

**City of Newburyport Other
Postemployment Benefits Plan**

GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2016

As of the Measurement Date:
July 1, 2017

For the Reporting Date:
June 30, 2018

Delivered September 25, 2018

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September 25, 2018

Personal and Confidential

Mr. Ethan Manning
Finance Director/City Auditor
City of Newburyport
60 Pleasant Street
Newburyport, MA 01950

Dear Mr. Manning:

We have performed an actuarial valuation of the City of Newburyport Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending June 30, 2018 with a Measurement Date of July 1, 2017 and a Valuation Date of July 1, 2016. The figures presented in this report reflect the adoption, by the City of Newburyport, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75") effective for the fiscal year ending June 30, 2017 and June 30, 2018 respectively.

The financial results of the actuarial valuation are summarized in the report. The Executive Summaries highlight the results of the valuation. Additional information summarizing census data, actuarial assumptions, claim rates and the methodology for developing them, as well as a glossary of selected terms used in this study, is also included in the report.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions used are reasonable, reflecting the experience of the plan and reasonable expectations and, in combination, represent our best estimate of the anticipated experience under the plan.

We refer you to Section I of this report for a detailed summary and commentary on the results of the valuation and a comparison with the prior valuation. Section II is a summary of the plan provisions, and Section III describes the actuarial cost method and assumptions. Details for cost calculations, supporting data, and disclosures are provided in Exhibits A through C.

We will be pleased to answer any questions that you may have regarding this actuarial valuation report.

Very truly yours,

A handwritten signature in black ink, appearing to read 'P. Elmore', written over a light gray horizontal line.

Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

September 25, 2018

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the City of Newburyport other postemployment benefit programs with a Valuation Date of July 1, 2016 with a Measurement Date of July 1, 2017 for the Reporting Date & fiscal year ending June 30, 2018 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 Numbers 74 & 75 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the City and on participant claims or premium data provided by the City and/or vendors employed by the City.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statements Number 74 and 75 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the City are reasonably related to the experience and expectations of the postemployment benefits programs.



Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

EXECUTIVE SUMMARY

GASB 74 and 75 Impact

The City adopted GASB 74 for the fiscal year ending June 30, 2017 and GASB 75 for the fiscal year ending June 30, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, which makes the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the City's balance sheet is likely to increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than over a 30 year period as GASB 45 allowed.

What caused plan liabilities to change from FY 17 to FY 18?

There was no plan experience for the year ending on the Measurement Date of July 1, 2017, because this was an interim valuation. Changes in assumptions increased disclosed liabilities by \$1.5 million.

Over the one year period, the TOL went from \$74,322,530 as of July 1, 2016 to \$74,858,019 as of July 1, 2017 for an increase of \$535,489. The Net OPEB Expense was \$3,023,286 for the year ending on the July 1, 2017 Measurement Date. As this is the first year using GASB 75 methodology, there is no baseline for comparison. For a projection of future costs and liabilities refer to Exhibit D.

EXECUTIVE SUMMARY

(continued)

Assumption changes

A key assumption has changed since the prior valuation - the impact is detailed below.

- ✓ Due to the GASB 75 standards the discount rate was changed from 4.00% to 4.25% increasing the disclosed liability by \$1.5 million.
- ✓ Assumption changes caused Normal Cost to increase by \$40 thousand.

It is important to remember that actuarial assumptions or changes in such do not impact the actual cost of the Plan. Rather, they impact the timing of the recognition of such costs.

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare Integrated) plans - represent 77% of the total plan liabilities
- ✓ Age at which plan participants retire
- ✓ Percentage of plan participants who elect coverage for themselves and/or a spouse
- ✓ Medical care cost inflation rate – We currently assume medical costs increase at 5.0% per year
- ✓ Discount Rate (4.25%) – Higher discount rates yield lower liabilities and vice versa
- ✓ Cost Sharing - Under Massachusetts law you may charge retirees up to 50% of premiums for health insurance

EXECUTIVE SUMMARY

(continued)

What is Implicit Subsidy? How does it impact us?

The implicit subsidy arises because retirees who are not eligible for Medicare are charged the same premium as active employees, even though their actual medical costs are higher on average. Consequently, a portion of the premiums being paid for active employees are being used to “subsidize” the premiums of retirees. Actuarial Standards of Practice and GASB standards require the liability associated with this implicit subsidy to be valued. The chart below shows a breakdown of how implicit cost impacts reported cash flows and liabilities.

Impact of Implicit Subsidy		
Impact on Liability	As of the Measurement Date	
	<u>July 1, 2017</u>	<u>July 1, 2016</u>
I. Actuarial Accrued Liability	74,858,019	74,322,530
II. Actuarial Accrued Liability (Excluding Implicit Subsidy)	<u>66,975,164</u>	<u>66,308,052</u>
III. Liability from Implicit Subsidy [I. - II.]	7,882,855	8,014,478

Impact on Payments	For the Measurement Period Ending	
	<u>July 1, 2017</u>	<u>July 1, 2016</u>
IV. Employer Payments (Including Implicit Subsidy)	2,457,447	2,457,447
V. Actual Employer Payments	<u>2,168,509</u>	<u>2,168,509</u>
VI. Implicit Subsidy [IV. - V.]	288,938	288,938

EXECUTIVE SUMMARY
(continued)

What are some key plan metrics?

While an actuarial valuation under GASB 74/75 can be very complex with many variables, we find it helpful to look at several key metrics shown below to better allow you to manage your plan.

Representative Plan Statistics		
Valuation Date	July 1, 2016	July 1, 2016
Measurement Date & Period Ending	July 1, 2017	July 1, 2016
Reporting Date/Fiscal Year End	June 30, 2018	June 30, 2017
Total OPEB Liability	74,858,019	74,322,530
Per Eligible Active Plan Participant	70,086	67,784
Per Retiree/Spouse Plan Participant	74,255	75,750
Total Annual Service Cost (annual benefit accrual)	2,444,356	2,594,826
Per Eligible Active Plan Participant	4,444	4,718
Expected Employer Share of Retiree Costs	2,457,447	2,457,447
Per Retiree/Spouse Plan Participant	5,025	5,025
Net OPEB Liability as a % of Payroll	185.80%	184.70%
Average Annual Medical Plan Premium (Single Coverage)	6,934	6,604
Average Annual Medical Plan Premium (Family Coverage)	25,137	23,940
<u>Projected 2022 Excise Tax Thresholds</u>		
Annual Medical Plan Premium (Single Coverage)	12,511	
Annual Medical Plan Premium (Family Coverage)	32,676	

EXECUTIVE SUMMARY

(continued)

Liabilities & Benefit Payments in today's dollars

With the growth of medical care costs over time, the nominal accrued liabilities ("TOL") and benefit payments can appear daunting. However, it is important to remember that a dollar paid in the future is worth less than a dollar paid today.

For the Period Ending on the Measurement Date of:	Number of Retirees, Spouses & Surviving Spouses	Present Value at 3.00% of Total OPEB Liability	Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"
July 1, 2017	489	74,858,019	2,457,447
July 1, 2022	544	78,941,154	2,770,633
July 1, 2027	564	83,540,979	2,935,989
July 1, 2032	572	87,592,689	3,199,627
July 1, 2037	564	91,915,432	3,306,187
July 1, 2042	557	97,715,047	3,513,394
July 1, 2047	551	105,772,360	3,526,040

A full projection of plan costs and liabilities in today's dollars is shown in Exhibit D of this report.

We have an "unfunded liability". How do we fund it? Can we fund it?

If you're looking to fund your OPEB liability, there are a variety of manner to do so. The amount of funding in combination with your Investment Policy will impact the discount rate and disclosed liabilities. Below are a few sample funding options, but it's important to develop a funding policy that fits your organization as each situation is different.

	Current Funding Policy	Alternative Funding Policy - Level Dollar	Alternative Funding Policy - Increasing 3.00% per Year
Net OPEB Liability	\$74,286,966	\$51,378,032	\$51,378,032
Trust Contribution made during Fiscal Year 2019	\$75,000	\$1,946,014	\$1,490,740
Discount Rate*	4.25%	7.00%	7.00%

*Final discount rate will be chosen based on liabilities and cash flows at each measurement date

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

City of Newburyport
Assuming Funding - 4.25% discount rate
Comparison of Plan Liabilities to Prior Valuation

Valuation Date	July 1, 2016	July 1, 2016
For the Measurement Period ending on the Measurement Date of:	July 1, 2017	July 1, 2016
For the Reporting Period & Fiscal Year ending on:	June 30, 2018	June 30, 2017
I. Present Value of Future Benefits		
A. Actives	62,248,700	61,807,366
B. Retirees/Disabled	36,310,484	37,041,577
C. Total	98,559,184	98,848,943
II. Present Value of Future Normal Cost	23,701,165	24,526,413
III. Total OPEB Liability (Individual Entry Age Normal)		
A. Actives	38,547,535	37,280,953
B. Retirees/Disabled	36,310,484	37,041,577
C. Total	74,858,019	74,322,530
IV. Fiduciary Net Position [Plan Assets]	571,053	479,543
V. Net OPEB Liability (Asset) [III. - IV.]	74,286,966	73,842,987
VI. Funded Ratio [IV. / III.]	0.76%	0.65%
VII. Annual Covered Payroll	39,972,872	39,972,872
VIII. Net OPEB Liability (Asset) as % of Covered Payroll	185.8%	184.7%
IX. Number of Eligible Participants		
A. Actives	550	550
B. Retirees/Disabled	489	489
C. Total	1,039	1,039
X. Service Cost	2,444,356	2,594,826
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	3,102,379	N/A
XII. Projected Earnings on OPEB Plan Investments	(34,625)	N/A
XIII. Net Recognition of Deferred (Inflows)/Outflows	(6,377)	N/A
XIV. Financial Statement Expense [X.+XI.+XII.+XIII.]	5,505,733	N/A
XV. Employer Share of Costs	(2,457,447)	(2,457,447)
XVI. Employer (Payments)/Withdrawals to/from OPEB Trust	(25,000)	(25,000)
XVII. Total Employer Contribution [XV. + XVI.]	(2,482,447)	(2,482,447)
XVIII. Other Changes	0	N/A
XIX. Net OPEB Expense [XIV.+XVII.+XVIII.]	3,023,286	N/A
XX. Discount Rate	4.25%	4.00%

