

GASB Statements No. 74 and 75  
Report for Fiscal Year 2019

Town of Concord

Lawrence B. Stone



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January 9, 2020

Ms. Kerry Lafleur  
Finance Director / Treasurer-Collector  
Town of Concord  
22 Monument Square  
Concord, MA 01742

Dear Ms. Lafleur:

For the purpose of satisfying the requirements of the Government Accounting Standards Board (GASB) Statements No. 74 and No. 75, Stone Consulting, Inc. has prepared a set of illustrative tables and other Required Supplementary Information (RSI) based on the June 30, 2019 actuarial valuation of the Town of Concord Other Post-employment Benefits (OPEB) plan performed by Stone Consulting, Inc. The valuation and this report were prepared using generally accepted actuarial principles and practices and meet the parameters set by the Governmental Accounting Standards Board (GASB).

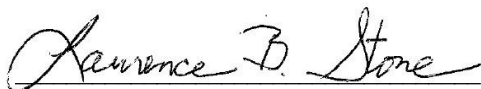
For GASB 74, the results are as of a valuation date of June 30, 2019, and an OPEB plan fiscal year-end of June 30, 2019. For GASB 75, the results are as of a valuation date of June 30, 2019, a measurement date of June 30, 2019, and a reporting date of June 30, 2019. To the best of our knowledge, this report is complete and accurate, and the assumptions used represent our best estimate of anticipated experience of the system unless required by statute or by the GASB standard.

We are pleased to present these exhibits. If the Town of Concord or the Town of Concord OPEB Trust has any questions on the content of this report, we would be glad to respond. Please note that this report is meant to be used in its entirety. Use of excerpts of this report may result in a misleading or inaccurate understanding of the results.

Stone Consulting, Inc. is completely independent of the Town of Concord or the Town of Concord OPEB Trust, including any of their officers and key personnel. Neither we or anyone else closely associated with us has any relationship with the Town of Concord or the Town of Concord OPEB Trust which would impair our independence, other than this or related assignments, such as work for the Town of Concord Retirement System.

The undersigned are consultants for Stone Consulting, Inc. and members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,  
STONE CONSULTING, INC.



Lawrence B. Stone  
Member, American Academy of Actuaries



Kevin K. Gabriel, FSA  
Member, American Academy of Actuaries

## SECTION I – ACTUARIAL RESULTS

### Summary of Results

The most recent actuarial OPEB valuation performed by Stone Consulting for the Town of Concord was on June 30, 2019. Participant census data as of June 30, 2019 was supplied by the Town of Concord and liabilities were first determined as of that date. Update procedures were used to roll the Total OPEB Liability from the valuation date to June 30, 2019, the OPEB plan’s fiscal year-end (GASB 74) and the measurement date (GASB 75).

The key results as of June 30, 2019 were:

Total OPEB Liability	\$ 54,532,494
Plan Fiduciary Net Position	<u>18,907,467</u>
Net OPEB Liability	\$ 35,625,027

- “Total OPEB Liability” is the total liability for all benefits as of the reporting date and is based on a projection of future liabilities based on the Town of Concord’s actuarial assumptions.
- “Plan Fiduciary Net Position” is the amount of assets available and in the OPEB trust as of the end of the 2019 Fiscal Year, 06/30/2019.
- “Net OPEB Liability” is the difference between the above two figures and is the amount of the future liability not funded as of the reporting date.

These amounts are calculated by using what is referred to as the “Entry Age Normal” actuarial cost method, which is the method required by GASB. Note, also, that these figures are intended for financial reporting and are not intended to be used to determine funding of the OPEB plan.

### Normal Cost

Normal Cost for Plan Year 2019	\$ 1,333,336
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“Normal” (or “Service”) Cost is the cost of benefits accruing in each year. This figure is based on an interest rate of 7.25% and the Entry Age Normal Cost Method. Because the Normal Cost used for Plan Year 2019 (GASB 75 FY 2019) is a beginning-of-year number, it is calculated using interest rate, valuation assumptions, and participant data from the prior valuation (06/30/2018) rolled forward as necessary to the beginning of the plan year (July 1, 2018).

These results used a discount rate of 7.25%. The 7.25% was based on an assessment of the Town of Concord’s investment strategy and should be thought of as the expected net long-term rate of return on the Town of Concord’s invested assets. The rate is determined based on a projection of future cash flows and assumes that the Town of Concord makes additional cash contributions according to funding schedule on page 10. Should the future contribution amount schedule change or the target asset allocation change, the valuation discount rate would likely change.

## Funding

Valuations performed for GASB74/75 purposes are not intended to be funding valuations. Rather, they are intended for use by accountants in developing financial statements. The rules set forth by GASB are designed to ensure that all entities report on a comparable basis. Development of a funding schedule requires additional assumptions and a separate actuarial valuation. The Town of Concord has asked Stone Consulting to develop a plan to fund its liability on an actuarial basis by Enterprise Fund and according to the following assumptions:

- The Entry Age Normal actuarial cost method used in determining the liability and Normal Cost
- Closed amortization of the unfunded liability over 26 years commencing in Fiscal Year 2009, increasing 3.00% annually. This is a change from the prior funding policy to fund over 30 years commencing in Fiscal Year 2009.
- 7.00% discount rate (this rate does not need to tie into the GASB 74/75 cash flow analysis)
- Normal Cost increases of 4.00%

In general, the funding amount is an amount to cover the Normal Cost for the year plus an amount to amortize the unfunded liability over a period of time. Using the EAN Method and a 7.00% discount rate, the Normal Cost for Fiscal Year 2020, including interest to the end of the year, is \$1,587,707.

The amortization amount, using the same actuarial cost method and discount rate (7.00%), would be the amount required to pay off the unfunded liability of \$37,481,476 over a given period of time and using a particular pattern (level, increasing, etc.). The Town of Concord has chosen a 16-year funding schedule with 3% amortization increases annually, with the goal of full funding by the end of Fiscal 2035. The amortization amount for Fiscal Year 2020, including interest to the end of the year is \$3,175,486.

Use of a different cost method, discount rate, or other assumptions would give a different number for the Normal Cost, the unfunded OPEB Liability, and amortization amount.

The funding schedule and the Actuarially Determined Contribution broken down by Enterprise Fund are included on page 10 this report.

**GASB Statement No. 74 – Net OPEB Liability**

The components of the Net OPEB Liability for the Town of Concord as of an OPEB plan fiscal year-end of June 30, 2019 were as follows:

	FY 2019	FY 2018
<b>Total OPEB Liability</b>		
Service Cost	\$ 1,333,336	\$ 1,315,915
Interest	3,694,236	3,231,988
Changes in Benefit Terms	19,740	0
Differences between expected and actual experience	954,765	1,425,318
Changes of assumptions/methodology	0	2,432,103
Benefit payments	(2,182,442)	(1,911,377)
<b>Net change in Total OPEB liability</b>	<b>\$ 3,819,635</b>	<b>\$ 6,493,947</b>
<b>Total OPEB Liability – beginning (7.25%)</b>	<b>50,712,859</b>	<b>44,218,912</b>
<b>Total OPEB Liability – ending (7.25%) (a)</b>	<b>\$ 54,532,494</b>	<b>\$ 50,712,859</b>
<b>Plan Fiduciary Net Position</b>		
Contributions – employer*	\$ 3,924,542	\$ 3,522,377
Net Investment Income	1,045,755	1,056,361
Benefit payments	(2,182,442)	(1,911,377)
Administrative expenses	0	0
<b>Net change in Plan Fiduciary Net Position</b>	<b>\$ 2,787,855</b>	<b>\$ 2,667,361</b>
<b>Plan Fiduciary Net Position – beginning</b>	<b>16,119,612</b>	<b>13,452,252</b>
<b>Plan Fiduciary Net Position – ending (b)</b>	<b>\$ 18,907,467</b>	<b>\$ 16,119,612</b>
<b>Net OPEB Liability – ending (a) – (b)</b>	<b>\$ 35,625,027</b>	<b>\$ 34,593,247</b>
<b>Plan Fiduciary Net Position as a percentage of Total OPEB Liability</b>	<b>34.7%</b>	<b>31.8%</b>

\*Employer contribution of \$2,182,442 of Pay-As-You-Go and a \$1,742,100 cash contribution for FY2019.

