</i>	RP-2014 Healthy Employee Table projected generationally with Scale MP2014
<i>Healthy (Non-Teachers)</i>	RP-2014 Healthy Annuitant Table projected generationally with Scale MP2014
<i>Disabled (Non-Teachers)</i>	RP-2014 Disabled Retiree Table projected generationally with Scale MP2014
<i>Pre-Retirement (Teachers)</i>	RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP-2016
<i>Healthy (Teachers)</i>	RP-2014 White Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2016
<i>Disabled (Teachers)</i>	RP-2014 Healthy Annuitant Mortality Table set forward 4 years projected generationally with Scale BB from 2014

Detailed information regarding all actuarial assumptions can be found in Section 5, Exhibit II.

SECTION 4: GASB No. 74 Information for the Town of Reading June 30, 2017

EXHIBIT 3

Determination of Discount Rate and Investment Rates of Return

DEVELOPMENT OF LONG-TERM RATE

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 rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These returns 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 and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized below:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	18.00%	6.44%
International developed markets equity	16.00%	7.40%
International emerging markets equity	6.00%	9.42%
Core fixed income	12.00%	2.02%
High-yield fixed income	10.00%	4.43%
Real estate	10.00%	5.00%
Commodities	4.00%	4.43%
Hedge fund, GTAA, Risk parity	13.00%	3.75%
Private equity	<u>11.00%</u>	10.47%
Total	100.00%	

Note: Some asset classes in the target allocation have been combined.

Nature of Assets: The assets are in an irrevocable OPEB Trust and are part of the State Retiree Benefits Trust Fund.

SECTION 4: GASB No. 74 Information for the Town of Reading June 30, 2017

**EXHIBIT 4
Sensitivity**

Sensitivity of the net OPEB liability to changes in the discount rate. The following presents the NOL of the Town of Reading as well as what the Town of Reading’s NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate.

	1% Decrease in Discount Rate (6.50%)	Current Discount Rate (7.50%)	1% Increase in Discount Rate (8.50%)
Town of Reading’s net OPEB liability as of June 30, 2017	\$78,147,496	\$68,814,656	\$61,050,477

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates. The following presents the net OPEB liability of the Town of Reading, as well as what the Town of Reading’s net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point than the current rate:

	1% Decrease	Current Trend Rate	1% Increase
Town of Reading’s net OPEB liability as of June 30, 2017	\$60,342,347	\$68,814,656	\$77,996,332

SECTION 4: GASB No. 74 Information for the Town of Reading June 30, 2017

EXHIBIT 5

Schedule of Changes in Net OPEB Liability – Last Ten Fiscal Years

	Year End June 30,									
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Total OPEB liability										
Service cost	\$1,891,090									
Interest	5,376,453									
Differences between expected and actual experience	0									
Changes of assumptions	0									
Benefit payments, including refunds of member contributions	-3,476,250									
					(Historical information prior to implementation of GASB 74/75 is not required)					
Net change in Total OPEB Liability	\$3,791,293									
Total OPEB Liability - beginning	71,501,661									
Total OPEB Liability - ending (a)	\$75,292,954									
Plan Fiduciary Net Position										
Contributions - employer	\$4,360,996									
Contributions - employee	0									
Net investment income	50,000									
Benefit payments, including refunds of member contributions	-3,476,250									
					(Historical information prior to implementation of GASB 74/75 is not required)					
Administrative expenses	0									
Net change in Fiduciary Net Position	\$934,746									
Plan Fiduciary Net Position - beginning	5,543,552									
Plan Fiduciary Net Position - ending (b)	\$6,478,298									
Net OPEB liability – ending: (a)-(b)	\$68,814,656									
Plan's fiduciary net position as a percentage of the total OPEB liability	8.60%									
					(Historical information prior to implementation of GASB 74/75 is not required)					
Covered-employee payroll	N/A									
Net OPEB liability as a percentage of covered-employee payroll	N/A									

Notes: Please enter covered payroll for fiscal 2017.

2017 employer contributions include projected benefit payments of \$3,476,250 and \$884,746 in employer contributions to the trust.

