

GASB Statements No. 74
Report for Fiscal Year 2017

Town of Concord

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January 31, 2018

Town of Concord

Dear Members of the Board:

For the purpose of satisfying the requirements of the Government Accounting Standards Board (GASB) Statements No. 74, Stone Consulting, Inc. has prepared a set of illustrative tables and other Required Supplementary Information (RSI) based on the July 1, 2016 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, 2017. 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. The assumptions used were the same as used in the GASB 45 report

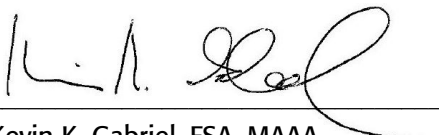
We are pleased to present these exhibits. If the Concord Board has any questions on the content of this report, we would be glad to respond. Please note that this report is meant to be used in its entirety. Use of excerpts of this report may result in a misleading or inaccurate understanding of the results.

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

Respectfully submitted,
STONE CONSULTING, INC.
Actuaries for the Plan



Lawrence B. Stone
Member, American Academy of Actuaries



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

GASB Statements No. 74 – Net OPEB Liability
 (All amounts in thousands)

	FY 2017
Total OPEB Liability	
Service Cost	\$ 1,265
Interest	3,047
Changes in Benefit Terms	-
Differences between expected and actual experience	-
Changes of assumptions	-
Benefit payments	<u>(1,690)</u>
Net change in Total OPEB liability	\$ 2,622
Total OPEB Liability – beginning	<u>41,597</u>
Total OPEB Liability – ending (a)	\$ 44,219
Plan Fiduciary Net Position	
Contributions – employer	\$ 3,470
Net Investment Income	1,497
Benefit payments	(1,690)
Administrative expenses	<u>0</u>
Net change in Plan Fiduciary Net Position	\$ 3,277
Plan Fiduciary Net Position – beginning	<u>10,175</u>
Plan Fiduciary Net Position – ending (b)	\$ 13,452
Net OPEB Liability – ending (a) – (b)	\$ 30,767
Plan fiduciary net position as a percentage of total OPEB liability	30.4%

Update procedures were used to roll the Total OPEB Liability backward from the valuation date (6/30/2017) to the beginning of the Fiscal Year (7/1/2016).

Projection of the Net OPEB Liability

TOTAL OPEB LIABILITY (TOL)

The TOL was projected back to the beginning of the Fiscal Year (7/1/2016) by subtracting the changes resulting from experience, assumption changes, and changes to plan provisions. Interest was deducted from the TOL, Service Cost, and paid benefits, and added to the total, less the projected benefit payments for the year.

The TOL is calculated using the Entry Age Funding method. This is required by GASB Statement No. 74 and is different from the method used in the GASB Statement No. 45. Due to the difference in methodology, one cannot directly compare the results under GASB Statements Nos. 45 and 74.

PLAN FIDUCIARY NET POSITION (FNP)

GASB Statement No. 74 requires that Market Value of Assets be used for the Fiduciary Net Position. Net investment income is the portion of the change in assets during the measurement period 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.

Distribution of the Member Population

Town of Concord OPEB Trust – Membership as of June 30, 2017

	2017
Retired, Disabled, Survivors and Beneficiaries receiving benefits	267
Inactive plan members entitled to but not yet receiving benefit payments	33
Active plan members	<u>676</u>
Total	976

These numbers are based on the data supplied by the Town of Concord for the June 30, 2017 valuation. Note that these membership numbers count a retiree and a spouse as only one member, even if they have separate policies. This is different from the methodology we used in our GASB 45 valuation report.

Development of Exhibits

DISCOUNT RATE

Projections were made using a discount rate assumption of 7.25%, which is consistent with the assumption used in the funding report. One of the objectives of the provisions introduced by GASB 74 is to examine how benefit payments and plan contributions and investment earnings interact on a cash flow basis. GASB requires that these amounts be calculated with Market 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. For this report we have used a first-year cash contribution of \$1,780,000, a second-year contribution of \$1,611,000. Subsequent contributions are based on a \$1,400,000 annual contribution, increasing with salary scale of 5% in 2017 and 4% thereafter. Consistent with the requirements of GASB Statement No. 74, we have first assigned the contribution to the cost of projected new entrants prior to allocating the remainder to cover existing active and inactive employees. Concord's Fiduciary Net Position was projected to be available to make all future benefit payments of current active and inactive employees. 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 requires that a return rate for the measurement period be developed using the market value of assets at the beginning of the Fiscal Year, along with monthly cash flows. This has been done for the 2017 Fiscal year, and is shown below:

Fiscal Year	2017
Money-Weighted Rate of Return	13.07%

Note that the first funding was made at the end of the fiscal year so there was no rate of return calculated.

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%). Amounts are shown in thousands (‘000s).

Fiscal Year	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
2017	\$ 36,695	\$ 30,767	\$ 25,899

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, amounts are in thousands (‘000s).