Note: Charts in this report may not total due to rounding.

### Changes from Prior Report

The following is a discussion of the reasons for some of the changes from the prior report:

- 1) Changes in Benefit Terms: The Town of Concord has offered incentives to retirees choosing high-deductible HSA-Qualified plans in Plan Year 2020. This incentive was applicable to three employees as of June 30, 2019. Since the Town of Concord has no long-term plan to offer this incentive, the one-year cost of the incentive was both added to and limited to liabilities and benefit payments in the first valuation year.
- 2) Experience changes:
  - a. There was a 3% decrease in liabilities due to lower than expected claims and trends and a 2% decrease in Service Cost. The decrease in Service Cost will be reflected in the following Plan Year.
  - b. Population changes increased liabilities by 2%. This was primarily due to a shift in the commercial plans chosen by retirees over age 65. This population showed a shift from family plans to two (retiree/spouse) individual plans. Because each individual plan is counted as a separate unit, this increased the overall percentage of retirees over age 65 choosing commercial plans from 0.15% to 0.38%. At the same time, the percentage of retirees over age 65 choosing family plans decreased from 55% to 42.5%.

### Distribution of the Member Population

Town of Concord OPEB Trust – Membership as of June 30, 2019

	2019
Retired, Disabled, Survivors and Beneficiaries receiving benefits	386
Inactive plan members entitled to but not yet receiving benefit payments	18
Active plan members	697
<b>Total</b>	<b>1,101</b>

These numbers are based on the data supplied by the Town of Concord as of June 30, 2019. Note that these membership numbers count a retiree and a spouse as only one member, even if they have separate policies.



## Development of Exhibits

### DISCOUNT RATE

Total OPEB Liability as of the plan's fiscal year-end (June 30, 2019) is calculated using a discount rate assumption of 7.25%. To calculate this rate, Stone Consulting has conducted a cash flow study of the Trust assets and liabilities. Using a rate consistent with the Town of Concord's investment strategy (7.25%), we determine the length of time for which the assets would support OPEB benefit payments for current and projected new employees. For the Town of Concord, there is no depletion point. The present value of OPEB benefits is then calculated using a rate consistent with the Town of Concord's investment strategy (7.25%) before the depletion point and a rate based on 20-year Municipal General Obligation bonds as shown in the Bond Buyer 20 Bond Index (3.50% as of June, 2019) after the depletion point. Finally, a single rate producing an equivalent present value of benefits is calculated. This is the 7.25% rate we have used for the Town of Concord. One of the objectives of the provisions introduced by GASB 74 and 75 is to examine how benefit payments and plan contributions and investment earnings interact on a cash flow basis. GASB 74 and 75 require that these amounts be calculated with the Fair Value of Assets and using the Entry Age Normal cost method.

Projected contributions for each year are the sum of cash payments and the pay-as-you-go funding of the retirees. Consistent with the requirements of GASB Statement No. 74 and 75, we have first assigned the contribution to the cost of projected new entrants prior to allocating the remainder to cover existing actives and inactive employees.

As of June 30, 2019, the Town of Concord's Fiduciary Net Position was projected to be available to make all future benefit payments of current active and inactive employees per the methodology contained in GASB 75. Thus, the long-term expected rate of return on investments was applied for all benefit periods when calculating the Net OPEB Liability.

The long-term rate of return which was used to develop the discount rate of 7.25% includes the effect of inflation (not subtracted out as in the real rates of return). It is based on a combination of expected rates of return on the mix of current and expected investments over a long-term period. These expectations are based on current market conditions, historical experience and future expectations. It assumes a rebalancing of assets on an ongoing basis as well as a constant monitoring of asset allocation and manager performance.

GASB Statement No. 74, Paragraph 34(b)(3) requires that an annual money-weighted rate of return be developed using the market value of assets at the beginning of the Plan Year, along with monthly cash flows. This has been done for the 2019 Fiscal year, and is shown below:

Fiscal Year	2019
Money-Weighted Rate of Return	6.16%

For detailed calculations of this amount, see the schedule on page 11.



### Discount Sensitivity

The following presents the Town of Concord's Net OPEB Liability calculated at the valuation discount rate of 7.25%, as well as at discount rates one percent higher (8.25%) and one percent lower (6.25%).

OPEB Plan Fiscal Year-End	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
06/30/2019	\$ 42,540,509	\$ 35,625,027	\$ 29,903,770

### Sensitivity of Current Valuation to Funding Level

To give the Town of Concord some idea of the sensitivity of the discount rate employed in the GASB valuation to the assumed funding level, Stone Consulting has performed depletion analysis under various funding scenarios. If the Town of Concord were to cease making contributions to the OPEB trust, the discount rate employed would be lowered by 170 basis points from 7.25% to 5.55%. Alternately, if contributions were to be made according to the funding schedule for 3 years through FY 2022 then cease, the trust would maintain the discount rate of 7.25%. Lower returns than 7.25% per annum will increase the number of years the Town of Concord needs to contribute in order to use the fully funded discount rate for GASB 74 and 75. We have not calculated liabilities at the 5.55% rate; however, as required by GASB 74 and shown above, a 6.25% discount rate increases the Net OPEB Liability from \$35,625,027 to \$42,540,509.

These sensitivity calculations assume the same assumptions and methods as used in the original valuation with only a change in the amount the Town of Concord plans to contribute. They also assume no change in the Town of Concord investment strategy. A change in such strategy would also impact the discount rate determined.

### Trend Sensitivity

For postretirement medical plans in particular, the calculated actuarial values are highly sensitive to the assumed rate of health care cost trend. This is due to the compounding effect of the annual trend rates assumed for medical costs, as opposed to pension valuations where benefit levels typically remain fixed.

The following table illustrates the effect on our valuation results of a 1% increase or decrease in the assumed rates of health care cost trend in each year.

OPEB Plan Fiscal Year-End	1% Decrease	Base Trend *	1% Increase
06/30/2019	\$ 29,331,169	\$ 35,625,027	\$ 43,346,470

\* Base trend rates are found in Actuarial Assumptions and Methods, page 30.