Notes to Schedule:

Changes in Assumptions: None.

Changes in Plan Provisions: None.

SECTION 4: GASB No. 74 Information for the Town of Reading June 30, 2017

EXHIBIT 6

Schedule of Contributions – Last Ten Fiscal Years

	Year End June 30,									
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined contribution	\$6,479,523									
Contributions in relation to the actuarially determined contribution	<u>4,360,996</u>									
Contribution deficiency (excess)	\$2,118,527									
Covered-employee payroll	N/A									
Contributions as a percentage of covered-employee payroll	N/A									(Historical information prior to implementation of GASB 74/75 is not required)

Notes to Schedule:

Methods and assumptions used to establish actuarially determined contribution rates for fiscal 2017:

<i>Valuation date:</i>	Actuarially determined contribution for fiscal year ending June 30, 2017 was determined with the June 30, 2017 actuarial valuation.
<i>Actuarial cost method:</i>	Entry Age Normal – Level percentage of payroll
<i>Amortization method:</i>	Level percent of payroll
<i>Remaining amortization period:</i>	30 years from July 1, 2016 for General Government, 14 years from July 1, 2016 for all Other Departments
<i>Asset valuation method:</i>	Market value
<i>Investment rate of return:</i>	7.50%
<i>Inflation:</i>	2.50%
<i>Health Care Cost Trend Rates:</i>	
Medical/Prescription drug	7.0% decreasing by 0.5% for 5 years to an ultimate level of 4.5% per year
<i>Mortality Rates:</i>	
Pre-Retirement (Non-Teachers)	RP-2014 Healthy Employee Table projected generationally with Scale MP2014
Healthy (Non-Teachers)	RP-2014 Healthy Annuitant Table projected generationally with Scale MP2014
Disabled (Non-Teachers)	RP-2014 Disabled Retiree Table projected generationally with Scale MP2014
Pre-Retirement (Teachers)	RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP-2016
Healthy (Teachers)	RP-2014 White Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2016
Disabled (Teachers)	RP-2014 Healthy Annuitant Mortality Table set forward 4 years projected generationally with Scale BB from 2014

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

This exhibit summarizes the participant data used for the current and prior valuations.

**EXHIBIT I
Summary of Participant Data**

	Municipal Light	Sewer	Storm Water	Water	Town	School	Total
Active employees covered for medical benefits as of July 1, 2017							
Number of employees							
Male	42	3	2	10	108	67	232
Female	<u>16</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>58</u>	<u>333</u>	<u>407</u>
Total	58	3	2	10	166	400	639
Average age	48.8	42.1	53.3	43.3	47.1	45.4	46.1
Average service	13.6	16.7	9.0	12.3	13.2	9.4	10.9
Average age at hire	35.2	25.4	44.3	31.0	33.9	36.0	35.2
Retired employees, spouses and beneficiaries covered for medical benefits as of July 1, 2017							
Number of individuals	91	3	0	13	200	404	711
Average age	70.1	67.2	--	65.8	72.8	73.3	72.6
	Municipal Light	Sewer	Storm Water	Water	Town	School	Total
Active employees covered for medical benefits as of July 1, 2014							
Number of employees							
Male	37	3	2	9	95	69	215
Female	<u>14</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>44</u>	<u>267</u>	<u>325</u>
Total	51	3	2	9	139	336	540
Average age	50.7	40.1	49.6	42.7	47.3	44.6	45.8
Average service	15.2	14.7	6.5	14.3	14.8	10.2	11.9
Average age at hire	35.5	25.4	43.1	28.4	32.5	34.4	33.9
Retired employees, spouses and beneficiaries covered for medical benefits as of July 1, 2014							
Number of individuals	87	3	0	12	198	399	699
Average age	70.1	68.1	--	63.5	72.4	72.1	71.7