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

City of Newburyport
Comparison of Discount Rates

As of the July 1, 2017 Measurement Date

	<u>Funding - 4.25% discount</u> <u>rate</u>	<u>Funding - 7.00%</u> <u>discount rate</u>
I. Present Value of Future Benefits		
A. Actives	62,248,700	32,363,686
B. Retirees/Disabled	<u>36,310,484</u>	<u>29,293,360</u>
C. Total	98,559,184	61,657,046
II. Present Value of Future Normal Cost	23,701,165	9,707,961
III. Total OPEB Liability (Individual Entry Age Normal)		
A. Actives	38,547,535	22,655,725
B. Retirees/Disabled	<u>36,310,484</u>	<u>29,293,360</u>
C. Total	74,858,019	51,949,085
IV. Fiduciary Net Position [Plan Assets]	571,053	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	74,286,966	51,378,032
VI. Funded Ratio [IV. / III.]	0.76%	1.10%
VII. Annual Covered Payroll	39,972,872	39,972,872
VIII. Net OPEB Liability (Asset) as % of Covered Payroll	185.8%	128.5%
IX. Number of Eligible Participants		
A. Actives	550	550
B. Retirees/Disabled	<u>489</u>	<u>489</u>
C. Total	1,039	1,039
For the Reporting Date and Fiscal Year Ending June 30, 2018		
X. Service Cost	2,444,356	1,230,504
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	3,102,379	3,487,945
XII. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0
XIV. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0
XV. Projected Earnings on OPEB Plan Investments	(34,625)	(107,538)
XVI. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>(6,377)</u>	<u>(6,377)</u>
XVII. Financial Statement Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.]	5,505,733	4,604,534
XVIII. Employer Share of Costs	(2,457,447)	(2,457,447)
XIX. Employer (Payments)/Withdrawals to/from OPEB Trust	(25,000)	(1,946,014)
XX. Total Employer Contribution [XVIII. + XIX.]	(2,482,447)	(4,403,461)
XXI. Other Changes	0	0
XXII. Net OPEB Expense [XVII.+XX.+XXI.]	3,023,286	201,073

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

City of Newburyport
Plan Liabilities as of the July 1, 2017 Measurement Date
Assuming Funding - 4.25% discount rate

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	61,046,324	0	365,291	837,085	62,248,700
B. Retirees/Disabled	<u>35,233,408</u>	<u>0</u>	<u>871,222</u>	<u>205,854</u>	<u>36,310,484</u>
C. Total	96,279,732	0	1,236,513	1,042,939	98,559,184
II. Present Value of Future Normal Cost	23,122,931	0	127,926	450,308	23,701,165
III. Total OPEB Liability					
A. Actives	37,923,393	0	237,365	386,777	38,547,535
B. Retirees/Disabled	<u>35,233,408</u>	<u>0</u>	<u>871,222</u>	<u>205,854</u>	<u>36,310,484</u>
C. Total	73,156,801	0	1,108,587	592,631	74,858,019
IV. Fiduciary Net Position [Plan Assets]	558,075	0	8,457	4,521	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	72,598,726	0	1,100,130	588,110	74,286,966
VI. Annual Covered Payroll	39,972,872	39,972,872	39,972,872	39,972,872	39,972,872
VII. Net OPEB Liability (Asset) as % of Covered Payroll	181.6%	0.0%	2.8%	1.5%	185.8%
VIII. Number of Eligible Participants					
IX. A. Actives	550	550	550	550	
B. Retirees/Disabled	<u>489</u>	<u>0</u>	<u>329</u>	<u>489</u>	
C. Total	1,039	550	879	1,039	
For the Reporting Date and Fiscal Year Ending June 30, 2018					
X. Service Cost	2,392,259	0	13,038	39,059	2,444,356
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	3,028,984	0	46,549	26,846	3,102,379
XII. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIV. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XV. Projected Earnings on OPEB Plan Investments	(33,838)	0	(513)	(274)	(34,625)
XVI. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	(6,232)	<u>0</u>	(95)	(50)	(6,377)
XVII. Financial Statement Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.]	5,381,173	0	58,979	65,581	5,505,733
XVIII. Employer Share of Costs	(2,408,177)	0	(49,270)	0	(2,457,447)
XIX. Employer (Payments)/Withdrawals to/from OPEB Trust	(24,460)	0	(348)	(192)	(25,000)
XX. Total Employer Contribution [XVIII. + XIX.]	(2,432,637)	0	(49,618)	(192)	(2,482,447)
XXI. Other Changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XXII. Net OPEB Expense [XVII.+XX.+XXI.]	2,948,536	0	9,361	65,389	3,023,286

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

City of Newburyport

Plan Liabilities as of the July 1, 2017 Measurement Date

Assuming Funding - 4.25% discount rate

	General Government Employees and Retirees	School Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Present Value of Future Benefits					
A. Actives	21,663,022	36,396,725	2,122,552	2,066,401	62,248,700
B. Retirees/Disabled	<u>13,810,692</u>	<u>21,104,255</u>	<u>535,614</u>	<u>859,923</u>	<u>36,310,484</u>
C. Total	35,473,714	57,500,980	2,658,166	2,926,324	98,559,184
II. Present Value of Future Normal Cost	8,725,857	13,382,053	775,012	818,243	23,701,165
III. Total OPEB Liability					
A. Actives	12,937,165	23,014,672	1,347,540	1,248,158	38,547,535
B. Retirees/Disabled	<u>13,810,692</u>	<u>21,104,255</u>	<u>535,614</u>	<u>859,923</u>	<u>36,310,484</u>
C. Total	26,747,857	44,118,927	1,883,154	2,108,081	74,858,019
IV. Fiduciary Net Position [Plan Assets]	204,675	335,964	14,403	16,011	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	26,543,182	43,782,963	1,868,751	2,092,070	74,286,966
VI. Annual Covered Payroll	14,261,517	23,313,469	1,048,899	1,348,987	39,972,872
VII. Net OPEB Liability (Asset) as % of Covered Payroll	186.1%	187.8%	178.2%	155.1%	185.8%
VIII. Number of Eligible Participants					
A. Actives	181	333	16	20	550
B. Retirees/Disabled	<u>180</u>	<u>278</u>	<u>12</u>	<u>19</u>	<u>489</u>
C. Total	361	611	28	39	1,039
For the Reporting Date and Fiscal Year Ending June 30, 2018					
IX. Service Cost	745,533	1,512,041	91,310	95,472	2,444,356
X. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,187,496	1,753,668	76,478	84,737	3,102,379
XI. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XIV. Projected Earnings on OPEB Plan Investments	(12,408)	(20,372)	(874)	(971)	(34,625)
XV. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>(2,285)</u>	<u>(3,752)</u>	<u>(161)</u>	<u>(179)</u>	<u>(6,377)</u>
XVI. Financial Statement Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.]	1,918,336	3,241,585	166,753	179,059	5,505,733
XVII. Employer Share of Costs	(880,892)	(1,472,648)	(35,229)	(68,678)	(2,457,447)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(8,918)	(14,723)	(647)	(712)	(25,000)
XIX. Total Employer Contribution [XVII. + XVIII.]	(889,810)	(1,487,371)	(35,876)	(69,390)	(2,482,447)
XX. Other Changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XXI. Net OPEB Expense [XVI.+XIX.+XX.]	1,028,526	1,754,214	130,877	109,669	3,023,286

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

City of Newburyport
Assuming Funding - 4.25% discount rate
For the Period ending on the July 1, 2017 Measurement Date

	<u>Present Value of Future</u> <u>Benefits</u>	<u>Total OPEB Liability</u> <u>(Individual Entry Age</u> <u>Normal)</u>	<u>Service Cost</u>
Actives			
Under Age 65			
A. Participants	12,152,545	7,737,400	460,756
B. Spouses	<u>8,699,819</u>	<u>5,535,376</u>	<u>324,818</u>
C. Total	20,852,364	13,272,776	785,574
Age 65 and Over			
A. Participants	25,626,965	15,678,710	965,541
B. Spouses	<u>15,769,371</u>	<u>9,596,049</u>	<u>693,241</u>
C. Total	41,396,336	25,274,759	1,658,782
Actives Total			
A. Participants	37,779,510	23,416,110	1,426,297
B. Spouses	<u>24,469,190</u>	<u>15,131,425</u>	<u>1,018,059</u>
C. Total	62,248,700	38,547,535	2,444,356
Retirees/Disabled			
Under Age 65			
A. Participants	2,493,970	2,493,970	0
B. Spouses	<u>1,544,096</u>	<u>1,544,096</u>	<u>0</u>
C. Total	4,038,066	4,038,066	0
Age 65 and Over			
A. Participants	24,293,451	24,293,451	0
B. Spouses	<u>7,978,967</u>	<u>7,978,967</u>	<u>0</u>
C. Total	32,272,418	32,272,418	0
Retirees/Disabled Total			
A. Participants	26,787,421	26,787,421	0
B. Spouses	<u>9,523,063</u>	<u>9,523,063</u>	<u>0</u>
C. Total	36,310,484	36,310,484	0
Total Population			
A. Participants	64,566,931	50,203,531	1,426,297
B. Spouses	<u>33,992,253</u>	<u>24,654,488</u>	<u>1,018,059</u>
C. Total	98,559,184	74,858,019	2,444,356

OVERVIEW OF GASB 74 AND 75

Before Statements 74 and 75, GASB statement 45 established the reporting standards for Other Postemployment Benefit (“OPEB”) plans. It was designed to recognize the Other Postemployment Benefits earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. “pay-as-you-go” accounting. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Service Cost”. These amounts are reflected in your financial statement each year so that OPEB benefits for an eligible employee shall be fully charged to the financial statement when that eligible employee terminates employment.

In 2012 GASB issued GASB Statements 67 and 68 to update and standardize the financial reporting of pension liabilities. This increased the transparency of pension liabilities by moving them to the balance sheet and made financial statement disclosures of pension liabilities more comparable between municipal entities. GASB Statements 74 and 75 are designed to have the same effect on OPEB plans.

GASB 74 and 75 require retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 74 only applies in situations where a separate trust is established to prefund these benefits. GASB 75 requires employers to perform periodic actuarial valuations to determine annual accounting costs and to keep a running tally of the extent to which these amounts are over or under funded.

GASB 74 and 75 apply to those benefits provided after retirement, except for pension benefits, such as medical, dental and life insurance. The philosophy behind the accounting standard is that these post-employment benefits are part of the compensation earned by employees in return for their services, and the cost of these benefits should be recognized while employees are providing those services, rather than after they have retired. This philosophy has already been applied for years to defined benefit pensions; GASB 74 and 75 extend this practice to all other post-employment benefits.

OVERVIEW OF GASB 74 AND 75

(continued)

The process of determining the liability for OPEB benefits is based on many assumptions about future events. The key actuarial assumptions are:

Turnover and retirement rates: How likely is it that an employee will qualify for post-employment benefits and when will they start?

Medical inflation and claims cost assumptions: When an employee starts receiving post-employment benefits many years from now, how much will be paid each year for the benefits and how rapidly will the costs grow?