**Long-Term Expected Real Rate of Return**

The long-term expected real rate of return reflects the expected rate of return on plan assets adjusted for the expected rate of inflation. Note that the discount rate includes the effect of inflation. The long-term real rate of return removes the effect of inflation on the return amounts. It is a long-term assumption and is meant to reflect a best estimate of future experience, based on the expected asset allocation. The allocation percentages are based on information provided by the Town of Concord and the Plan’s asset consultant, ICMA-RC. Real rates of return are based on nominal long-term return estimates from New England Pension Consultants (NEPC), asset consultants for the Pension Reserves Investment Trust, adjusted using PRIT’s inflation rate of 2.25%.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return* (Geometric)
Equity	76%	5.38%
Fixed Income	17%	2.07%
Multi-Strategy	7%	4.41%

\* Returns for the Equity category are based on a blend of NEPC’s return rates for US equity, International equity, Emerging equity, and Hedged equity. For the Fixed Income category, NEPC’s projected return for Core bonds was used. The return figure for Multi-strategy is based on NEPC’s rate for Portfolio Completion (PCS).

**Schedule of Changes in the Town of Concord's Net OPEB Liability and Related Ratios – GASB 74**

(Amounts in Thousands)

Plan Year	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
<b>TOTAL OPEB LIABILITY</b>										
Service cost	1,333	1,316	1,265							
Interest	3,694	3,232	3,047							
Change of benefit terms	20	0	0							
Differences between expected and actual experience	955	1,425	0							
Change of assumptions and methods	0	2,432	0							
Benefit payments	(2,182)	(1,911)	(1,690)							
<b>Net change in total OPEB liability</b>	<b>3,820</b>	<b>6,494</b>	<b>2,622</b>							
<b>Total OPEB liability - beginning</b>	<b>50,713</b>	<b>44,219</b>	<b>41,597</b>							
<b>Total OPEB liability - ending</b>	<b>54,532</b>	<b>50,713</b>	<b>44,219</b>							
<b>PLAN FIDUCIARY NET POSITION</b>										
Contributions – employer	3,925	3,522	3,470							
Contributions – employee	0	0	0							
Net Investment Income	1,046	1,056	1,497							
Benefit payments	(2,182)	(1,911)	(1,690)							
Administrative expense	0	0	0							
Other	0	0	0							
<b>Net change in plan fiduciary net position</b>	<b>2,788</b>	<b>2,667</b>	<b>3,277</b>							
<b>Plan fiduciary net position - beginning</b>	<b>16,120</b>	<b>13,452</b>	<b>10,175</b>							
<b>Plan fiduciary net position - end</b>	<b>18,907</b>	<b>16,120</b>	<b>13,452</b>							
<b>Town of Concord Net OPEB Liability – ending</b>	<b>35,625</b>	<b>34,593</b>	<b>30,767</b>							
<b>Plan fiduciary net position as a percentage of the total OPEB liability</b>	<b>34.7%</b>	<b>31.8%</b>	<b>30.4%</b>							
<b>Money-Weighted Rate of Return</b>	<b>6.16%</b>	<b>7.24%</b>	<b>13.07%</b>							

**Schedule of Plan Contributions - GASB 74**

Plan Year-End of June 30,	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially Determined Contribution	\$3,729	\$3,589	\$4,088							
Contributions in relation to the Actuarially Determined Contribution	<u>(3,925)</u>	<u>(3,522)</u>	<u>(3,470)</u>							
Contribution deficiency / (excess)	(\$196)	\$67	\$618							

The Town of Concord's plan to fund OPEB is to contribute the Actuarially Required Contribution according to the schedule on the following page.

**Funding Schedule**

EAN Funding Schedule; 20 Years from 07/01/2019 (FY 2020) at 7.25%

Fiscal Year	Normal Cost + Expenses <sup>1</sup>	Amortization <sup>2</sup>	Actuarially Determined Contribution (ADC)	Projected Annual Benefit Cost <sup>3</sup>	Cash Contrib. (Adjusted for timing) <sup>4</sup>	Year-End UAAL
2020	\$1,504,010	\$2,636,358	\$4,140,368	\$2,190,734	\$1,949,634	\$35,477,587
2021	\$1,564,170	\$2,715,449	\$4,279,619	\$2,428,878	\$1,850,741	\$35,237,551
2022	\$1,626,737	\$2,796,912	\$4,423,649	\$2,708,153	\$1,715,496	\$34,895,747
2023	\$1,691,807	\$2,880,820	\$4,572,626	\$3,300,723	\$1,271,903	\$34,442,267
2024	\$1,759,479	\$2,967,244	\$4,726,723	\$3,581,991	\$1,144,733	\$33,866,406
2025	\$1,829,858	\$3,056,261	\$4,886,120	\$3,830,952	\$1,055,167	\$33,156,608
2026	\$1,903,052	\$3,147,949	\$5,051,002	\$4,185,528	\$865,473	\$32,300,396
2027	\$1,979,175	\$3,242,388	\$5,221,562	\$4,393,802	\$827,760	\$31,284,307
2028	\$2,058,342	\$3,339,659	\$5,398,001	\$4,456,791	\$941,210	\$30,093,816
2029	\$2,140,675	\$3,439,849	\$5,580,524	\$4,666,150	\$914,375	\$28,713,255
2030	\$2,226,302	\$3,543,045	\$5,769,347	\$4,896,041	\$873,306	\$27,125,733
2031	\$2,315,354	\$3,649,336	\$5,964,690	\$5,124,147	\$840,543	\$25,313,039
2032	\$2,407,968	\$3,758,816	\$6,166,785	\$5,281,560	\$885,225	\$23,255,545
2033	\$2,504,287	\$3,871,581	\$6,375,868	\$5,493,736	\$882,132	\$20,932,103
2034	\$2,604,459	\$3,987,728	\$6,592,187	\$5,468,774	\$1,123,412	\$18,319,926
2035	\$2,708,637	\$4,107,360	\$6,815,997	\$5,400,632	\$1,415,365	\$15,394,474
2036	\$2,816,983	\$4,230,581	\$7,047,563	\$5,484,122	\$1,563,441	\$12,129,318
2037	\$2,929,662	\$4,357,498	\$7,287,160	\$5,630,372	\$1,656,788	\$8,495,999
2038	\$3,046,848	\$4,488,223	\$7,535,071	\$5,768,004	\$1,767,068	\$4,463,885
2039	\$3,168,722	\$4,622,870	\$7,791,592	\$6,016,472	\$1,775,120	\$0

<sup>1</sup> Assumes 4.00% annual increase in normal cost and a static group of actives.

<sup>2</sup> Assumes 3.00% annual increase in amortization payment.

<sup>3</sup> The projected benefit cost, or Pay-As-You-Go amount, is for the current group of actives and retirees and is shown for the calendar year. It does not include any future hires. It is not directly comparable to the funding contribution but is included for illustrative purposes only. It does illustrate, in the short-term, the estimated amount of claims costs for retirees. However, the retiree amount is expected to grow as new employees retire or become disabled.

<sup>4</sup> Assumes timing of contribution at 12/31/2019.