Fiscal Year	1% Decrease	Base Trend	1% Increase
2017	\$ 25,309	\$ 30,767	\$ 37,536

Long-Term Expected Real Rate of Return

The long-term expected real rate of return reflects the expected rate of return on plan assets minus 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 Concord and the asset manager ICMA-RC. The real rates of return below are based on long-term return estimates provided by the asset manager.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Low Duration Bond/U.S. Short Duration Government/Credit	6.54%	2.80%
Core Bond Index/US Aggregate Bonds	14.29%	2.60%
Inflation Focused Fund/TIPS	0.91%	2.80%
High Yield/US High Yield Bonds	4.05%	4.90%
Diversifying Strategies/60% US Large Cap Equity & 40% US Aggregate Bonds	13.00%	4.88%
Equity Income/US Large Cap Equity	14.04%	6.40%
Growth & Income/US Large Cap Equity	12.29%	6.40%
Growth/US Large Cap Equity	10.49%	6.40%
Select Value/US Mid Cap Equity	0.70%	7.90%
Mid/Small Index/US Small Cap Equity	5.29%	7.50%
Aggressive Opportunities/US Mid Cap Equity	0.70%	7.90%
Discovery/US Small Cap Equity	0.70%	7.50%
International/International Equity	14.24%	7.20%
EM ETFs/EM Equity	2.76%	9.70%
Total	100.00%	5.62%

Schedule of Plan Contributions

	FY 2017
Actuarial Determined Contribution (GASB 45)	\$ 4,088
Contributions made	<u>3,470</u>
Contribution deficiency (excess)	\$ 618

Development of Money-Weighted Rate of Return

NET INVESTMENT AMOUNTS					
	Beginning of Month	Middle of Month	End of Month	Periods Invested**	Investment with Interest
Starting Value* (7/1/2016)	\$10,174,780.38			12	\$11,109,906.93
Cash Flows:					
July				11	\$0.00
August		\$1,480,000		10	\$0.00
September				9	\$0.00
October				8	\$0.00
November				7	\$0.00
December				6	\$0.00
January				5	\$0.00
February				4	\$0.00
March				3	\$0.00
April				2	\$0.00
May				1	\$0.00
June				0	\$0.00
Ending Value* (7/1/2017)	\$13,152,251.61			Sum:	\$13,152,251.61

* 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:	13.07%
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Actuarial Methods and Assumptions

ACTUARIAL METHODS

Actuarial Cost Method

Costs are attributed between past and future service using the Individual 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.

ACTUARIAL ASSUMPTIONS

Valuation Date

June 30, 2017

Mortality

- **Actives:** RP-2014 projected from 2006 using MP-2016 generational
- **Retirees:** RP-2014 projected from 2006 using MP-2016 generational
- **Disabled:** RP-2014 projected from 2006 using MP-2016 generational. Set forward 2 years

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

Interest Rate / Discount Rate

7.25% per year net of investment expenses.

Medicare Eligibility

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

Expenses

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

Actuarial Methods and 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%

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

Actuarial Methods and Assumptions (Continued)

Withdrawal Prior to Retirement, Non-Teachers

Based on years of service. Same for both pre and post-April 1, 2012 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 Methods and Assumptions (Continued)

Withdrawal Prior to Retirement, Teachers

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

		Service			
		Age	0	5	10
Male Teachers	20		13.00%	5.50%	1.50%
	30		15.00	5.40	1.50
	40		13.30	5.20	1.70
	50		16.20	7.00	2.30
Female Teachers	20		10.00%	7.00%	5.00%
	30		15.00	8.80	4.50
	40		10.50	5.00	2.220
	50		9.80	5.50	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 Group 1 and 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%	0.008%
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%	0.060%
60	0.28%	0.85%	0.070%

Actuarial Methods and 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%	-	-	25.00%
56	2.50%	6.50%	10.00%	-	-	15.00%
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%	30.00%	30.00%	20.00%
61	20.00%	13.00%	20.00%	20.00%	10.00%	20.00%
62	30.00%	15.00%	25.00%	15.00%	12.00%	25.00%
63	25.00%	12.50%	25.00%	25.00%	10.00%	25.00%
64	22.00%	18.00%	30.00%	20.00%	15.00%	30.00%
65	40.00%	15.00%	100.00%	25.00%	13.00%	100.00%
66	25.00%	20.00%	NA	20.00%	18.00%	NA
67	25.00%	20.00%	NA	50.00%	40.00%	NA
68	30.00%	25.00%	NA	30.00%	25.00%	NA
69	30.00%	20.00%	NA	30.00%	25.00%	NA
70	100.00%	100.00%	NA	100.00%	100.00%	NA