Mortality assumption: How long is a retiree likely to receive benefits?

Discount rate assumption: What is the present value of those future benefit payments in terms of today's dollars?

Since the liability is being recognized over the employee's whole career with the City, the present value is divided into three pieces: the part that is attributed to past years (the "Total OPEB Liability" or "Past Service Liability"), the part that is being earned this year (the "Service Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Service Cost have been calculated, the next step is to determine an actuarially determined contribution. This is an amount that if paid annually would fully prefund the benefits for current active and retired employees. This consists of two pieces:

- ✓ Service Cost – because the benefits earned by active employees each year should be paid for each year
- ✓ Past Service Cost – a catch-up payment to fund the Accrued Liability over a period of time determined by an actuary

The final step is to keep track going forward of how much of the contribution is actually paid. There is no requirement to actually fund these benefits, but the cumulative deficiency must be disclosed on the City's financial statements as the Net OPEB Liability (NOL). If you decide to fully fund the NOL this will appear in the financial statement as a Net OPEB Asset. In addition, the Discount Rate used to calculate the liabilities must reflect the expected investment income of whatever funds are set aside to prefund the benefits; if there is no prefunding then the Discount Rate will be much lower and the liabilities significantly higher than if the benefits are prefunded.

OVERVIEW OF GASB 74 AND 75

(continued)

GASB 74/75 – How we got here:

GASB 74 and 75 were designed to recognize the Other Postemployment Benefits (“OPEB”) earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. “pay-as-you-go” accounting while increasing disclosures to better reflect the plan’s liabilities and future funding requirements. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Service Cost”. These amounts are reflected in your financial statement each year so that OPEB benefits for an eligible employee shall be fully charged to the financial statement when that eligible employee terminates employment. Additionally, GASB 74 and 75 require increased disclosures comparable to those required under GASB 67 and 68 and interest rates used in the valuation are more closely tied to the plan’s underlying investment and funding policy.

GASB 74 and 75 Impact

The City has adopted GASB 74 for the fiscal year ending June 30, 2017 and GASB 75 for the fiscal year ending June 30, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, making the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the City’s balance sheet will increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than recognizing liabilities (Net OPEB Obligation) over a 30 year period as GASB 45 allowed. Please keep these changes in mind when considering any comparison to previously reported liabilities and expenses.

SECTION II

SUMMARY OF PLAN PROVISIONS

<u>Effective Date</u>	GASB 45 is adopted July 1, 2008 GASB 74 is adopted for the fiscal year ending June 30, 2017 GASB 75 is adopted for the fiscal year ending June 30, 2018
<u>Plan Year</u>	July 1 through June 30.
<u>Eligibility</u>	An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service.
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Participant Contributions</u>	Retirees shall pay 25% of premiums for Medical Insurance, 10% for Life Insurance and 100% for Dental Insurance.
<u>Benefits Offered</u>	Various Medical offerings via Blue Cross Blue Shield of Massachusetts as well as Dental and Group Term Life Insurance.
<u>Excise Tax</u>	Under the Patient Protection and Affordable Care Act ("PPACA"), a 40% tax will be imposed on the cost of medical benefits in excess of a specified threshold.
<u>Normal Retirement Date</u>	The normal retirement date is the first day of the month following a participant's 65th birthday.
<u>Early Retirement</u>	Early retirement is available for any participant who has attained benefit eligibility.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

A. ACTUARIAL COST METHOD

The actuarial cost method used to calculate the costs and liabilities of the plan is the Individual Entry Age Normal Actuarial Cost Method. Under this method, the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement. The annual normal cost for each active member is a level percent of payroll. The actuarial accrued liability is the actuarial present value of the projected benefit times the ratio of past service to expected total service at retirement/termination.

Actuarial gains and losses are calculated each year and amortized into the OPEB expense. Gains and losses arising from plan design changes are recognized immediately. Gains and losses arising from differences between expected and actual investment returns are amortized over a five (5) year period. Gain and losses arising from differences between expected and actual plan experience and changes in actuarial assumptions are amortized over the remaining lifetime of all active and retired plan participants (5.13 years for the City for the 2018 fiscal year).

All employees who are plan participants on the valuation date are included in the actuarial valuation.

B. ASSET VALUATION METHOD

The actuarial value of assets is equal to the Market Value of the Plan's assets as of the measurement date.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS

We used the following assumptions in this year's actuarial valuation:

Pre-Retirement Mortality

It is assumed that pre-retirement mortality is represented by the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Post-Retirement Mortality

It is assumed that post-retirement mortality is represented by the RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Disabled Mortality

It is assumed that disabled mortality is represented by the RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

Mortality Experience Study

The mortality assumptions reflect PERAC's recent experience analysis published in 2014 (based on the years 2006-2011), updated to reflect data through January 1, 2015 for post-retirement mortality, and professional judgement. As such, mortality assumptions reflect observed current mortality as well as expected mortality improvements.

Discount Rate

4.25% per annum (previously 4.00%)

Long Term Rate of Return

7.04% (based on investment policy)

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Municipal Bond Rate

3.13% as of July 1, 2017 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)

Excise Tax

The PPACA Excise tax is expected to take effect for tax years beginning after December 31, 2021. The projected 2022 threshold amounts are \$12,511 for single coverage and \$32,676 for family coverage. For qualified retirees and those engaged in high risk professions, a "kicker" amount of \$1,650 for single coverage and \$3,450 for family coverage is expected to be added to the above thresholds.

Employee Termination

It was assumed that employees would terminate employment in accordance with the sample rates shown in the following table:

Non-Public Safety Employees						
<u>Age</u>	<u>0-4 Years of Service (Males)</u>	<u>0-4 Years of Service (Females)</u>	<u>5-9 Years of Service (Males)</u>	<u>5-9 Years of Service (Females)</u>	<u>10+ Years of Service (Males)</u>	<u>10+ Years of Service (Females)</u>
20	27.00%	27.00%	12.00%	12.00%	6.00%	6.00%
30	23.00%	23.00%	10.00%	10.00%	5.50%	5.50%
40	16.00%	16.00%	8.00%	8.00%	3.50%	3.50%
50	18.00%	18.00%	6.00%	6.00%	3.00%	3.00%
60	18.00%	18.00%	5.00%	5.00%	3.50%	3.50%

Public Safety Employees		
<u>Service</u>	<u>Public Safety Male</u>	<u>Public Safety Female</u>
0	9.00%	9.00%
5	6.00%	6.00%
10	3.50%	3.50%
15	2.00%	2.00%
20	1.50%	1.50%
25	1.50%	1.50%
30	1.50%	1.50%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Retirement Rates

It was assumed that the following percentage of eligible employees would retire each year:

<u>Age</u>	<u>Standard Male</u>	<u>Standard Female</u>	<u>Male Teachers</u>	<u>Female Teachers</u>	<u>Public Safety</u>
45	0.00%	0.00%	0.00%	0.00%	1.00%
46	0.00%	0.00%	0.00%	0.00%	1.00%
47	0.00%	0.00%	0.00%	0.00%	1.00%
48	0.00%	0.00%	0.00%	0.00%	1.00%
49	0.00%	0.00%	0.00%	0.00%	1.00%
50	1.00%	1.50%	2.00%	1.50%	2.00%
51	1.00%	1.50%	2.00%	1.50%	2.00%
52	1.00%	2.50%	2.00%	1.50%	2.00%
53	1.00%	2.50%	2.00%	1.50%	5.00%
54	2.00%	2.50%	2.00%	2.00%	7.50%
55	2.00%	5.50%	6.00%	5.00%	15.00%
56	2.50%	6.50%	20.00%	15.00%	10.00%
57	2.50%	6.50%	40.00%	35.00%	10.00%
58	5.00%	6.50%	50.00%	35.00%	10.00%
59	6.50%	6.50%	50.00%	35.00%	15.00%
60	12.00%	5.00%	40.00%	35.00%	20.00%
61	20.00%	13.00%	40.00%	35.00%	20.00%
62	30.00%	15.00%	35.00%	35.00%	25.00%
63	25.00%	12.50%	35.00%	35.00%	25.00%
64	22.00%	18.00%	35.00%	35.00%	30.00%
65	40.00%	15.00%	35.00%	35.00%	100.00%
66	25.00%	20.00%	40.00%	35.00%	100.00%
67	25.00%	20.00%	40.00%	30.00%	100.00%
68	30.00%	25.00%	40.00%	30.00%	100.00%
69	30.00%	20.00%	40.00%	30.00%	100.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
71	100.00%	100.00%	100.00%	100.00%	100.00%
72	100.00%	100.00%	100.00%	100.00%	100.00%

In the absence of census data specifying which employees are teachers it was assumed that two thirds of school employees are teachers. If available, actual census data was used.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

Disability rates

It was assumed that the following percentage of eligible employees would become permanently disabled each year:

<u>Age</u>	<u>Standard</u>	<u>Teachers</u>	<u>Public Safety</u>
20	0.01%	0.05%	0.20%
25	0.01%	0.06%	0.20%
30	0.01%	0.07%	0.21%
35	0.03%	0.10%	0.40%
40	0.07%	0.21%	0.71%
45	0.10%	0.30%	1.00%
50	0.13%	0.42%	1.10%
55	0.14%	0.50%	0.80%
60	0.12%	0.50%	0.80%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Healthcare Trend

It was assumed that healthcare costs would increase in accordance with the trend rates in the following table:

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

Participation Rate

It was assumed that 80% of employees eligible to receive retirement benefits would enroll in the retiree medical plans upon retirement. For life insurance plans, it was assumed that 80% of eligible employees would elect coverage upon retirement.

Percent Married

It was assumed that 80% of male employees and 70% of female employees who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement. If provided, the actual census information was used. Otherwise it was assumed that a male spouse is three years older than a female spouse and same sex spouses are assumed to be the same age.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Compensation Increases

3.00% per year.

Open Group Forecast

It was assumed for projecting plan liabilities in future years that the active population would remain unchanged and that those who terminate employment or retire will be replaced with new employees with the demographics below:

Open Group Forecast Population Demographics

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	8.0%	5.0%
30	7.0%	14.0%
40	20.0%	19.0%
50	10.0%	10.0%
60	<u>3.0%</u>	<u>4.0%</u>
Total	48.0%	52.0%

Additional Comments

The values in this report reflect a closed group and do not reflect any new entrants after the valuation date.

For purposes of this valuation, retiree contributions were assumed to increase with the same trend rate as health care claims.