**Breakdown by Enterprise Fund; Actuarially Determined Contribution (ADC) for FY 2020**

	General Fund	Water	Sewer	Light	Broadband	Swim
AAL 6/30/2019	\$48,226,507	\$1,366,515	\$308,985	\$3,936,373	\$80,791	\$613,321
Assets 6/30/2019	\$16,191,930	\$675,700	\$169,948	\$1,310,864	\$0	\$559,025
Unfunded AAL	\$32,034,577	\$690,815	\$139,037	\$2,625,509	\$80,791	\$54,297
Normal Cost	\$1,340,671	\$30,238	\$7,559	\$94,157	\$14,018	\$17,367
Amortization	\$2,370,654	\$51,122	\$10,289	\$194,296	\$5,979	\$4,018
ADC	\$3,711,325	\$81,360	\$17,849	\$288,453	\$19,997	\$21,385
Proj Annual Benefit Cost	\$1,996,540	\$34,052	\$6,222	\$138,820	\$51	\$15,050
Year-End UAAL	\$31,901,997	\$36,789	\$138,462	\$2,614,643	\$80,457	\$54,072
Cash Contribution	\$1,714,785	\$35,374	\$11,627	\$149,633	\$19,946	\$6,335

**GASB Statement No. 74, Paragraph 34 b. (3) - Money-Weighted Rate of Return**

NET EXTERNAL CASH FLOW					
	Beginning of month	Middle of Month	End of Month	Periods Invested**	Cash Flow with Return
Starting Value* (7/1/2018)	\$16,119,612.12			12	\$ 17,112,515.51
<u>Cash Flows:</u>					
July				11	0.00
August				10	0.00
September				9	0.00
October				8	0.00
November				7	0.00
December			1,742,100.00	6	1,794,951.48
January				5	0.00
February				4	0.00
March				3	0.00
April				2	0.00
May				1	0.00
June				0	<u>0.00</u>
Ending Value* (6/30/2019)	\$18,907,466.99			Sum:	\$ 18,907,466.99

\* Value shown does not include any payables or receivables, except those related to investments.

\*\* Middle of period cash flows are given an additional half period of interest, and beginning of period cash flows are given an additional full period.

Return Rate:	6.16%
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**Changes in the Net OPEB Liability [GASB 75, Paragraph 55]**

	Total OPEB Liability at 7.25% (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
<b>Balances at end of prior Measurement Period (06/30/2017)</b>	\$ 44,218,912	\$ 13,452,252	\$ 30,766,660
One-time adjustment for change in measurement date <sup>(1)</sup>	6,493,947	2,667,361	3,826,586
<b>Balances at beginning of Measurement Period (07/01/2018)</b>	\$ 50,712,859	\$ 16,119,612	\$ 34,593,247
<u>Changes for the Year:</u>			
Service Cost	1,333,336		1,333,336
Interest	3,694,236		3,694,236
Change in benefit terms	19,740		19,740
Differences between expected and actual experience	954,765		954,765
Change in assumptions/methods	0		0
Contributions - employer		3,924,542	(3,924,542)
Contributions – employee		0	0
Net investment income		1,045,755	(1,045,755)
Benefit payments, including refunds of employee contributions	(2,182,442)	(2,182,442)	0
Administrative expense		0	0
Other changes		0	0
Net Changes	<u>3,819,635</u>	<u>2,787,855</u>	<u>1,031,780</u>
<b>Balances at end of Measurement Period (06/30/2019)</b>	\$ 54,532,494	\$ 18,907,467	\$ 35,625,027

**NOTE:** Amounts shown in this report may not total due to rounding

<sup>(1)</sup> The Town of Concord has chosen to change the measurement date used for GASB 75. For Fiscal 2018, the measurement period ended at 06/30/2017. For Fiscal 2019, the measurement period begins at 07/01/2018 and ends at 06/30/2019. To adjust between the prior year-end date and the current beginning date, a one-time adjustment has been made to the Changes in NOL for GASB 75.

Plan Fiduciary Net Position as a percentage of Total OPEB Liability	34.7%
Covered Employee Payroll *	\$51,130,178
Net OPEB Liability as a percentage of payroll	69.7%

\* Fiscal Year 2019 pensionable payroll.



**Projection of the Net OPEB Liability**

**TOTAL OPEB LIABILITY (TOL)**

The Total OPEB Liability at the beginning of the measurement period (07/01/2018) is equal to the Actuarial Accrued Liability (AAL) calculated at 06/30/2018. Any differences between the projected amount and the actual value that are not the result of changes in assumptions, methods, or plan provisions are recognized as "Differences between expected and actual experience." GASB Statement No. 75, Paragraph 42 requires that the AAL be calculated under the Entry Age Normal Cost Method. The components of the AAL (calculated as of 06/30/2019 at a discount rate of 7.25%) are as follows:

Actives	\$ 23,815,509
Retirees, Disabled, Beneficiaries, and Vested Terminated	<u>30,716,985</u>
Total	\$ 54,532,494

The TOL is projected to the end of the measurement period (06/30/2019) by adding the changes resulting from experience, assumption changes, methodology changes, and changes to plan provisions. Interest is given to the TOL, Service Cost, and paid benefits, and added to the total, less the projected benefit payments for the year. Projected TOL is then compared with actual TOL. Changes due to expected and actual gains on plan assets will be recognized over a five-year period [GASB Statement No. 75, Paragraph 43b], and liabilities arising from changes in plan structure or assumptions will be spread over the average of the expected remaining service lives of all employees that are provided with OPEB through the OPEB plan (active employees and inactive employees) [GASB Statement No. 75, Paragraph 43a]. Changes in plan provisions are recognized immediately.

**PLAN FIDUCIARY NET POSITION (FNP)**

GASB Statement No. 75 requires that the Fair Value of Assets be used for the Fiduciary Net Position. We have used the Market Value of Assets, adjusted for payables and receivables. Net investment income is the portion of the change in assets during the measurement period that is not attributed to employee/employer contributions, benefits payments, administrative expense, or other changes.

The projected Net OPEB Liability (NOL) for the end of the year is the portion of the TOL not covered by the FNP.

**OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB**  
**[GASB 75, Paragraph 56 h.]**

	Deferred Outflows Of Resources	Deferred Inflows Of Resources
Differences between expected and actual experience	\$ 797,213	\$ 0
Changes of assumptions and methods	0	0
Net difference between projected and actual earnings on plan investments	0	(268,310)
<b>Total</b>	\$ 797,213	\$ (268,310)

Year Ending June 30, *	Recognition
2020	\$ 55,711
2021	55,711
2022	55,711
2023	194,766
2024	157,552
Thereafter	9,453

\*The years are based on measurement date of June 30, 2019. For GASB 75, the reporting date is the same as the measurement date, so the Fiscal Year ending June 30, 2020 is based on a measurement date of 06/30/2020.

### Components of the Town of Concord's OPEB Expense

Components of the Town of Concord's OPEB Expense for the Fiscal Year ended June 30, 2019 [GASB 75, Paragraph 43] are shown below.

NOTE*	Description	Fiscal 2019	Fiscal 2018
A	Service Cost	\$ 1,333,336	\$ 1,265,303
A, B	Interest	3,694,236	3,047,291
C	Differences between Expected and Actual Experience	157,552	0
D	Changes of Assumptions and Methods	0	0
D	Changes to Benefit Provisions	19,740	0
E	Projected Earnings on Plan Investments	(1,231,823)	(802,197)
F	Differences between Projected and Actual Earnings on Plan Investments	(101,841)	(139,055)
A	Administrative Expense	0	0
A	Other Changes in Fiduciary Net Position	0	0
	<b>Total OPEB Expense</b>	<b>\$ 3,871,199</b>	<b>\$ 3,371,343</b>

\* Notes shown on page 16. Amounts are based on the following dates:

- Valuation date: June 30, 2019
- Measurement date: June 30, 2019
- Reporting date: June 30, 2019

### CHANGES IN METHODS, ASSUMPTIONS, AND PLAN PROVISIONS

Benefit Provisions were changed to incentivize HSAQ/high deductible plans. The Town of Concord has indicated that this incentive will be made on a year-by-year basis. We have added the cost of incentives for FY20 to both the liabilities and the expected benefit payments and have assumed the incentive will not be offered in the future. The cost was estimated based on employees enrolled in HSAQ plans at the valuation date.