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

**EXHIBIT II
Actuarial Assumptions and Actuarial Cost Method**

Data:	Detailed census data, claim experience, premium rates, and summary plan descriptions for postemployment welfare benefits were provided by the Town of Burlington.
Actuarial Cost Method:	Entry Age Normal – Level Percentage of Payroll (previously, Projected Unit Credit).
Per Capita Cost Development:	Per capita costs were based on the fully insured premium rates effective July 1, 2017 for non-Medicare plans and January 1, 2017 for the BCBS Medicare plan. Premiums were combined by taking a weighted average based on the number of participants in each plan, and were then trended to the midpoint of the valuation year at assumed trend rates. Actuarial factors were then applied to the weighted average cost to estimate individual retiree and spouse costs by age and by gender.
Measurement Date:	June 30, 2017 The results of the June 30, 2017 actuarial valuation were used to determine the Annual Required Contribution for the fiscal year ending June 30, 2017.
Discount Rate:	7.50% (previously, 6.00% partially funded for General Government and 7.75% funded for all other departments).
Salary Increase:	6.0% decreasing to 4.25% based on service for Group 1 and Group 2 7.0% decreasing to 4.75% based on service for Group 4 7.5% decreasing to 4.0% based on service for Teachers
Asset Valuation Method:	Market value

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Mortality Rates:

<i>Pre-Retirement (Non-Teachers)</i>	RP-2014 Healthy Employee Table projected generationally with Scale MP2014 (previously, RP-2000 Healthy Employee Mortality Table projected 20 years with Scale AA)
<i>Healthy (Non-Teachers)</i>	RP-2014 Healthy Annuitant Table projected generationally with Scale MP2014 (previously, RP-2000 Healthy Annuitant Mortality Table projected 15 years with Scale AA)
<i>Disabled (Non-Teachers)</i>	RP-2014 Disabled Retiree Table projected generationally with Scale MP2014 (previously, RP-2000 Healthy Annuitant Mortality Table set forward 5 years projected 15 years with Scale AA)
<i>Pre-Retirement (Teachers)</i>	RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP-2016 (previously, RP-2000 Combined Healthy White Collar Mortality Table projected 22 years with Scale AA)
<i>Healthy (Teachers)</i>	RP-2014 White Collar Healthy Annuitant Mortality Table projected generationally with Scale MP-2016 (previously, RP-2000 Healthy Annuitant with Large Benefit Amount Adjustment Mortality Table projected 17 years with Scale AA)
<i>Disabled (Teachers)</i>	RP-2014 Healthy Annuitant Mortality Table set forward 4 years projected generationally with Scale BB from 2014 (previously, RP-2000 Healthy Annuitant with Large Benefit Amount Adjustment Mortality Table set forward 3 years and projected 7 years with Scale AA)

The underlying tables with generational projection to the ages of participants as of the measurement date reasonably reflect the mortality experience of the plan as of the measurement date. The mortality tables were then adjusted to future years using generational projection to reflect future mortality improvement between the measurement date and those years.

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Non-Teacher Annuitant Mortality Rates:

Age	Rate per year (%)			
	Current		Previous	
	Male	Female	Male	Female
60	0.78	0.52	0.64	0.58
70	1.68	1.29	1.77	1.55
80	4.47	3.48	5.53	4.13
90	13.59	10.71	17.27	12.59

Note: Rates shown are before generational projection (previously, no generational projection.).

Teacher Annuitant Mortality Rates:

Age	Rate per year (%)			
	Current		Previously	
	Male	Female	Male	Female
60	0.52	0.39	0.50	0.48
70	1.24	1.06	1.29	1.30
80	3.73	3.04	4.30	3.80
90	12.62	10.02	14.25	10.75

Note: Rates shown are before generational projection (previously, no generational projection.).