Medicare Part B Penalties are not reflected

Medicare Part B Reimbursement is not reflected

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

As part of the Other Post-Employment Benefits Program, there are situations where the cost is borne partly or entirely on the retirees. In most cases, the premium that is used to split the cost is lower than the true cost of providing the medical benefits, for two reasons:

- ✓ The cost sharing program is usually a fixed amount such as a COBRA premium that does not take into account the age of the retiree and his/her dependents. Since medical costs generally increase with age, the cost sharing premium is often lower than the true cost of the medical benefits:
- ✓ The cost sharing premium is usually a blended rate that takes into account the cost of medical benefits for active employees as well as retirees. Medical costs are generally higher for retirees than for active employees of the same age. This means that, again, the cost sharing premium is often lower than the true cost of the medical benefits.

Because of these two factors, a retiree who is paying 100% of the cost sharing premium is most likely not paying 100% of the true cost of the medical benefits. This situation is known as an "implicit subsidy". GASB 74 and 75 require the plan sponsor to measure the liability for this subsidy; that is, the difference between the true cost of the medical benefits and the cost sharing premiums paid by the retiree. Actuarial Standard of Practice No. 6 ("ASOP 6") requires us to recognize this implicit subsidy while the plan sponsor may only pay the premiums billed by an insurance provider. To do this, our valuation consists of several steps:

First, we calculate the liability for the true cost of medical benefits expected to be received by retirees and their dependents. This liability is based on factors developed by actuaries that reflect how the cost of medical benefits varies by age and gender, as well as the other assumptions discussed on the prior page.

Next, we calculate the liability for the future premiums expected to be paid by the retiree for their own and their dependents' coverage. This liability is based on the current premium rates without adjustment for age or gender. It also is based on the terms of the retiree medical program - different retirees pay different percentages based on their union, date of retirement, age at retirement, and other factors.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - Based on Active & Retiree Incurred Claims & Premiums

	Number of Participants			
	Single	Two-Person	Family	Total
HMO Blue New England	137		266	403
PPO Blue Care Elect	32		82	114
HMO Limited Network			6	6
Medex II	145	108		253
Total	314	108	354	776

	Per Contract Costs (monthly) - FY 2018		
	Single	Two-Person	Family
HMO Blue New England	771.99		2,022.72
PPO Blue Care Elect	894.59		2,344.08
HMO Limited Network	717.95		1,881.13
Medex II	324.52	649.04	

Gross Expected FY 2018 Incurred Premiums	11,917,033
Adjustment to reflect children's claims	(2,106,216)
Total Expected FY 2018 Incurred Premiums (adults only)	9,810,817

II. PRE-65 AND POST-65 PER CAPITA RETIREE ANNUAL CLAIM COSTS

	Employer Primary	Medicare Primary
Age 65	13,139	3,234
Average Age	12,844	3,894

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

III. BREAKDOWN OF CLAIM COSTS

ALL ACTIVE EMPLOYEES AND SPOUSES

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
24 & Under	8,061	3,373
25 to 29	8,061	3,631
30 to 34	8,061	4,375
35 to 39	8,061	5,222
40 to 44	8,061	6,144
45 to 49	8,946	7,330
50 to 54	9,824	8,854
55 to 59	10,691	10,770
60 to 64	12,091	12,915
65 to 69	13,320	14,230
70 & Over	14,721	15,710

**ALL RETIREES AND SPOUSES - NOT
MEDICARE ELIGIBLE**

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
44 & Under	8,061	6,144
45 to 49	8,946	7,330
50 to 54	9,824	8,854
55 to 59	10,691	10,770
60 to 64	12,091	12,915
65 to 69	13,320	14,230
70 to 74	14,721	15,710
75 to 79	15,931	17,013
80 to 84	16,736	17,879
85 to 89	17,596	18,794
90 & Over	18,493	19,753

**ALL RETIREES AND SPOUSES - MEDICARE
ELIGIBLE**

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
65 to 69	3,278	3,502
70 to 74	3,623	3,867
75 to 79	3,921	4,187
80 to 84	4,119	4,401
85 to 89	4,331	4,626
90 & Over	4,552	4,862

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

E. DEVELOPMENT OF REPRESENTATIVE DENTAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - with Active & Retiree Incurred Premiums

	Per Contract Costs (monthly) - FY 2018		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Dental Plan	48.98	97.95	171.40

FY 2018 Expected Per Person Rate 588

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE

(As of the July 1, 2017 Measurement Date)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require the following disclosures in the financial statements related to the retiree medical, dental and life insurance benefits;

1. A DESCRIPTION OF THE RETIREE MEDICAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Medical & Medicare Supplement coverages through Blue Cross Blue Shield of Massachusetts.
- b. Administrator: City of Newburyport
- c. Eligibility: An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service.
- d. Cost Sharing: 25% Participant paid.

2. A DESCRIPTION OF THE RETIREE DENTAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Dental
- b. Administrator: City of Newburyport
- c. Eligibility: Same as above
- d. Cost sharing: 100% Participant paid.

3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Group Term Life Insurance - \$5,000
- b. Administrator: City of Newburyport
- c. Eligibility: Same as above
- d. Cost sharing: 10% Participant paid.

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

4. RETIREE MEDICAL AND LIFE INSURANCE CONTRIBUTIONS:

Group	Individual	Family
Medical	25%	25%
Dental	100%	100%
Life	10%	N/A

5. FUNDING POLICY

The contribution requirements of plan members and the City are established and may be amended through City ordinances. For the period ending on the July 1, 2016 Measurement Date total City premiums plus implicit costs for the retiree medical program were \$2,457,447. The City also made a contribution to an OPEB Trust of \$25,000 for a total contribution during the measurement period of \$2,482,447 to be reported on the financial statement for the fiscal year ending June 30, 2018.

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

6. INVESTMENT POLICY

The chart below shows how the long-term rate of return on assets is developed based on the City's Investment Policy.

Investment Target Allocation & Expected Long-Term Real Rate of Return			
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return
Domestic Equity - Large Cap	14.50%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	3.50%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	16.00%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	6.00%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	20.00%	Domestic Fixed Income	2.00%
International Fixed Income	3.00%	International Fixed Income	3.00%
Alternatives	23.00%	Alternatives	6.50%
Real Estate	14.00%	Real Estate	6.25%
Cash	0.00%	Cash	0.00%
Total	100.00%		
		I. Real Rate of Return	4.79%
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	7.54%
		IV. Investment Expense	0.50%
		V. Net Investment Return [III.-IV.]	7.04%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

7. ACTUARIALLY DETERMINED CONTRIBUTION (ADC)

The City's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which represents a level of funding that, if paid on an ongoing basis, is projected to cover the service cost each year and amortize any unfunded actuarial liabilities (or funding excess). The following table shows the components of the City's annual ADC for the fiscal year and the amount actually contributed to the plan:

Actuarially Determined Contribution - Deficiency / (Excess)	
<u>For the Period Ending on the July 1, 2017 to be Reported on June 30, 2018</u>	
I. Service Cost	2,444,356
II. 30 year level flat dollar amortization of NOL at 4.25%	<u>4,246,881</u>
III. Actuarial Determined Contribution [I. + II.]	6,691,237
IV. Contributions in relation to the actuarially determined contribution	<u>(2,482,447)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>4,208,790</u>
Covered employee payroll	39,972,872
Contributions as a % of covered employee payroll	6.21%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

8. FUNDED STATUS AND FUNDING PROGRESS

As of the July 1, 2017 Measurement Date, the plan was 0.76% funded. The Total OPEB Liability (TOL) for benefits was \$74,858,019, and the Fiduciary Net Position was \$571,053, resulting in a Net OPEB Liability (NOL) of \$74,286,966. The covered payroll (annual payroll of active employees covered by the plan) was \$ 39,972,872 and the ratio of the NOL to the covered payroll was 185.8%.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the actuarially determined contribution of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented in the required supplementary information following the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the Total OPEB Liabilities for benefits.

Fiscal Year	Measurement Date	Fiduciary Net Position	Total OPEB Liability	Net OPEB Liability	Funded Ratio	Covered Payroll	NOL as a % of Covered Payroll
2020	07/01/2019 (est.)	\$800,600	\$81,097,457	\$80,296,857	1.0%	\$42,407,220	189.4%
2019	07/01/2018 (est.)	\$675,453	\$78,017,171	\$77,341,718	0.9%	\$41,172,058	187.9%
2018	07/01/2017	\$571,053	\$74,858,019	\$74,286,966	0.8%	\$39,972,872	185.8%
2017	07/01/2016	\$479,543	\$74,322,530	\$73,842,987	0.6%	\$39,972,872	184.7%
2016	07/01/2015	\$475,010	\$69,669,240	\$69,194,230	0.7%	\$33,353,201	207.5%
2015	07/01/2014	\$25,000	\$66,815,622	\$66,790,622	0.0%	\$32,381,749	206.3%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

9. FIDUCIARY NET POSITION

Statement of Fiduciary Net Position		
July 1, 2017 and July 1, 2018		
	<u>July 1, 2018</u>	<u>July 1, 2017</u>
Assets		
I. Cash and cash equivalents	0	0
<u>Receivables & Prepaid expenses:</u>		
II. Contributions	0	0
III. Investment Income	0	0
IV. Receivables from brokers for unsettled trades	0	0
V. Prepaid expenses	<u>0</u>	<u>0</u>
VI. Total Receivables [II.+III.+IV.+V.]	<u>0</u>	<u>0</u>
<u>OPEB Trust Investments:</u>		
VII. Fixed Income	155,355	131,343
VIII. Stocks	270,181	228,421
IX. Cash and cash equivalents	0	0
X. Real estate	94,563	79,947
XI. Alternative investments	<u>155,354</u>	<u>131,342</u>
XII. Total Investments [VII.+VIII.+IX.+X.+XI.]	<u>675,453</u>	<u>571,053</u>
Invested securities lending cash collateral	0	0
Capital assets, net of accumulated depreciation	0	0
Total Assets	675,453	571,053
Liabilities		
XIII. Accrued expenses and benefits payable	0	0
XIV. Securities lending cash collateral	0	0
XV. Payable to brokers for unsettled trades	<u>0</u>	<u>0</u>
XVI. Total liabilities [XIII.+XIV.+XV.]	<u>0</u>	<u>0</u>
XVII. Net Position restricted for OPEB [XII.-XVI.]	675,453	571,053

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

9. FIDUCIARY NET POSITION (CONTINUED)

Statement of Changes in Fiduciary Net Position	
<u>For the Year Ending on the July 1, 2017 Measurement Date</u>	
Additions	
<u>Contributions</u>	
Employer Contributions to OPEB Trust	<u>25,000</u>
Total Contributions	25,000
<u>Investment Income / (loss)</u>	
Interest	6,410
Dividends	4,568
Equity fund income, net	0
Net increase in fair value of investments	55,532
Securities lending income	0
Less investment expenses:	
Direct investment expense	0
Securities lending management fees	0
Securities lending borrower rebates	0
Net investment income	66,510
Other income	0
Total Additions	<u>91,510</u>
Deductions	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
Total deductions	<u>0</u>
Net increase (decrease)	91,510
Net Position restricted for OPEB	
As of July 1, 2016	<u>479,543</u>
As of June 30, 2017	571,053