Actuarial Methods and 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%	1.0%	2%	1.5%	N/A	N/A	N/A	N/A	N/A	N/A
51	N/A	N/A	1	1	2	1.5	N/A	N/A	N/A	N/A	N/A	N/A
52	N/A	N/A	1	1	2	1.5	N/A	N/A	N/A	N/A	N/A	N/A
53	N/A	N/A	1.5	1	2	1.5	N/A	N/A	N/A	N/A	N/A	N/A
54	N/A	N/A	2.5	1	2	2	N/A	N/A	N/A	N/A	N/A	N/A
55	5%	3%	3	3	6	5	N/A	N/A	N/A	N/A	N/A	N/A
56	5	3	6	5	20	15	N/A	N/A	N/A	N/A	N/A	N/A
57	5	4	10	8	40	35	N/A	N/A	N/A	N/A	N/A	N/A
58	5	8	15	10	50	35	N/A	N/A	N/A	N/A	N/A	N/A
59	10	8	20	15	50	35	N/A	N/A	N/A	N/A	N/A	N/A
60	10	10	25	20	40	35	30	30	45	40	60	55
61	20	12	30	25	40	35	20	12	30	25	40	35
62	20	12	35	30	35	35	20	12	35	30	35	35
63	25	15	40	30	35	35	25	15	40	30	35	35
64	25	20	40	30	35	35	25	20	40	30	35	35
65	25	25	40	40	35	35	25	25	40	40	35	35
66	30	25	30	30	40	35	30	25	30	30	40	35
67	30	30	30	30	40	30	30	30	30	30	40	30
68	30	30	30	30	40	30	30	30	30	30	40	30
69	30	30	30	30	40	30	30	30	30	30	40	30
70	100	100	100	100	100	100	100	100	100	100	100	100

Actuarial Methods and Assumptions (Continued)

Claim Costs By Age

Age	Commercial Managed Care Individual	Commercial Managed Care Blended ⁽¹⁾	Medicare Managed Care	Medicare Indemnity
55	\$9,359.05	\$16,078.69	\$1,846.96	\$2,522.43
60	\$11,169.42	\$19,188.87	\$2,204.23	\$3,010.36
65	\$13,720.48	\$23,571.55	\$2,707.66	\$3,697.91
70	\$15,905.80	\$27,325.88	\$3,138.92	\$4,286.89
75	\$17,995.95	\$30,916.73	\$3,551.40	\$4,850.22
80	\$19,868.98	\$34,134.56	\$3,921.04	\$5,355.04
85	\$20,882.50	\$20,882.50	\$4,121.05	\$5,628.20

⁽¹⁾ Blended rates below 65 are 45% Family and 55% Individual. Blended rates 65 and higher are 45% Family and 55% Individual. Individual rates are used for all participants 81 and higher.

Trend Rates by Plan

Year of Change	Commercial Managed Care	Medicare Managed Care ⁽¹⁾	Medicare Indemnity
2017	8.50%	7.50%	8.50%
2018	8.00%	7.00%	8.00%
2019	7.50%	6.50%	7.00%
2020	7.00%	6.00%	7.00%
2021	6.50%	5.50%	6.50%
2022	6.00%	5.00%	6.00%
2023	5.50%	5.00%	6.00%
2024	5.00%	5.00%	6.00%
2025	5.00%	5.00%	6.00%
2026	5.00%	5.00%	6.00%
2027-2033	5.00%	5.00%	Graded
2034	5.00%	5.00%	5.50%
2035	5.00%	5.00%	5.50%
2036-2042	5.00%	5.00%	Graded
2043	5.00%	5.00%	5.25%
2044	5.00%	5.00%	5.00%

(1) Actual increases have varied substantially and will likely do so in the future. The use of a graded scale is the most common method for trend projections. Actuarial gains/losses will occur as actual experience varies from projected trend rates.

(2) Managed Care trends also reflect changes in contribution levels for 2018-2020.

Medicare penalties are subject to a flat 5% trend per year.

Actuarial Methods and 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: 70% of the active employees eligible for post-employment medical benefits are assumed to elect Medical Coverage immediately upon retirement.

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

For all Retirees: 80% of spouses are assumed to participate.

Participants with no or unknown current coverage (e.g. active employees who do not currently participate in 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.

Plan Enrollment Rates

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

Projections

The June 30, 2017 valuation was not adjusted for timing. This means that the Pay-as-you-go amount as well as the Actuarial Valuation results have not been modified for interest or any other timing factor in our presentation.

Section 9 ½ of Chapter 32B

No current or future payments or receipts are assumed due to past service or future service with other Chapter 32 entities.

PPACA

This valuation does not include any potential impact from the Patient Protection and Affordable Care Act (PPACA) other than those already adopted as of the valuation date. This includes new plans or taxes including the so-called “Cadillac Tax” high-cost health plans. The Cadillac Tax on benefits plans whose richness exceeds set levels will not begin until 2018. 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. In view of these uncertainties, we have elected not to try to estimate the Act’s impact on costs and trends.

Principal Plan Provisions Recognized in Valuation

ELIGIBILITY FOR BENEFITS

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

MEDICAL BENEFITS

Various medical plans offered by Concord to its own employees.

LIFE INSURANCE

Concord Town retirees are eligible for a \$2,000 life insurance benefit offered by Concord. Retirees pay 50% of the cost or \$0.88 per month for their coverage.

RETIREE CONTRIBUTIONS

Based on data provided by Concord.