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Termination Rates before Retirement:

Groups 1 and 2 (excluding Teachers) - Rate per year (%)

Mortality

Age	Current		Previous		Disability
	Male	Female	Male	Female	
20	0.04	0.02	0.02	0.01	0.01
25	0.05	0.02	0.03	0.02	0.02
30	0.05	0.02	0.04	0.02	0.03
35	0.05	0.03	0.07	0.04	0.05
40	0.06	0.04	0.09	0.05	0.10
45	0.10	0.07	0.12	0.08	0.15
50	0.17	0.11	0.15	0.12	0.19
55	0.28	0.17	0.21	0.22	0.24
60	0.47	0.24	0.35	0.36	0.28

*Notes: 55% of the rates shown represent accidental disability and death.
Rates shown are before generational projection (previously, no generational projection).*

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Age	Group 4 – Rate (%)				Disability
	Mortality				
	Current		Previous		
	Male	Female	Male	Female	
20	0.04	0.02	0.02	0.01	0.10
25	0.05	0.02	0.03	0.02	0.20
30	0.05	0.02	0.04	0.02	0.30
35	0.05	0.03	0.07	0.04	0.30
40	0.06	0.04	0.09	0.05	0.30
45	0.10	0.07	0.12	0.08	1.00
50	0.17	0.11	0.15	0.12	1.25
55	0.28	0.17	0.21	0.22	1.20
60	0.47	0.24	0.35	0.36	0.85

Notes: 90% of the rates shown represent accidental disability and death.

Rates shown are before generational projection (previously, no generational projection).

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Teachers - Rate per year (%)					
Mortality					
Age	Current		Previously		Disability
	Male	Female	Male	Female	
20	0.02	0.01	0.02	0.01	0.00
25	0.03	0.01	0.03	0.02	0.01
30	0.03	0.02	0.03	0.02	0.01
35	0.04	0.03	0.05	0.04	0.01
40	0.05	0.04	0.07	0.05	0.01
45	0.08	0.06	0.10	0.07	0.03
50	0.12	0.10	0.13	0.10	0.05
55	0.20	0.16	0.22	0.22	0.07
60	0.34	0.26	0.39	0.42	0.07

Notes: 35% of the rates shown represent accidental disability.

75% of the death rates shown represent accidental death.

Mortality rates shown are before generational projection (previously, no generational projection).

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Withdrawal Rates:

Years of Service	Rate per year (%)			
	Groups 1 and 2		Years of Service	Group 4
	Current	Previously		
0	15.0	15.0	0 – 10	1.5
1	12.0	12.0	11+	0.0
2	10.0	10.0		
3	9.0	9.0		
4	8.0	8.0		
5	7.6	7.6		
6	7.6	7.5		
7	7.6	6.7		
8	7.6	6.3		
9	7.6	5.9		
10	5.4	5.4		
11	5.4	5.0		
12	5.4	4.6		
13	5.4	4.1		
14	5.4	3.7		
15	3.3	3.3		
16-19	3.3	2.0		
20	2.0	2.0		
21-24	2.0	1.0		
25 – 29	1.0	1.0		
30+	0.0	0.0		

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Age	Teachers - Rate per year (%)					
	0 Years of Service		5 Years of Service		10+ Years of Service	
	Male	Female	Male	Female	Male	Female
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

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Retirement Rates:

Age	Rate per year (%)		
	Groups 1 and 2 (excluding Teachers)		Group 4
	Male	Female	
45 - 49	--	--	1.0%
50	1.0%	1.5%	2.0
51	1.0	1.5	2.0
52	1.0	2.0	2.0
53	1.0	2.5	5.0
54	2.0	2.5	7.5
55	2.0	5.5	15.0
56	2.5	6.5	10.0
57	2.5	6.5	10.0
58	5.0	6.5	10.0
59	6.5	6.5	15.0
60	12.0	5.0	20.0
61	20.0	13.0	20.0
62	30.0	15.0	25.0
63	25.0	12.5	25.0
64	22.0	18.0	30.0
65	40.0	15.0	100.0
66	25.0	20.0	100.0
67	25.0	20.0	100.0
68	30.0	25.0	100.0
69	30.0	20.0	100.0
70	100.0	100.0	100.0

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Age	Teachers - Rate per year (%)					
	Years of Service					
	Less than 20		20 – 29		30 or more	
	Male	Female	Male	Female	Male	Female
50 - 52	--	--	1.0	1.0	2.0	1.5
53	--	--	1.5	1.0	2.0	1.5
54	--	--	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

Dependents: Demographic data was available for spouses of current retirees. For future retirees, husbands were assumed to be three years older than their wives and 60% were assumed to have an eligible spouse who also opts for health coverage at that time.