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

10. OPEB LIABILITY, OPEB EXPENSE AND ADC

	Fiscal Year Ending June 30, 2018				
	General Government Employees and Retirees	School Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Total OPEB Liability	26,747,857	44,118,927	1,883,154	2,108,081	74,858,019
II. Fiduciary Net Position as of July 1, 2017	204,675	335,964	14,403	16,011	571,053
III. Net OPEB Liability (Asset) [I. - II.]	26,543,182	43,782,963	1,868,751	2,092,070	74,286,966
IV. Service Cost	745,533	1,512,041	91,310	95,472	2,444,356
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,187,496	1,753,668	76,478	84,737	3,102,379
VI. Projected Earnings on OPEB Plan Investments	(12,408)	(20,372)	(874)	(971)	(34,625)
VII. Net Recognition of Deferred (Inflows)/Outflows	(2,285)	(3,752)	(161)	(179)	(6,377)
VIII. Financial Statement Expense [IV. + V. + VI. + VII. + VIII. + VI. + VII.]	1,918,336	3,241,585	166,753	179,059	5,505,733
IX. Employer Share of Costs	(880,892)	(1,472,648)	(35,229)	(68,678)	(2,457,447)
X. Employer (Payments) Withdrawals to/from OPEB Trust	(8,918)	(14,723)	(647)	(712)	(25,000)
XI. Total Employer Contribution [IX. + X.]	(889,810)	(1,487,371)	(35,876)	(69,390)	(2,482,447)
XII. Net OPEB Expense [VIII. + XI.]	1,028,526	1,754,214	130,877	109,669	3,023,286
XIII. Actuarial Determined Contribution (ADC)	2,262,969	4,015,051	198,144	215,073	6,691,237
XIV. Total Expected Contribution	889,810	1,487,371	35,876	69,390	2,482,447
XV. Percentage of ADC Contributed [XIV. / XIII.]	39%	37%	18%	32%	37%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

11. OPEB LIABILITY, OPEB EXPENSE AND DEFERRED INFLOW/OUTFLOW

Valuation Date	July 1, 2016
For the Measurement Period ending on the Measurement Date of:	July 1, 2017
For the Reporting Period & Fiscal Year ending on:	June 30, 2018

Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	0
II. Deferred (Inflow)/Outflow from Investment Experience	(25,508)
III. Deferred (Inflow)/Outflow from Changes in Benefit Terms	0
IV. Deferred (Inflow)/Outflow from Changes in Assumptions	0

Change in Deferred Inflow/Outflow	
I. Deferred Outflow at the beginning of the period	0
II. Deferred Outflow created during the period	0
III. Deferred Outflow recognized during the period	0
IV. Change in Deferred Outflow (II. - III.)	0
V. Deferred Outflow at end of the period (I. + IV.)	0
VI. Deferred Inflow at the beginning of the period	0
VII. Deferred Inflow created during the period	(31,885)
VIII. Deferred Inflow recognized during the period	(6,377)
IX. Deferred Inflow at end of the period (VII. - VIII.)	(25,508)
X. Deferred Inflow at end of the period (VI. + IX.)	(25,508)

Net OPEB Liability	
I. Net OPEB Liability at beginning of period	71,289,188
II. Service Cost	2,444,356
III. Interest on Total OPEB Liability, Service Cost, and Payments	3,102,379
IV. Projected Investment Income	(34,625)
V. Total Employer Contributions	(2,482,447)
VI. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V.)	3,029,663
VII. Deferred Outflow created during the period	0
VIII. Deferred Inflow created during the period	(31,885)
IX. Net OPEB Liability at end of period (I. + VI. + VII. + VIII.)	74,286,966

Net OPEB Expense	
I. Service Cost	2,444,356
II. Interest on Total OPEB Liability, Service Cost, and Payments	3,102,379
III. Projected Investment Income	(34,625)
IV. Recognition of Deferred (Inflow)/Outflow	(6,377)
V. Financial Statement Expense (I. + II. + III. + IV.)	5,505,733
VI. Benefit Payments	(2,457,447)
VII. Contributions to Trust	(25,000)
VIII. Total Employer Payments (VI. + VII.)	(2,482,447)
IX. Total Employer Payments (V. + VIII.)	3,023,286

Valuation Date	July 1, 2016
For the Measurement Period ending on the Measurement Date of:	July 1, 2017
For the Reporting Period & Fiscal Year ending on:	June 30, 2018

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

12. EFFECT OF 1% CHANGE IN HEALTHCARE TREND

Impact of a 1% Change in the Healthcare Trend Rate as of the July 1, 2017 Measurement Date

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
I. Total OPEB Liability	60,825,842	74,858,019	92,812,186
II. Fiduciary Net Position	<u>571,053</u>	<u>571,053</u>	<u>571,053</u>
III. Net OPEB Liability (Asset) [I.-II.]	60,254,789	74,286,966	92,241,133
IV. Service Cost	1,707,022	2,444,356	3,470,286

13. EFFECT OF 1% CHANGE IN DISCOUNT RATES

Impact of a 1% Change in the Discount Rate as of the July 1, 2017 Measurement Date

	<u>1% Decrease (3.25%)</u>	<u>Current Discount Rate (4.25%)</u>	<u>1% Increase (5.25%)</u>
I. Total OPEB Liability	87,451,749	74,858,019	64,956,103
II. Fiduciary Net Position	<u>571,053</u>	<u>571,053</u>	<u>571,053</u>
III. Net OPEB Liability (Asset) [I.-II.]	86,880,696	74,286,966	64,385,050
IV. Service Cost	3,212,338	2,444,356	1,887,593

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE

(As of the July 1, 2017 Measurement Date)

(continued)

14. ACTUARIAL METHODS AND ASSUMPTIONS

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Actuarial Cost Method: Individual Entry Age Normal
Discount Rate: 4.25% per annum (previously 4.00%)
Healthcare Trend Rates

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

General Inflation Assumption: 2.75% per annum
Annual Compensation Increases: 3.00% per annum
Actuarial Value of Assets: Market Value

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE

(As of the July 1, 2017 Measurement Date)

(continued)

15. RECOGNITION OF OPEB TRUST ASSETS

The State of Massachusetts has passed legislation allowing municipal entities to establish a Trust for Other Postemployment Benefits (“OPEB”) under M.G.L. Chapter 32B, Section 20 for purposes of accumulating assets to pre-fund the liabilities under GASB 75. This legislation was amended effective November 9, 2016 to clarify who may adopt such a Trust and provide guidance on the ongoing operation of such a Trust. To the best of our knowledge, the City of Newburyport has established an irrevocable trust for the purposes of prefunding liabilities under GASB 74/75.

16. OPEB EXPENSE DEVELOPMENT

Components of the City's OPEB Expenses for the Fiscal Year Ending June 30, 2018	
Description	Amount
I. Service Cost	2,444,356
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	3,102,379
III. Deferred (Inflows)/Outflows from Plan Design Changes*	0
IV. Deferred (Inflows)/Outflows from Plan Experience**	0
V. Deferred (Inflows)/Outflows from Changes of Assumptions**	0
VI. Projected earnings on OPEB plan investments	(34,625)
VII. Deferred (Inflows)/Outflows from Earnings on Plan Investments***	(6,377)
VIII. Total Employer Contributions	(2,482,447)
IX. OPEB Plan administrative expense	0
X. Other changes in fiduciary net position	0
XI. Net OPEB expense [I.+II.+III.+IV.+V.+VI.+VII.+VIII.+IX.+ X.]	3,023,286

* Recognized Immediately

** Amortized over 5.13 years

*** Amortized over 5 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

17. CHANGES IN NET OPEB LIABILITY

Changes in Net OPEB Liability			
	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
I. Balances at July 1, 2016 GASB 45	74,322,530	479,543	73,842,987
II. Change in Assumptions for GASB 75	<u>(2,553,799)</u>	<u>0</u>	<u>(2,553,799)</u>
III. Balances at July 1, 2016 GASB 75 [I. + II.]	71,768,731	479,543	71,289,188
Changes for the year:			
IV. Service Cost	2,444,356	0	2,444,356
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	3,102,379	0	3,102,379
VI. Changes in Benefit terms *	0	0	0
VII. Change in assumptions **	0	0	0
VIII. Differences between actual and expected experience **	0	0	0
IX. Net Investment Income	0	66,510	(66,510)
X. Employer Contributions to Trust	0	2,482,447	(2,482,447)
XI. Benefit Payments Withdrawn from Trust	0	(2,457,447)	2,457,447
XII. Benefit payments excluding Implicit Cost	(2,168,509)	0	(2,168,509)
XIII. Implicit Cost amount	(288,938)	0	(288,938)
XIV. Total Benefit payments including Implicit Cost [XII. + XIII.]	(2,457,447)	0	(2,457,447)
XV. Administrative expense	0	0	0
XVI. Other Charges	0	0	0
XVII. Net Changes [IV.+V.+VI.+VII.+VIII.+IX.+X.+XI.+XIV.+XV.+XVI.]	3,089,288	91,510	2,997,778
XVII. Balances at July 1, 2017 [III.+XVII.]	74,858,019	571,053	74,286,966

* Recognized Immediately

** Amortized over 5.13 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

18. MONEY WEIGHTED RATE OF RETURN

Determination of Beginning & Ending Balances of OPEB Plan Investments for Purposes of Calculating the Annual Money-Weighted Rate of Return		
	Assets as of July 1, 2016	Assets as of July 1, 2017
Assets		
Cash and cash equivalents	0	0
Receivables:		
Investment income	0	0
Receivables from brokers for unsettled trades	0	0
Investments		
Fixed income	110,296	131,343
Stocks	191,817	228,421
Cash and cash equivalents	0	0
Real estate	67,136	79,947
Alternative investments	110,295	131,342
Invested securities lending cash collateral	0	0
Liabilities		
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	0	0
Total OPEB plan investments	479,544	571,053

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

18. MONEY WEIGHTED RATE OF RETURN (CONTINUED)

	Plan Investments / Net External	Periods Invested	Period Weight
I. Beginning value - July 1, 2016	479,543	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	10	0.8333
September	0	9	0.7500
October	0	8	0.6667
November	0	7	0.5833
December	0	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	25,000	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
<u>June</u>	<u>0</u>	0	0.0000
II. Total net external cash flow	25,000		
III. Earnings and increase in fair value	66,510		
IV. Ending value - June 30, 2017 [I.+II.+III.]	571,053		
Money Weighted Rate of Return	13.70%		
Asset Value - June 30, 2017	571,053		