There were no other assumption changes in the June 30, 2019 valuation.

NOTES

- A. See the RSI schedule of changes to the Net OPEB Liability, on page 12.
- B. Events that impact the Total OPEB Liability are assumed to happen evenly throughout the period. In addition, the amount of interest is calculated using an interest rate equal to the discount rate that was used to determine the service cost. The amount is determined as follows:

Description	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	Interest on the Total OPEB Liability (a) x (b) x (c)
Beginning Total OPEB Liability	\$ 50,712,859	100%	7.25%	\$ 3,676,682
Service cost	1,333,336	100%	7.25%	96,667
Benefit payments	\$ (2,182,442)	50%	7.25%	(79,114)
Interest				\$ 3,694,236

- C. Differences between expected and actual experience recognized in the current period in accordance with paragraph 43a of Statement 75. For the detailed calculation of this amount, see the schedule on page 17.
- D. Assumption and plan provision changes recognized in OPEB Expense in the current period in accordance with paragraph 43a of Statement 75. For detailed calculations of these amounts, see the schedule on page 17.
- E. Changes in the amounts invested are assumed to occur evenly throughout the period. In addition, the amount of projected earnings on plan investments is calculated using the assumed rate of return on plan investments as of the beginning of the period. The amount is determined as follows:

Description	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Beginning plan Fiduciary Net Position	\$ 16,119,612	100%	7.25%	\$ 1,168,672
Employer contributions	3,924,542	50%	7.25%	142,265
Employee contributions	0	50%	7.25%	0
Benefit payments	(2,182,442)	50%	7.25%	(79,114)
Administrative expense	0	50%	7.25%	0
Total projected earnings				\$ 1,231,823
Actual earnings				1,045,755
Difference between projected and actual earnings				\$ 186,068

- F. Differences between projected and actual earnings recognized in the current period in accordance with paragraph 43b of Statement 75. For detailed calculation of this amount, see the schedule on page 17.

**Increase / (Decrease) in OPEB Expense Arising from the Recognition of Gains and Losses – GASB 75**

Increase / (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Fiscal Year	Differences between actual and expected experience	Recognition period (years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ -	5.59	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 954,765	6.06		\$ 157,552	\$ 157,552	\$ 157,552	\$ 157,552	\$ 157,552	\$ 157,552	\$ 9,453	\$ -	\$ -
Net increase (decrease) in OPEB expense			\$ -	\$ 157,552	\$ 157,552	\$ 157,552	\$ 157,552	\$ 157,552	\$ 157,552	\$ 9,453	\$ -	\$ -

Increase / (Decrease) in OPEB Expense Arising from the Recognition of the Effects of Changes of Assumptions

Fiscal Year	Change of assumptions	Recognition period (years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ -	5.59	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ -	6.06		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net increase (decrease) in OPEB expense			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Increase/ (Decrease) in OPEB Expense Arising from the Recognition of Differences between Expected and Actual Earnings on OPEB Plan Investments

Fiscal Year	Differences between projected and actual earnings on OPEB plan investments	Recognition period (years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ (695,275)	5	\$ (139,055)	\$ (139,055)	\$ (139,055)	\$ (139,055)	\$ (139,055)	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 186,068	5		\$ 37,214	\$ 37,214	\$ 37,214	\$ 37,214	\$ 37,214	\$ -	\$ -	\$ -	\$ -
Net increase (decrease) in OPEB expense			\$ (139,055)	\$ (101,841)	\$ (101,841)	\$ (101,841)	\$ (101,841)	\$ 37,214	\$ -	\$ -	\$ -	\$ -

### Deferred Outflows and Deferred Inflows of Resources Arising from Gains and Losses

Deferred Outflows and Deferred Inflows of Resources Arising from Differences between Expected and Actual Experience

Fiscal Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in OPEB Expense through June 30, 2019 (c)	BALANCES AT JUNE 30, 2019	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 954,765	\$ -	\$ 157,552	\$ 797,213	\$ -
<b>TOTAL</b>				\$ 797,213	\$ -

Deferred Outflows and Deferred Inflows of Resources Arising from Changes of Assumptions

Fiscal Year	Increases in the Total OPEB Liability (a)	Decreases in the Total OPEB Liability (b)	Amounts Recognized in OPEB Expense through June 30, 2019 (c)	BALANCES AT JUNE 30, 2019	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>				\$ -	\$ -

Deferred Outflows and Deferred Inflows of Resources  
 Arising from Differences between Expected and Actual Earnings on OPEB Plan Investments

Fiscal Year	Investment Earnings Less than Projected (a)	Investment Earnings More than Projected (b)	Amounts Recognized in OPEB Expense through June 30, 2019 (c)	BALANCES AT JUNE 30, 2019	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ -	\$ (695,275)	\$ (278,110)	\$ -	\$ (417,165)
2019	\$ 186,068	\$ -	\$ 37,214	\$ 148,855	\$ -
<b>TOTAL</b>				\$ 148,855	\$ (417,165)
			<b>NET TOTAL</b>		\$ (268,310)

**Results by Employer**

Employer	Proportion	Contributions made FY 2019 *	Proportionate Share of OPEB Expense	One-time adjustment to NOL
General Fund	91.55%	\$ 3,592,918	\$ 3,544,225	\$ 3,479,515
Water	1.38%	\$ 54,159	\$ 53,576	\$ 27,169
Sewer	0.29%	\$ 11,381	\$ 11,252	\$ 6,888
Light	6.17%	\$ 242,144	\$ 238,729	\$ 256,764
Broadband	0.07%	\$ 2,747	\$ 2,726	\$ -
Swim/Beede	0.54%	\$ 21,193	\$ 20,691	\$ 56,251
TOTAL	100.00%	\$ 3,924,542	\$ 3,871,199	\$ 3,826,586

Employer	Proportionate Share of NOL	Proportionate share of NPL Discount Sensitivity (in 1,000's)	
		1% Increase (8.25%)	1% Decrease (6.25%)
General Fund	\$ 32,400,234	\$ 27,377	\$ 38,946
Water	\$ 259,850	\$ 413	\$ 587
Sewer	\$ 65,260	\$ 87	\$ 123
Light	\$ 2,384,868	\$ 1,845	\$ 2,625
Broadband	\$ 722	\$ 21	\$ 30
Swim/Beede	\$ 514,092	\$ 161	\$ 230
TOTAL	\$ 35,625,027	\$ 29,904	\$ 42,541

Employer	Change in NOL due to Change in Proportionality	Proportionate Share of Deferred Outflows of Resources	Proportionate Share of Deferred Inflows of Resources
General Fund	\$ 861	\$ 730,568	\$ (243,052)
Water	\$ 932	\$ 11,780	\$ (908)
Sewer	\$ 153	\$ 2,440	\$ (319)
Light	\$ (751)	\$ 49,188	\$ (19,434)
Broadband	\$ 97	\$ 639	\$ 104
Swim/Beede	\$ (1,293)	\$ 4,305	\$ (6,408)
TOTAL	\$ -	\$ 798,919	\$ (270,016)

\* Cash contributions made to OPEB trust plus premium payments and a share of the implicit subsidy. The implicit subsidy is allocated since the Enterprise Fund entities have made premium payments for active members.