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Per Capita Health Costs:

Fiscal year 2017-2018 medical and prescription drug claims costs are shown in the table below for retirees and for spouses at selected ages. These costs are net of deductibles and other benefit plan cost sharing provisions.

Age	Non-Medicare Plans				Medicare Plans			
	Retiree		Spouse		Retiree		Spouse	
	Male	Female	Male	Female	Male	Female	Male	Female
45	\$9,585	\$12,024	\$5,945	\$8,975	N/A	N/A	N/A	N/A
50	11,376	12,958	7,946	10,405	N/A	N/A	N/A	N/A
55	13,511	13,949	10,633	12,043	N/A	N/A	N/A	N/A
60	16,045	15,035	14,235	13,968	N/A	N/A	N/A	N/A
65	19,056	16,198	19,056	16,198	\$3,734	\$3,174	\$3,734	\$3,174
70	22,086	17,455	22,086	17,455	4,328	3,420	4,328	3,420
75	23,801	18,789	23,801	18,789	4,664	3,682	4,664	3,682
80	25,630	20,257	25,630	20,257	5,022	3,969	5,022	3,969

**Weighted Average Annual Retiree
Contribution Amount:**

<i>Non-Medicare:</i>	\$3,679
<i>Medicare:</i>	\$1,172

**SECTION 5: Supporting Information for the Town of Reading June 30, 2017
Measurement Under GASB 45 and 74**

Health Care Cost Trend Rates: Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are “net” and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is applied to that year’s cost to yield the next year’s projected cost.

Year Ending June 30	Medical/drug
2018	7.0%
2019	6.5%
2020	6.0%
2021	5.5%
2022	5.0%
2023 & later	4.5%

The trend rate assumptions were developed using Segal’s internal guidelines, which are established each year using data sources such as the 2017 Segal Health Trend Survey, internal client results, trends from other published surveys prepared by the S&P Dow Jones Indices, consulting firms and brokers, and CPI statistics published by the Bureau of Labor Statistics.

Retiree Contribution Increase Rate: Retiree contributions for medical and prescription drug coverage are expected to increase with medical trend.

Participation and Coverage Election: 100% of active employees with coverage are assumed to elect retiree coverage. Part-time employees with coverage are not assumed to be eligible for retiree coverage and are therefore excluded from this valuation.

100% of retirees over age 65 are assumed to remain with their current medical plan for life.

For future retirees hired before 1986 and current retirees under age 65, 90% are assumed to be eligible for Medicare and are assumed to enroll in a Medicare Supplement plan upon reaching age 65 and 10% are assumed to be ineligible for Medicare and to remain enrolled in a non-Medicare plan.

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100% of active employees and retirees are assumed to have \$5,000 life insurance coverage.

Plan Design: Development of plan liabilities was based on the substantive plan of benefits in effect as described in Exhibit III.

Administrative Expenses: Administrative expenses are assumed to be included in the fully insured premium rates.

Missing Participant Data: A missing census item for a given participant was assumed to equal the average value of that item over all other participants of the same status for whom the item is known.

Health Care Reform Assumption: This valuation does not include the potential impact of any future changes due to the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 other than the excise tax on high cost health plans beginning in 2020 (reflected with this valuation) and those previously adopted as of the valuation date.

Demographic and Salary Scale Assumptions: Many of the demographic assumptions (including mortality, disability, turnover, retirement) and the salary scale assumption used in this valuation are the same as used in the Reading Contributory Retirement System Actuarial Valuation as of January 1, 2015, dated March 28, 2016 completed by KMS Actuaries and the Massachusetts Teachers' Retirement System Actuarial Valuation Report as of January 1, 2017, dated September 15, 2017. A review of the demographic assumptions is beyond the scope of this assignment, however, we have no reason to doubt the reasonableness of the assumptions.

The remaining demographic assumptions, such as percent married and enrollment elections, were based on the experience of the Plan and the experience of similar plans.