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

19. PLAN CASH FLOWS

Aggregate External (Noninvestment Cash Flows)	
<u>For the Year Ending on the July 1, 2017 Measurement Date</u>	
Additions	
<u>Contributions</u>	
Member contributions	0
Employer contributions	25,000
Other income	0
Deductions	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
Beginning balances of noninvestment-related assets and liabilities	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Ending balances of noninvestment-related assets and liabilities	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Change in capital assets - depreciation	0
Aggregate external cash flows	25,000

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

19. PLAN CASH FLOWS (CONTINUED)

Reconciliation of Beginning & Ending Balances of OPEB Plan Investments, Aggregate External Cash Flows, and Net Investment Income	
<u>For the Year Ending on the July 1, 2017 Measurement Date</u>	
I. Total OPEB plan investments on July 1, 2016	479,543
II. Aggregate external cash flows	25,000
III. Net investment income	<u>66,510</u>
IV. Total OPEB plan investments on July 1, 2017 [I.+II.+III.]	<u><u>571,053</u></u>

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES

Projection of Contributions using a July 1, 2016 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
July 1, 2017	39,972,872	0	39,972,872	0	2,457,447	0	2,457,447
July 1, 2018	37,149,839	4,022,219	41,172,058	0	2,656,780	0	2,656,780
July 1, 2019	34,913,218	7,494,002	42,407,220	0	2,820,356	0	2,820,356
July 1, 2020	33,090,741	10,588,696	43,679,437	0	2,920,045	0	2,920,045
July 1, 2021	31,503,282	13,486,538	44,989,820	0	3,076,934	0	3,076,934
July 1, 2022	29,916,403	16,423,112	46,339,515	0	3,211,923	0	3,211,923
July 1, 2023	28,465,623	19,264,077	47,729,700	0	3,299,619	0	3,299,619
July 1, 2024	27,055,308	22,106,283	49,161,591	0	3,459,101	0	3,459,101
July 1, 2025	25,755,212	24,881,227	50,636,439	0	3,584,462	0	3,584,462
July 1, 2026	24,405,121	27,750,411	52,155,532	0	3,739,625	0	3,739,625
July 1, 2027	22,987,216	30,732,982	53,720,198	0	3,945,724	0	3,945,724
July 1, 2028	21,399,947	33,931,857	55,331,804	0	4,082,804	23,661	4,106,465
July 1, 2029	20,027,790	36,963,968	56,991,758	0	4,244,125	62,731	4,306,856
July 1, 2030	18,742,787	39,958,724	58,701,511	0	4,394,918	119,076	4,513,994
July 1, 2031	17,553,793	42,908,763	60,462,556	0	4,557,435	193,746	4,751,181
July 1, 2032	16,463,738	45,812,695	62,276,433	0	4,700,039	284,875	4,984,914
July 1, 2033	15,391,231	48,753,495	64,144,726	0	4,838,242	353,425	5,191,667
July 1, 2034	14,298,164	51,770,904	66,069,068	0	4,976,453	434,163	5,410,616
July 1, 2035	13,320,673	54,730,467	68,051,140	0	5,125,044	526,307	5,651,351
July 1, 2036	12,421,511	57,671,163	70,092,674	0	5,165,419	602,101	5,767,520
July 1, 2037	11,528,169	60,667,285	72,195,454	0	5,283,503	687,839	5,971,342
July 1, 2038	10,612,731	63,748,587	74,361,318	0	5,412,057	811,778	6,223,835
July 1, 2039	9,662,656	66,929,502	76,592,158	0	5,483,124	981,104	6,464,228
July 1, 2040	8,713,954	70,175,969	78,889,923	0	5,538,768	1,193,694	6,732,462
July 1, 2041	7,805,107	73,451,514	81,256,621	0	5,581,722	1,453,453	7,035,175
July 1, 2042	7,008,464	76,685,856	83,694,320	0	5,603,095	1,753,172	7,356,267
July 1, 2043	6,246,937	79,958,213	86,205,150	0	5,526,440	1,999,496	7,525,936
July 1, 2044	5,564,158	83,227,147	88,791,305	0	5,480,918	2,276,675	7,757,593
July 1, 2045	4,838,569	86,616,475	91,455,044	0	5,500,084	2,582,322	8,082,406
July 1, 2046	4,222,230	89,976,465	94,198,695	0	5,442,846	2,860,803	8,303,649
July 1, 2047	3,600,667	93,423,989	97,024,656	0	5,394,111	3,164,513	8,558,624
July 1, 2048	3,050,805	96,884,591	99,935,396	0	5,383,159	3,518,615	8,901,774
July 1, 2049	2,627,658	100,305,800	102,933,458	0	5,379,383	3,913,343	9,292,726
July 1, 2050	2,208,509	103,812,953	106,021,462	0	5,331,158	4,349,258	9,680,416
July 1, 2051	1,786,023	107,416,083	109,202,106	0	5,257,430	4,834,378	10,091,808
July 1, 2052	1,434,372	111,043,797	112,478,169	0	5,202,955	5,360,588	10,563,543
July 1, 2053	1,191,302	114,661,212	115,852,514	0	5,089,520	5,891,534	10,981,054
July 1, 2054	976,066	118,352,023	119,328,089	0	4,972,090	6,459,361	11,431,451
July 1, 2055	763,408	122,144,524	122,907,932	0	4,936,260	7,065,182	12,001,442
July 1, 2056	569,996	126,025,174	126,595,170	0	4,836,178	7,695,494	12,531,672

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

Projection of Contributions using a July 1, 2016 Valuation Date (Continued)

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
July 1, 2057	440,877	129,952,148	130,393,025	0	4,742,955	8,360,376	13,103,331
July 1, 2058	296,350	134,008,466	134,304,816	0	4,660,877	9,083,942	13,744,819
July 1, 2059	178,063	138,155,897	138,333,960	0	4,566,181	9,852,994	14,419,175
July 1, 2060	131,396	142,352,583	142,483,979	0	4,458,927	10,676,557	15,135,484
July 1, 2061	82,393	146,676,105	146,758,498	0	4,360,898	11,560,576	15,921,474
July 1, 2062	52,185	151,109,068	151,161,253	0	4,240,139	12,497,157	16,737,296
July 1, 2063	21,338	155,674,753	155,696,091	0	4,129,774	13,476,583	17,606,357
July 1, 2064	8,017	160,358,957	160,366,974	0	4,012,533	14,507,545	18,520,078
July 1, 2065	1,786	165,176,197	165,177,983	0	3,876,461	15,594,512	19,470,973
July 1, 2066	1,279	170,132,043	170,133,322	0	3,743,216	16,725,618	20,468,834
July 1, 2067	0	175,237,322	175,237,322	0	3,597,504	17,909,927	21,507,431
July 1, 2068	0	180,494,442	180,494,442	0	3,450,199	19,162,873	22,613,072
July 1, 2069	0	185,909,275	185,909,275	0	3,293,129	20,472,390	23,765,519
July 1, 2070	0	191,486,553	191,486,553	0	3,125,221	21,848,186	24,973,407
July 1, 2071	0	197,231,150	197,231,150	0	2,960,903	23,293,784	26,254,687
July 1, 2072	0	203,148,085	203,148,085	0	2,789,270	24,806,283	27,595,553
July 1, 2073	0	209,242,528	209,242,528	0	2,615,338	26,395,067	29,010,405
July 1, 2074	0	215,519,804	215,519,804	0	2,439,689	28,052,659	30,492,348
July 1, 2075	0	221,985,398	221,985,398	0	2,262,060	29,786,621	32,048,681
July 1, 2076	0	228,644,960	228,644,960	0	2,091,651	31,599,813	33,691,464
July 1, 2077	0	235,504,309	235,504,309	0	1,925,570	33,493,322	35,418,892
July 1, 2078	0	242,569,438	242,569,438	0	1,773,834	35,478,387	37,252,221
July 1, 2079	0	249,846,521	249,846,521	0	1,625,024	37,556,688	39,181,712
July 1, 2080	0	257,341,917	257,341,917	0	1,473,795	39,736,619	41,210,414
July 1, 2081	0	265,062,175	265,062,175	0	1,331,068	42,023,026	43,354,094
July 1, 2082	0	273,014,040	273,014,040	0	1,192,259	44,420,960	45,613,219
July 1, 2083	0	281,204,461	281,204,461	0	1,058,195	46,939,408	47,997,603
July 1, 2084	0	289,640,595	289,640,595	0	931,384	49,579,126	50,510,510
July 1, 2085	0	298,329,813	298,329,813	0	812,327	52,347,290	53,159,617
July 1, 2086	0	307,279,707	307,279,707	0	701,634	55,255,402	55,957,036
July 1, 2087	0	316,498,098	316,498,098	0	601,035	58,305,846	58,906,881
July 1, 2088	0	325,993,041	325,993,041	0	509,564	61,508,641	62,018,205
July 1, 2089	0	335,772,832	335,772,832	0	427,516	64,874,312	65,301,828
July 1, 2090	0	345,846,017	345,846,017	0	355,452	68,409,719	68,765,171
July 1, 2091	0	356,221,398	356,221,398	0	291,983	72,126,013	72,417,996
July 1, 2092	0	366,908,040	366,908,040	0	237,214	76,031,023	76,268,237
July 1, 2093	0	377,915,281	377,915,281	0	190,239	80,135,736	80,325,975
July 1, 2094	0	389,252,739	389,252,739	0	150,790	84,449,609	84,600,399
July 1, 2095	0	400,930,321	400,930,321	0	117,727	88,982,758	89,100,485