**SECTION II - ACTUARIAL VALUATION DETAILS**

**Population Data**

- A. DISTRIBUTION BY AGE: RETIREES, BENEFICIARIES, AND SURVIVORS; Includes 19 retirees split between CPS and CCRSD  
 (Includes retirees with life only)

Age	Total
0-19	0
20-24	0
25-29	0
30-34	0
35-39	2
40-44	2
45-49	1
50-54	4
55-59	18
60-64	31
65-69	100
70-74	139
75-79	78
80-84	63
85-89	46
90-94	30
95-99	6
100+	2
<b>TOTAL</b>	<b>522</b>

Includes retirees who are eligible for medical or with life coverage in addition to terminated vesteds, beneficiaries, and survivors with medical coverage.

**B. ACTIVE PARTICIPANTS**

# OF PARTICIPANTS\*

Current Plan	Mandatory Medicare Eligible	Pre-Mandatory Medicare Eligible	Total
No Medical/ Unknown	298	4	302
Indemnity	0	0	0
Managed Care	381	14	395
<b>TOTAL</b>	<b>679</b>	<b>18</b>	<b>697</b>

\* "Pre-Mandatory Medicare eligible" means hired March 31, 1986 or before. "Mandatory Medicare eligible" means hired after March 31, 1986. Employees hired March 31, 1986 or before do not contribute to Medicare.

**C. PLAN DEFINITION TABLE; INCLUDES CONCORD-CARLISLE REGIONAL SCHOOL DISTRICT<sup>(1)</sup>**

Name of Plan	Type of Plan	Ind Rate	Retirees Enrolled	Fam Rate	Retirees Enrolled	EE Cont % <sup>(2)</sup>
Fallon Direct Care	Commercial Managed Care	654	3	1749	0	40%/45%
Fallon Select Care	Commercial Managed Care	703	4	1877	6	40%/45%
Fallon Select Care HSA-Qualified	Commercial Managed Care	576	0	1539	2	40%/45%
Harvard Pilgrim Benchmark HMO	Commercial Managed Care	908	12	2387	6	37%/45%
Harvard Pilgrim HSA-Qualified	Commercial Managed Care	717	0	1886	1	37%/45%
Harvard Pilgrim PPO Out Of Area	Commercial Managed Care	1965	2	5188	0	50%/50%
Tufts Benchmark EPO	Commercial Managed Care	860	32	2335	8	39%/48%
Tufts Medicare Pref. Low Income Subsidy	Medicare Managed Care	314	3	314	NA	50%
Tufts Medicare Preferred HMO	Medicare Managed Care	314	153	314	NA	50%
Tufts Group Supplement Plan	Medicare Indemnity	430	289	430	NA	50%
Life Insurance	Life Insurance	\$4.80	88	NA	NA	50%

<sup>(1)</sup> Rates at 06/30/2019. Only plans with retiree enrollment shown.

<sup>(2)</sup> Individual/Family

C. DISTRIBUTION BY AGE AND SERVICE: ACTIVE PARTICIPANTS (Estimated splits between CPS and CCRSD)

Age Group	0-4	5-9	10-15	15-19	20-24	25-29	30-34	35-39	40+	Total
0-19	0	0	0	0	0	0	0	0	0	0
20-24	10	0	0	0	0	0	0	0	0	10
25-29	47	8	0	0	0	0	0	0	0	55
30-34	28	25	6	0	0	0	0	0	0	59
35-39	28	20	18	1	1	0	0	0	0	68
40-44	28	15	14	16	0	0	0	0	0	73
45-49	19	8	7	14	14	1	0	0	0	63
50-54	28	23	10	15	18	10	5	1	0	110
55-59	29	16	31	13	14	7	16	4	0	130
60-64	14	11	20	20	5	5	10	2	1	88
65-69	3	5	4	5	6	3	3	1	2	32
70-74	0	1	2	0	1	0	1	0	2	7
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	1	0	0	0	0	1
85-89	1	0	0	0	0	0	0	0	0	1
90-94	0	0	0	0	0	0	0	0	0	0
95-99	0	0	0	0	0	0	0	0	0	0
100+	0	0	0	0	0	0	0	0	0	0
TOTAL	235	132	112	84	60	26	35	8	5	697

### SECTION III – APPENDICES

Actuarial methods and assumptions were selected by the Town of Concord, other than those required by statute or by GASB statements, with guidance from Stone Consulting, Inc.

#### Actuarial Methods

##### Actuarial Cost Method

Costs are attributed between past and future service using the Entry Age Normal cost method. For attribution purposes, benefits are assumed to accrue over all employee service until decrement.

##### Asset Valuation Method

Market value of assets with payables and receivables.

#### Actuarial Assumptions

##### Valuation Date

June 30, 2019

##### Interest Rate / Discount Rate

- 7.25% per year net of investment expenses as of 06/30/2019. In the calculation of the discount rate, the 20-year Municipal General Obligation bonds as shown in the Bond Buyer 20 Bond Index (3.50%) was used.
- 7.25% per year as of 07/01/2018.

##### Mortality

- **Actives:** The RP-2014 Mortality Tables adjusted to 2006, sex-distinct, for Employees projected using generational mortality and scale MP-2016.
- **Retirees:** The RP-2014 Mortality Tables adjusted to 2006, sex-distinct, for Healthy Annuitants projected using generational mortality and scale MP-2016.
- **Disabled:** The RP-2014 Mortality Tables adjusted to 2006, sex-distinct, for Healthy Annuitants projected using generational mortality and scale MP-2016. Set forward 2 years.

No additional mortality projection is assumed other than as described above.

**Actuarial Assumptions (Continued)**

Salary Scale

4.00% ultimate rate, reduced to 3.50% while receiving steps:

- **Police:** 5.2% in year one, 5.6% in year two, 7.3% in year three, 5.0% in year four, and 4.8% in year five.
- **Fire:** Three years of 4.7% steps
- **All other employees:** Seven years of 4.3% steps

Teachers – Increases are based on service as shown below.

Service	Teachers
0	7.50%
1	7.10%
2	7.00%
3	6.90%
4	6.80%
5	6.70%
6	6.60%
7	6.50%
8	6.30%
9	6.10%
10	5.90%
11	5.70%
12	5.20%
13	4.70%
14	4.35%
15-16	4.20%
17-19	4.10%
20+	4.00%

Overall payroll increase rate, including new entrants: 4.00% per year/3.75% inflation. Prior year was 3.00% per year/2.75% inflation. This changed the projection of Normal Cost for the Funding Schedule and had no effect on the GASB valuation.

**Actuarial Assumptions (Continued)**

Eligibility for Vested Post-Retirement Medical Benefits upon Withdrawal

10 years of Service; assumed that individuals who withdraw prior to age 40 will elect a return of pension contributions and therefore be ineligible for retiree medical coverage.