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**Justification for
Assumption Changes
Since Prior Valuation:**

Based on past experience and future expectations, the following actuarial assumptions were changed:

- The discount rate was decreased from 7.75% to 7.5% for RMLD, Sewer, Storm Water and Water.
- The discount rate was increased from 6.0% to 7.5% for General Government.
- The per capita health costs were updated to reflect current experience.
- The medical trend assumption was revised.
- The demographic assumptions were changed to match the assumptions used in the Reading Contributory Retirement System Actuarial Valuation as of January 1, 2015 dated March 28, 2016 completed by KMS Actuaries and the the Massachusetts Teachers' Retirement System Actuarial Valuation Report as of January 1, 2017, dated September 15, 2017.
- The excise tax on high cost health plans beginning in 2020 was recalculated with this valuation.

The funding method was changed from Projected Unit Credit to Entry Age Normal to comply with GASB Statement No. 74.

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**EXHIBIT III
Summary of Plan**

This exhibit summarizes the major benefit provisions as included in the valuation. To the best of our knowledge, the summary represents the substantive plans as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

Eligibility: Retired and receiving a pension from the Reading Contributory Retirement System or Massachusetts Teachers' Retirement System.

*Members hired before
April 2, 2012*

Group 1 and Group 2 (including Teachers):

- Retirees with at least 10 years of creditable service are eligible at age 55;
- Retirees with at least 20 years of creditable service are eligible at any age.

Group 4

- Retirees are eligible at age 55;
- Retirees with at least 20 years of creditable service are eligible at any age.

*Members hired on or
after April 2, 2012*

Group 1 (including Teachers):

- Retirees with at least 10 years of creditable service are eligible at age 60.

Group 2

- Retirees with at least 10 years of creditable service are eligible at age 55.

Group 4

- Retirees are eligible at age 55;
- Retirees with at least 10 years of creditable service are eligible at age 50.

Disability: Accidental (job-related) Disability has no age or service requirement. Ordinary (non-job related) Disability has no age requirement but requires 10 years of creditable service.

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Pre-Retirement Death: Surviving spouses of members who die in active service on Accidental (job-related) Death are eligible at any age. Surviving spouses of members who die in active service on Ordinary (non-job related) Death are eligible after two years of service.

Post-Retirement Death: Surviving spouse is eligible.

Benefit Types:

The Town participates in the Massachusetts Interlocal Insurance Association (MIIA) Health Benefits Trust. Medical and prescription drug benefits are provided to all eligible retirees through a variety of plans offered by Blue Cross Blue Shield of Massachusetts. The Town of Reading pays 71% of the premium. (Dental coverage is offered but it is 100% retiree paid and therefore has no impact on this valuation.) A life insurance benefit of \$5,000 is also provided, for which the Town pays 50% of the premium.

Duration of Coverage:

Lifetime.

Dependent Benefits:

Medical and Prescription Drugs.

Dependent Coverage:

Benefits are payable to a spouse for their lifetime, regardless of when the retirees dies.

Retiree Life:

\$5,000

Retiree Contributions:

Premium rates and retiree contributions as of January 1, 2017 and July 1, 2017 are summarized on the following page:

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	Subscribers*			Retirees 65 and over**	Monthly Premium (eff. 7/1/2017)	Town cost	Retiree cost	Retiree Cost %
	Active	Retiree	Total					
<u>Non-Medicare Actives and Retirees</u>								
BCBS Network Blue								
Individual	109	21	130	9	\$834.07	\$592.19	\$241.88	29.0%
Family	183	15	198	5	\$2,234.22	\$1,586.30	\$647.92	29.0%
BCBS PPO								
Individual	139	34	173	21	\$841.61	\$597.54	\$244.07	29.0%
Family	208	12	220	2	\$2,254.40	\$1,600.62	\$653.78	29.0%
<u>Non-Medicare Total</u>	639	82	721	37				

	Subscribers			Monthly Premium (eff. 1/1/2017)	Town cost	Retiree cost	Retiree Cost %
	Active	Retiree	Total				
<u>Medicare Supplement Plans</u>							
Medex	N/A	381	381	\$324.10	\$230.11	\$93.99	29.0%
<u>Medicare Total</u>		381	381				
<u>Retiree Total***</u>		463					

* Part-time employees with coverage are not assumed to be eligible for retiree coverage and are therefore excluded from the liability.
 ** 37 of 414 over-65 retirees are in a non-Medicare plan.
 *** In addition, there are 248 spouses of retirees covered under an individual or family policy.