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2016 Valuation Date								
For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Portion of Employer Contributions for Current Plan Members	III. Total Benefit Payments	IV. Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Investment Earnings	VIII. Ending Fiduciary Net Position for Current Plan Members
July 1, 2017	479,543	2,457,447	2,457,447	0	25,000	25,000	66,510	571,053
July 1, 2018	571,053	2,656,780	2,656,780	0	50,000	45,115	54,400	670,568
July 1, 2019	670,568	2,820,356	2,820,356	0	75,000	61,746	49,803	782,117
July 1, 2020	782,117	2,920,045	2,920,045	0	102,128	77,370	58,595	918,082
July 1, 2021	918,082	3,076,934	3,076,934	0	107,031	74,946	68,336	1,061,364
July 1, 2022	1,061,364	3,211,923	3,211,923	0	112,168	72,415	78,601	1,212,380
July 1, 2023	1,212,380	3,299,619	3,299,619	0	117,552	70,107	89,419	1,371,906
July 1, 2024	1,371,906	3,459,101	3,459,101	0	123,195	67,798	100,845	1,540,549
July 1, 2025	1,540,549	3,584,462	3,584,462	0	129,108	65,668	112,922	1,719,139
July 1, 2026	1,719,139	3,739,625	3,739,625	0	135,305	63,313	125,709	1,908,161
July 1, 2027	1,908,161	3,945,724	3,945,724	0	141,800	60,677	139,241	2,108,079
July 1, 2028	2,108,079	4,082,804	4,106,465	0	148,606	57,474	153,551	2,295,443
July 1, 2029	2,295,443	4,244,125	4,306,856	0	155,739	54,729	166,988	2,454,429
July 1, 2030	2,454,429	4,394,918	4,513,994	0	163,214	52,113	178,439	2,565,905
July 1, 2031	2,565,905	4,557,435	4,751,181	0	171,048	49,660	186,558	2,608,377
July 1, 2032	2,608,377	4,700,039	4,984,914	0	179,258	47,390	189,832	2,560,724
July 1, 2033	2,560,724	4,838,242	5,191,667	0	187,862	45,077	186,775	2,439,151
July 1, 2034	2,439,151	4,976,453	5,410,616	0	196,879	42,607	178,529	2,226,124
July 1, 2035	2,226,124	5,125,044	5,651,351	0	206,329	40,388	163,858	1,904,063
July 1, 2036	1,904,063	5,165,419	5,767,520	0	3,456,353	612,519	253,641	2,168,122
July 1, 2037	2,168,122	5,283,503	5,971,342	0	7,150,129	1,141,732	400,040	3,022,055
July 1, 2038	3,022,055	5,412,057	6,223,835	0	7,161,006	1,022,008	460,533	3,692,818
July 1, 2039	3,692,818	5,483,124	6,464,228	0	7,172,405	904,851	508,149	4,124,714
July 1, 2040	4,124,714	5,538,768	6,732,462	0	7,184,352	793,563	538,968	4,263,551
July 1, 2041	4,263,551	5,581,722	7,035,175	0	7,196,872	691,296	549,176	4,050,570
July 1, 2042	4,050,570	5,603,095	7,356,267	0	7,209,993	603,756	534,636	3,435,790
July 1, 2043	3,435,790	5,526,440	7,525,936	0	7,223,744	523,475	491,831	2,451,600
July 1, 2044	2,451,600	5,480,918	7,757,593	0	7,238,155	453,583	423,043	1,051,551
July 1, 2045	1,051,551	5,500,084	8,082,406	0	7,253,258	383,745	325,002	708,747
July 1, 2046	708,747	5,442,846	8,303,649	0	7,269,086	325,819	301,416	627,235
July 1, 2047	627,235	5,394,111	8,558,624	0	7,285,673	270,377	296,252	566,629
July 1, 2048	566,629	5,383,159	8,901,774	0	7,303,056	222,946	292,586	515,532
July 1, 2049	515,532	5,379,383	9,292,726	0	7,321,274	186,896	289,620	476,516
July 1, 2050	476,516	5,331,158	9,680,416	0	7,340,366	152,905	287,533	440,438
July 1, 2051	440,438	5,257,430	10,091,808	0	7,360,375	120,380	285,686	406,066
July 1, 2052	406,066	5,202,955	10,563,543	0	7,381,344	94,130	283,992	378,122
July 1, 2053	378,122	5,089,520	10,981,054	0	7,403,320	76,128	282,785	358,913
July 1, 2054	358,913	4,972,090	11,431,451	0	7,426,351	60,745	282,229	342,974
July 1, 2055	342,974	4,936,260	12,001,442	0	7,450,487	46,277	281,942	328,219
July 1, 2056	328,219	4,836,178	12,531,672	0	7,475,782	33,660	281,779	315,439

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FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2016 Valuation Date (Continued)									
For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Portion of Employer Contributions for Current Plan Members	III. Total Benefit Payments	IV. Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Investment Earnings	VIII. Ending Fiduciary Net Position for Current Plan Members	
	July 1, 2057	315,439	4,742,955	13,103,331	0	7,502,291	25,366	281,796	307,162
July 1, 2058	307,162	4,660,877	13,744,819	0	7,530,072	16,615	282,175	298,790	
July 1, 2059	298,790	4,566,181	14,419,175	0	7,559,187	9,730	282,593	292,323	
July 1, 2060	292,323	4,458,927	15,135,484	0	7,589,699	6,999	283,194	290,193	
July 1, 2061	290,193	4,360,898	15,921,474	0	7,621,676	4,279	284,150	288,429	
July 1, 2062	288,429	4,240,139	16,737,296	0	0	0	20,305	20,305	
July 1, 2063	20,305	4,129,774	17,606,357	0	0	0	1,429	1,429	
July 1, 2064	1,429	4,012,533	18,520,078	0	0	0	101	101	
July 1, 2065	101	3,876,461	19,470,973	0	0	0	7	7	
July 1, 2066	7	3,743,216	20,468,834	0	0	0	0	0	
July 1, 2067	0	3,597,504	21,507,431	0	0	0	0	0	
July 1, 2068	0	3,450,199	22,613,072	0	0	0	0	0	
July 1, 2069	0	3,293,129	23,765,519	0	0	0	0	0	
July 1, 2070	0	3,125,221	24,973,407	0	0	0	0	0	
July 1, 2071	0	2,960,903	26,254,687	0	0	0	0	0	
July 1, 2072	0	2,789,270	27,595,553	0	0	0	0	0	
July 1, 2073	0	2,615,338	29,010,405	0	0	0	0	0	
July 1, 2074	0	2,439,689	30,492,348	0	0	0	0	0	
July 1, 2075	0	2,262,060	32,048,681	0	0	0	0	0	
July 1, 2076	0	2,091,651	33,691,464	0	0	0	0	0	
July 1, 2077	0	1,925,570	35,418,892	0	0	0	0	0	
July 1, 2078	0	1,773,834	37,252,221	0	0	0	0	0	
July 1, 2079	0	1,625,024	39,181,712	0	0	0	0	0	
July 1, 2080	0	1,473,795	41,210,414	0	0	0	0	0	
July 1, 2081	0	1,331,068	43,354,094	0	0	0	0	0	
July 1, 2082	0	1,192,259	45,613,219	0	0	0	0	0	
July 1, 2083	0	1,058,195	47,997,603	0	0	0	0	0	
July 1, 2084	0	931,384	50,510,510	0	0	0	0	0	
July 1, 2085	0	812,327	53,159,617	0	0	0	0	0	
July 1, 2086	0	701,634	55,957,036	0	0	0	0	0	
July 1, 2087	0	601,035	58,906,881	0	0	0	0	0	
July 1, 2088	0	509,564	62,018,205	0	0	0	0	0	
July 1, 2089	0	427,516	65,301,828	0	0	0	0	0	
July 1, 2090	0	355,452	68,765,171	0	0	0	0	0	
July 1, 2091	0	291,983	72,417,996	0	0	0	0	0	
July 1, 2092	0	237,214	76,268,237	0	0	0	0	0	
July 1, 2093	0	190,239	80,325,975	0	0	0	0	0	
July 1, 2094	0	150,790	84,600,399	0	0	0	0	0	
July 1, 2095	0	117,727	89,100,485	0	0	0	0	0	

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments using a July 1, 2016 Valuation Date

For the Period Ending on the Measurement Date	Beginning		Funded Portion		Unfunded		Present Value of Benefit Payments using Single Equivalent Discount Rate
	Fiduciary Net Position for Current Plan Members	Benefit Payments	of Benefit Payments	Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	
July 1, 2017	479,543	2,457,447	479,543	1,977,904	479,543	1,977,904	2,457,447
July 1, 2018	571,053	2,656,780	571,053	2,085,727	533,495	2,022,466	2,550,595
July 1, 2019	670,568	2,820,356	670,568	2,149,788	585,262	2,021,356	2,599,415
July 1, 2020	782,117	2,920,045	782,117	2,137,928	637,725	1,949,234	2,583,730
July 1, 2021	918,082	3,076,934	918,082	2,158,852	699,354	1,908,611	2,613,735
July 1, 2022	1,061,364	3,211,923	1,061,364	2,150,559	755,325	1,843,612	2,619,355
July 1, 2023	1,212,380	3,299,619	1,212,380	2,087,239	806,050	1,735,058	2,583,324
July 1, 2024	1,371,906	3,459,101	1,371,906	2,087,195	852,122	1,682,397	2,599,945
July 1, 2025	1,540,549	3,584,462	1,540,549	2,043,913	893,937	1,597,539	2,586,490
July 1, 2026	1,719,139	3,739,625	1,719,139	2,020,486	931,957	1,531,329	2,590,602
July 1, 2027	1,908,161	3,945,724	1,908,161	2,037,563	966,394	1,497,433	2,624,129
July 1, 2028	2,108,079	4,082,804	2,108,079	1,974,725	997,424	1,407,235	2,606,771
July 1, 2029	2,295,443	4,244,125	2,295,443	1,948,682	1,014,643	1,346,557	2,601,467
July 1, 2030	2,454,429	4,394,918	2,454,429	1,940,489	1,013,564	1,300,225	2,586,228
July 1, 2031	2,565,905	4,557,435	2,565,905	1,991,530	999,909	1,293,951	2,574,674
July 1, 2032	2,608,377	4,700,039	2,608,377	2,091,662	940,110	1,317,790	2,549,113
July 1, 2033	2,560,724	4,838,242	2,560,724	2,277,518	862,234	1,391,362	2,519,191
July 1, 2034	2,439,151	4,976,453	2,439,151	2,537,302	767,282	1,503,052	2,487,592
July 1, 2035	2,226,124	5,125,044	2,226,124	2,898,920	654,214	1,665,182	2,459,477
July 1, 2036	1,904,063	5,165,419	1,904,063	3,261,356	522,764	1,816,550	2,379,779
July 1, 2037	2,168,122	5,283,503	2,168,122	3,115,381	556,111	1,682,612	2,336,893
July 1, 2038	3,022,055	5,412,057	3,022,055	2,390,002	724,160	1,251,684	2,298,080
July 1, 2039	3,692,818	5,483,124	3,692,818	1,790,306	826,692	909,175	2,235,201
July 1, 2040	4,124,714	5,538,768	4,124,714	1,414,054	862,648	696,321	2,167,642
July 1, 2041	4,263,551	5,581,722	4,263,551	1,318,171	833,038	629,418	2,097,145
July 1, 2042	4,050,570	5,603,095	4,050,570	1,552,525	739,373	718,836	2,021,036
July 1, 2043	3,435,790	5,526,440	3,435,790	2,090,650	585,906	938,633	1,913,716
July 1, 2044	2,451,600	5,480,918	2,451,600	3,029,318	390,575	1,318,813	1,822,095
July 1, 2045	1,051,551	5,500,084	1,051,551	4,448,533	156,509	1,877,927	1,755,387
July 1, 2046	708,747	5,442,846	708,747	4,734,099	98,549	1,937,862	1,667,691
July 1, 2047	627,235	5,394,111	627,235	4,766,876	81,479	1,892,095	1,586,701
July 1, 2048	566,629	5,383,159	566,629	4,816,530	68,765	1,853,818	1,520,192
July 1, 2049	515,532	5,379,383	515,532	4,863,851	58,449	1,815,251	1,458,409
July 1, 2050	476,516	5,331,158	476,516	4,854,642	50,473	1,756,861	1,387,568
July 1, 2051	440,438	5,257,430	440,438	4,816,992	43,583	1,690,362	1,313,688
July 1, 2052	406,066	5,202,955	406,066	4,796,889	37,539	1,632,251	1,248,115
July 1, 2053	378,122	5,089,520	378,122	4,711,398	32,657	1,554,536	1,172,107
July 1, 2054	358,913	4,972,090	358,913	4,613,177	28,959	1,475,961	1,099,297
July 1, 2055	342,974	4,936,260	342,974	4,593,286	25,853	1,425,023	1,047,756
July 1, 2056	328,219	4,836,178	328,219	4,507,959	23,114	1,356,132	985,485