Withdrawal Prior to Retirement, Non-Teachers

Based on years of service. Same for both pre- and post-April 1, 2012 (Tier 1 and Tier 2) hires.

Years of Service	Groups 1,2	Group 4
0	15.00%	1.50%
1	12.00%	1.50%
2	10.00%	1.50%
3	9.00%	1.50%
4	8.00%	1.50%
5	7.60%	1.50%
6	7.50%	1.50%
7	6.70%	1.50%
8	6.30%	1.50%
9	5.90%	1.50%
10	5.40%	1.50%
11	5.00%	0.00%
12	4.60%	0.00%
13	4.10%	0.00%
14	3.70%	0.00%
15	3.30%	0.00%
16	2.00%	0.00%
17	2.00%	0.00%
18	2.00%	0.00%
19	2.00%	0.00%
20	2.00%	0.00%
21	1.00%	0.00%
22	1.00%	0.00%
23	1.00%	0.00%
24	1.00%	0.00%
25	1.00%	0.00%
26	1.00%	0.00%
27	1.00%	0.00%
28	1.00%	0.00%
29	1.00%	0.00%
30+	0.00%	0.00%

**Actuarial Assumptions (Continued)**

Withdrawal Prior to Retirement, Teachers

Same for both pre and post-April 1, 2012 hires.

		Service		
Age		0	5	10
Male Teachers	25	12.00%	4.50%	1.00%
	35	11.00	5.00	1.50
	45	9.50	5.00	2.00
	55	7.50	4.50	2.50
Female Teachers	25	10.00%	9.00%	5.00%
	35	12.00	8.40	4.10
	45	8.90	4.70	2.40
	55	8.00	3.20	2.00

Disability Prior to Retirement

The rates shown at the following sample ages illustrate the assumption regarding the incidence of disability. Disability is assumed to be 55% ordinary and 45% accidental for Groups 1 and 2, 10% ordinary and 90% accidental for Group 4, and 55% ordinary and 45% accidental for Teachers.

Rate of Disability			
Age	Groups 1 and 2	Group 4	Teachers
20	0.01%	0.10%	0.004%
25	0.02%	0.20%	0.005%
30	0.03%	0.30%	0.006%
35	0.06%	0.30%	0.006%
40	0.10%	0.30%	0.010%
45	0.15%	1.00%	0.030%
50	0.19%	1.25%	0.050%
55	0.24%	1.20%	0.080%
60	0.28%	0.85%	0.100%

Medicare Eligibility

- **Employees:** 100% if hired March 31, 1986 or after; 85% if hired pre-March 31, 1986.
- **Spouses:** 100%



**Actuarial Assumptions (Continued)**

Rates of Retirement, Non-Teachers

Based on gender, group, and hire date.

Age	Hired Pre-April 2, 2012			Hired Post-April 1, 2012		
	Groups 1 and 2 Male	Groups 1 and 2 Female	Group 4	Groups 1 and 2 Male	Groups 1 and 2 Female	Group 4
50	1.00%	1.50%	2.00%	-	-	-
51	1.00%	1.50%	2.00%	-	-	-
52	1.00%	2.00%	2.00%	-	-	-
53	1.00%	2.50%	5.00%	-	-	-
54	2.00%	2.50%	7.50%	-	-	-
55	2.00%	5.50%	15.00%	-	-	10.00%
56	2.50%	6.50%	10.00%	-	-	7.00%
57	2.50%	6.50%	10.00%	-	-	20.00%
58	5.00%	6.50%	10.00%	-	-	10.00%
59	6.50%	6.50%	15.00%	-	-	15.00%
60	12.00%	5.00%	20.00%	25.00%	30.00%	20.00%
61	20.00%	13.00%	20.00%	20.00%	13.00%	20.00%
62	30.00%	15.00%	25.00%	30.00%	15.00%	25.00%
63	25.00%	12.50%	25.00%	25.00%	12.50%	25.00%
64	22.00%	18.00%	30.00%	22.00%	18.00%	30.00%
65	40.00%	15.00%	100.00%	40.00%	15.00%	100.00%
66	25.00%	20.00%	NA	25.00%	20.00%	NA
67	25.00%	20.00%	NA	25.00%	20.00%	NA
68	30.00%	25.00%	NA	30.00%	25.00%	NA
69	30.00%	20.00%	NA	30.00%	20.00%	NA
70	100.00%	100.00%	NA	100.00%	100.00%	NA

**Actuarial Assumptions (Continued)**

Rates of Retirement, Teachers

Based on gender, years of service, and hire date.

Age	Hired Pre-April 2, 2102						Hired Post-April 1, 2012					
	<20 years service		20-29 years service		>29 years service		<20 years service		20-29 years service		>29 years service	
	M	F	M	F	M	F	M	F	M	F	M	F
50	N/A	N/A	1%	1.5%	2%	2%	N/A	N/A	N/A	N/A	N/A	N/A
51	N/A	N/A	1	1.5	2	2	N/A	N/A	N/A	N/A	N/A	N/A
52	N/A	N/A	1	1.5	2	2	N/A	N/A	N/A	N/A	N/A	N/A
53	N/A	N/A	1	1.5	2	2	N/A	N/A	N/A	N/A	N/A	N/A
54	N/A	N/A	1	1.5	2	2	N/A	N/A	N/A	N/A	N/A	N/A
55	3%	2%	3	3	6	6	3%	0%	0%	0%	0%	0%
56	8	2	5	3	20	15	8	0	0	0	0	0
57	15	8	8	7	35	30	15	0	0	0	0	0
58	15	10	10	7	50	35	15	0	0	0	0	0
59	20	15	20	11	50	35	20	0	0	0	0	0
60	15	20	20	16	50	35	25	25	35	23	45	45
61	30	20	25	20	50	35	35	30	35	30	45	45
62	20	25	30	30	40	40	30	25	30	25	45	45
63	30	24	30	30	40	30	35	25	30	25	45	45
64	40	20	30	30	40	35	40	30	35	30	45	45
65	40	30	40	30	50	35	40	30	35	30	45	45
66	40	30	30	30	50	35	40	30	40	30	45	45
67	40	30	30	30	50	30	50	35	45	35	55	45
68	40	30	30	30	50	30	50	35	45	35	55	45
69	40	30	30	30	50	30	55	35	45	35	55	45
70	100	100	100	100	100	100	100	100	100	100	100	100

**Actuarial Assumptions (Continued)**

Plan Enrollment Rates

These are the rates which retirees select medical plans, given that they enroll in a medical plan. The selection patterns follow the table below.