Plan Changes
 Since the Prior Valuation: None

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**EXHIBIT IV
Definitions of Terms**

The following list defines certain technical terms for the convenience of the reader:

Assumptions or

Actuarial Assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Total OPEB Liability:

Present value of all future benefit payments for current retirees and active employees taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions.

Service Cost:

The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarially Determined Contribution: A target or recommended contribution to an OPEB plan for the reporting period based on the most recent measurement available.

Valuation Date:

The date at which the actuarial valuation is performed

Covered Employee Payroll:

The payroll of the employees that are provided OPEB benefits

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Discount Rate:	The single rate of return, that when applied to all projected benefit payments results in an actuarial present value that is the sum of the following: <ol style="list-style-type: none">(1) the actuarial present value of projected benefit payments projected to be funded by plan assets using a long term rate of return, and(2) the actuarial present value of projected benefit payments that are non included in (1) using a yield or index rate for 20 year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher
Entry Age Actuarial Cost Method:	An actuarial cost method where the present value of the projected benefits for an individual is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age
Healthcare Cost Trend Rates:	The rate of change in per capita health costs over time
Net OPEB Liability:	The Total OPEB Liability less the Plan Net Fiduciary Position
Plan Net Fiduciary Position:	Market Value of Assets
Real Rate of Return:	The rate of return on an investment after removing inflation

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**EXHIBIT V
Accounting Requirements**

The Governmental Accounting Standards Board (GASB) issued Statement Number 74 – *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, and Statement Number 75 – *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Under these statements, all state and local government entities that provide other post-employment benefits (OPEB) are required to report the cost of these benefits on their financial statements. The accounting standards supplement cash accounting, under which the expense for postemployment benefits is equal to benefit and administrative costs paid on behalf of retirees and their dependents (*i.e.*, a pay-as-you-go basis).

The statements cover postemployment benefits of health, prescription drug, dental, vision and life insurance coverage for retirees; long-term care coverage, life insurance and death benefits that are *not* offered as part of a pension plan; and long-term disability insurance for employees. The benefits valued in this report are limited to those described in Exhibit III, which are based on those provided under the terms of the substantive plan in effect at the time of the valuation and on the pattern of sharing costs between the employer and plan members. The projection of benefits is not limited by legal or contractual limits on funding the plan unless those limits clearly translate into benefit limits on the substantive plan being valued.

The new standards introduce an accrual-basis accounting requirement, thereby recognizing the employer cost of postemployment benefits over an employee’s career. The standards also introduce a consistent accounting requirement for both pension and non-pension benefits.

The total cost of providing postemployment benefits is projected, taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions. These assumptions are summarized in Exhibit II. This amount is then discounted to determine the Total OPEB Liability. The Net OPEB Liability (NOL) is the difference between the Total OPEB Liability and market value of assets in the Plan, called the Net Plan Fiduciary Position.

Once the NOL is determined, the Annual OPEB Expense is determined as the change in NOL from the prior year with deferred recognition of certain elements. In addition, Required Supplementary Information (RSI) must be reported, including historical information about the Net OPEB liability and the Contributions made to the Plan. Exhibit IV contains a definition of terms as well as more information about GASB 74/75 concepts.

The calculation of an accounting obligation does not, in and of itself, imply that there is any legal liability to provide the benefits valued, nor is there any implication that the Employer is required to implement a funding policy to satisfy the projected expense.

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Actuarial calculations reflect a long-term perspective, and the methods and assumptions use techniques designed to reduce short-term volatility in accrued liabilities and the actuarial value of assets, if any.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

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