Participant Behavior at Key Ages

Status	Age	Pre-65 Retirement	65+ Retirement
Active	Under 65	Commercial Managed Care: 100% Commercial Indemnity: 0%	Medicare Managed Care: 35% Medicare Indemnity: 65% Commercial Managed Care: <1%
Active	65+	NA	Medicare Managed Care: 35% Medicare Indemnity: 65% Commercial Managed Care: <1%
Retired	Under 65	Current Plan	Medicare Managed Care: 35% Medicare Indemnity: 65% Commercial Managed Care: <1% Or Actual Plan if already in Medicare
Retired	65+	NA	Current Plan

Sample Claim Costs

Age	Commercial Managed Care Individual	Commercial Managed Care Blended <sup>(1)</sup>	Commercial Indemnity Individual	Commercial Indemnity Blended <sup>(1)</sup>	Medicare Managed Care	Medicare Indemnity
55	\$9,748.73	\$16,672.64	NA	NA	\$2,449.17	\$4,382.79
60	\$11,972.42	\$20,511.88	NA	NA	\$2,449.17	\$4,382.79
65	\$14,976.68	\$25,689.45	NA	NA	\$2,449.17	\$4,382.79
70	\$18,086.10	\$31,023.16	NA	NA	\$2,874.63	\$4,846.30
75	\$21,647.67	\$37,133.45	NA	NA	\$3,480.77	\$5,234.02
80	\$25,765.74	\$44,197.21	NA	NA	\$4,159.18	\$5,513.84
85	\$25,765.74	\$44,197.21	NA	NA	\$4,909.88	\$5,655.82

<sup>(1)</sup> Blended rates below 65 are 42.5% Family and 57.5% Individual. Blended rates 65 and higher are 42.5% Family and 57.5% Individual. Individual rates are used for all participants 81 and higher.

**Actuarial Assumptions (Continued)**

Trend Rates by Plan

Year	Commercial Managed Care	Commercial Indemnity	Medicare Indemnity	Medicare Managed Care
2019	8.50%	9.50%	8.50%	7.50%
2020	8.00%	9.00%	8.00%	7.00%
2021	7.50%	8.50%	7.50%	6.50%
2022	7.00%	8.00%	7.00%	6.00%
2023	6.50%	7.50%	6.50%	5.50%
2024	6.00%	7.00%	6.00%	5.00%
2025	5.50%	6.50%	6.00%	5.00%
2026	5.00%	6.00%	6.00%	5.00%
2027	5.00%	6.00%	6.00%	5.00%
2028	5.00%	6.00%	6.00%	5.00%
2029	5.00%	6.00%	5.75%	5.00%
2030	5.00%	6.00%	5.75%	5.00%
2031	5.00%	5.75%	5.75%	5.00%
2032	5.00%	5.75%	5.50%	5.00%
2033	5.00%	5.75%	5.50%	5.00%
2034	5.00%	5.75%	5.50%	5.00%
2035	5.00%	5.75%	5.25%	5.00%
2036	5.00%	5.50%	5.25%	5.00%
2037	5.00%	5.50%	5.00%	5.00%
2038	5.00%	5.50%	5.00%	5.00%
2039	5.00%	5.50%	5.00%	5.00%
2040	5.00%	5.50%	5.00%	5.00%
2041	5.00%	5.25%	5.00%	5.00%
2042	5.00%	5.25%	5.00%	5.00%
2043	5.00%	5.25%	5.00%	5.00%
2044	5.00%	5.25%	5.00%	5.00%
2045	5.00%	5.25%	5.00%	5.00%
2046	5.00%	5.00%	5.00%	5.00%

Expenses

Administrative expenses are included in the per capita medical cost assumption.

## Actuarial Assumptions (Continued)

### Participation Rates

Current retirees and spouses are assumed to continue the same coverage they have as of the valuation date. No future election of coverage is assumed for those retirees and spouses who currently have not elected coverage.

Medical All Retirees: 67.5% of the active Town of Concord employees eligible for post-employment medical benefits are assumed to elect Medical Coverage immediately upon retirement.

Life All Retirees: 50% of active Town of Concord employees eligible for post-employment medical benefits are assumed to elect Life Insurance coverage immediately upon retirement.

For all Retirees: For the Town of Concord plans 55% of spouses are assumed to participate. The prior valuation assumption was 57.5%.

Participants with no or unknown current coverage (e.g. active employees who do not currently participate in the Town of Concord's medical plans) are assumed to elect retiree coverage at the same rates as currently covered active employees. Medicare-eligible retirees currently under age 65 are assumed to elect a Medicare plan option at age 65.

### PPACA

OPEB liabilities as of June 30, 2019 include an estimate of the impact from the Patient Protection and Affordable Care Act (PPACA) as it is written as of the valuation date, including the so-called "Cadillac Tax" on high-cost health plans. The Cadillac Tax on plans whose richness exceeds set levels will begin in 2022 and the valuation reflects such implementation beginning in 2022. Prior to this time, the law may be amended or changes may be made in the benefit plan such that the law will not be applicable.

## Principal Plan Provisions Recognized in Valuation

### ELIGIBILITY FOR BENEFITS

Current retirees, beneficiaries and spouses of the Town of Concord are eligible for medical benefits, as are current employees or spouses who retire with a benefit from the Town of Concord. Survivors of Town of Concord employees and retirees are also eligible for medical benefits.

### MEDICAL BENEFITS

Various medical plans offered by the Town of Concord to its own employees.

### LIFE INSURANCE

Town of Concord retirees are eligible for a \$5,000 life insurance benefit offered by the Town of Concord. Retirees pay 50% of the \$4.80 cost.

### RETIREE CONTRIBUTIONS

Based on data provided by the Town of Concord.

## Glossary

- **Actuarial Accrued Liability:** The portion, as determined by a particular Actuarial Cost Method, of the present value of benefits which is not provided for by future Normal Costs.
- **Actuarial Assumptions:** Assumptions as to the occurrence of future events affecting Other Post-employment Benefits such as: mortality rates, disability rates, withdrawal rates, and retirement rates, the discount assumption, and the trend rates.
- **Actuarial Cost Method:** A procedure for determining the Actuarial Present Value of Total Projected benefits and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal and an Actuarial Accrued Liability.
- **Amortization Payment:** The portion of the OPEB contribution designed to pay interest and to amortize the Unfunded Actuarial Accrued Liability.
- **Actuarially Determined Contribution (ADC):** The employer's periodic contributions to a defined benefit OPEB plan, calculated in accordance with the Actuarial Standards of Practice.

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- **Cadillac Tax:** Under the Affordable Care Act and starting in 2022, a 40% excise tax on the value of employer-sponsored health benefits exceeding specified thresholds.
- **Commercial Plans:** Plans designed to cover the medical expenses of those not otherwise covered by Medicare.
- **GASB:** The Governmental Accounting Standards Board is the organization that establishes financial reporting standards for state and local governments.
- **Investment return Assumptions (Discount Rate):** The rate used to adjust a series of future benefit payments to reflect the time value of money.
- **Healthcare Cost Trend Rate:** The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, the intensity of the delivery of services, technological developments, and cost-shifting.
- **Medicare Plans:** Medical plans sold to those over 65 who are also covered by Medicare. These plans are supplemental to the Medicare plan, which is considered primary.
- **Normal Cost:** The portion of the Actuarial Present value of plan benefits that is allocated to a valuation year by the Actuarial Cost Method.
- **OPEB:** Other Post-Employment Benefits, other than pensions. This does not include plans such as severance plans or sick-time buyouts.
- **Pay-As-You-Go:** The amount of benefits (claims) paid out to plan participants during the year.
- **Per Capita Claims Cost:** The current average annual cost of providing postretirement health care benefits per individual.
- **Unfunded Actuarial Accrued Liability:** The portion of the Actuarial Accrued Liability that is not covered by plan assets. For a plan that is completely unfunded, this amount is equivalent to the Actuarial Accrued Liability.
- **Valuation Date:** The point from which all future plan experience is projected and as of which all present values are calculated.