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments using a July 1, 2016 Valuation Date (Continued)							
For the Period Ending on the Measurement Date	Beginning		Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Equivalent Discount Rate
	Fiduciary Net Position for Current Plan Members	Benefit Payments					
July 1, 2057	315,439	4,742,955	315,439	4,427,516	20,753	1,291,534	927,861
July 1, 2058	307,162	4,660,877	307,162	4,353,715	18,879	1,231,485	875,361
July 1, 2059	298,790	4,566,181	298,790	4,267,391	17,157	1,170,457	823,301
July 1, 2060	292,323	4,458,927	292,323	4,166,604	15,681	1,108,150	771,830
July 1, 2061	290,193	4,360,898	290,193	4,070,705	14,543	1,049,808	724,691
July 1, 2062	288,429	4,240,139	4,085,547	154,592	191,283	38,659	676,461
July 1, 2063	20,305	4,129,774	2,178,926	1,950,848	95,306	473,054	632,521
July 1, 2064	1,429	4,012,533	2,038,998	1,973,535	83,320	464,041	590,002
July 1, 2065	101	3,876,461	2,044,115	1,832,346	78,036	417,775	547,212
July 1, 2066	7	3,743,216	1,974,388	1,768,828	70,416	391,061	507,284
July 1, 2067	0	3,597,504	1,896,965	1,700,539	63,205	364,560	468,051
July 1, 2068	0	3,450,199	1,815,721	1,634,478	56,519	339,770	430,945
July 1, 2069	0	3,293,129	1,732,586	1,560,543	50,385	314,561	394,887
July 1, 2070	0	3,125,221	1,642,545	1,482,676	44,625	289,801	359,775
July 1, 2071	0	2,960,903	1,553,343	1,407,560	39,426	266,774	327,235
July 1, 2072	0	2,789,270	1,462,393	1,326,877	34,676	243,855	295,946
July 1, 2073	0	2,615,338	1,369,544	1,245,794	30,339	222,009	266,400
July 1, 2074	0	2,439,689	1,276,772	1,162,917	26,423	200,954	238,576
July 1, 2075	0	2,262,060	1,182,798	1,079,262	22,868	180,841	212,365
July 1, 2076	0	2,091,651	1,092,430	999,221	19,732	162,352	188,518
July 1, 2077	0	1,925,570	1,005,080	920,490	16,960	145,023	166,613
July 1, 2078	0	1,773,834	924,981	848,853	14,582	129,680	147,350
July 1, 2079	0	1,625,024	847,443	777,581	12,481	115,189	129,593
July 1, 2080	0	1,473,795	768,803	704,992	10,578	101,268	112,835
July 1, 2081	0	1,331,068	694,387	636,681	8,926	88,682	97,835
July 1, 2082	0	1,192,259	622,294	569,965	7,473	76,981	84,130
July 1, 2083	0	1,058,195	552,647	505,548	6,200	66,210	71,686
July 1, 2084	0	931,384	486,854	444,530	5,103	56,453	60,573
July 1, 2085	0	812,327	425,054	387,273	4,162	47,690	50,719
July 1, 2086	0	701,634	367,521	334,113	3,362	39,896	42,057
July 1, 2087	0	601,035	315,256	285,779	2,694	33,089	34,587
July 1, 2088	0	509,564	267,671	241,893	2,137	27,158	28,151
July 1, 2089	0	427,516	224,921	202,595	1,678	22,056	22,674
July 1, 2090	0	355,452	187,335	168,117	1,305	17,748	18,099
July 1, 2091	0	291,983	154,167	137,816	1,004	14,107	14,273
July 1, 2092	0	237,214	125,492	111,722	763	11,089	11,132
July 1, 2093	0	190,239	100,841	89,398	573	8,604	8,571
July 1, 2094	0	150,790	80,092	70,698	425	6,598	6,522
July 1, 2095	0	117,727	62,658	55,069	311	4,984	4,888

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of differences between expected & actual experience								
Fiscal Year	Differences between actual & expected experience		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	Recognition Period (years)							
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	5.13	0	0	0	0	0	0
2019								
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE (CONTINUED)

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of Changes in Assumptions								
Fiscal Year	Differences from changes in		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	Actuarial Assumptions	Recognition Period (years)						
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	5.13	0	0	0	0	0	0
2019								
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURE
(As of the July 1, 2017 Measurement Date)
(continued)

21. CHANGES TO NET OPEB EXPENSE (CONTINUED)

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of differences between Projected & Actual Earnings on OPEB Plan Investments								
Fiscal Year	Differences		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	between actual & expected earnings	Recognition Period (years)						
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	(31,885)	5.00	(6,377)	(6,377)	(6,377)	(6,377)	(6,377)	0
2019								
Net increase (decrease) in OPEB expense			(6,377)	(6,377)	(6,377)	(6,377)	(6,377)	0

EXHIBIT A

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of July 1, 2016.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, July 1, 2017.
<u>Actuarial Assumptions:</u>	
Investment Rate of Return:	7.04%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	3.13% as of July 1, 2017 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)
Single Equivalent Discount Rate:	4.25%, net of OPEB plan investment expense, including inflation.
Inflation:	2.75% as of July 1, 2017 and for future periods
Salary Increases:	3.00% annually as of July 1, 2017 and for future periods
Cost of Living Adjustment:	Not Applicable
Pre-Retirement Mortality:	RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Post-Retirement Mortality:	RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)

(continued)

Notes to Required Supplementary Information (Continued):

Disabled Mortality: RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

Plan Membership

Plan Membership: At July 1, 2016, OPEB plan membership consisted of the following

Inactive employees or beneficiaries currently receiving benefits:	489
Active Employees:	<u>550</u>
Total:	1,039

Changes in Assumptions: Effective July 1, 2017

- Discount rate is 4.25% previously 4.00%

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources Arising between Expected & Actual Experience					
Fiscal Year	Experience Losses	Experience Gains	Amounts recognized in OPEB Expense through June 30, 2018	Balances at June 30, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	0	0	0	0
Total				0	0

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions					
Fiscal Year	Increase in the Total OPEB Liability	Decrease in the Total OPEB Liability	Amounts recognized in OPEB Expense through June 30, 2018	Balances at June 30, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	0	0	0	0
Total				0	0

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Deferred Outflows of Resources and Deferred Inflows of Resources between Projected & Actual Earnings on OPEB Plan Investments					
Fiscal Year	Increase in the Total OPEB Liability	Decrease in the Total OPEB Liability	Amounts recognized in OPEB Expense through June 30, 2018	Balances at June 30, 2018	
				Deferred Outflows of Resources	Deferred Inflows of Resources
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	(31,885)	(6,377)	0	(25,508)
Total				0	(25,508)

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB as of June 30, 2018		
	Deferred Outflows of Resources	Deferred Inflows of Resources
I. Differences between actual & expected experience	0	0
II. Changes of assumptions	0	0
III. Net difference between projected & actual earnings on OPEB plan investments	<u>0</u>	<u>(25,508)</u>
IV. Total [I.+II.+III.]	0	(25,508)
Year ended June 30:		
2019	(6,377)	
2020	(6,377)	
2021	(6,377)	
2022	(6,377)	
2023	0	
Thereafter	0	

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the July 1, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):Contributions:

The contribution requirements of plan members and the City are established and may be amended through City ordinances. The City contributed \$25,000 beyond the pay-as-you-go cost for the period ending on the July 1, 2017 Measurement Date. For the year ending on the July 1, 2017 Measurement Date total City premiums plus implicit costs for the retiree medical program were \$2,457,447 .

EXHIBIT C

PLAN DEMOGRAPHICS
(As of the July 1, 2016 Valuation Date)

ACTIVE EMPLOYEES

Valuation Date	<u>July 1, 2016</u>	<u>July 1, 2014</u>
A. Average Age at Hire	36.69	37.17
B. Average Service	<u>9.68</u>	<u>9.71</u>
C. Average Current Age	46.37	46.88

RETIRED EMPLOYEES & DEPENDENTS

	<u>July 1, 2016</u>	<u>July 1, 2014</u>
I. Retirees		
A. Under Age 65	60	72
B. Age 65 & Over	<u>278</u>	<u>275</u>
C. Total Retirees	338	347
II. Dependents of Retirees		
A. Under Age 65	37	40
B. Age 65 & Over	<u>114</u>	<u>106</u>
C. Total Retirees	151	146
III. Retirees & Dependents		
A. Under Age 65	97	112
B. Age 65 & Over	<u>392</u>	<u>381</u>
C. Total Retirees	489	493

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical, Dental & Life Insurance - Funding - 4.25% discount rate

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 7.04% return		III. Net OPEB Liability (Asset) [I. - II.]	IV. Funded Ratio [II. / I]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Excess Employer Payments (beyond claims)	VIII. Total Employer Payments [VI. + VII.]
			Measurement Date	expected 7.04% return						
2018	July 1, 2017	74,858,019	571,053	74,286,966	0.76%	2,444,356	2,457,447	25,000	2,482,447	
2019	July 1, 2018	78,017,171	675,453	77,341,718	0.87%	2,580,657	2,656,780	50,000	2,706,780	
2020	July 1, 2019	81,097,457	800,600	80,296,857	0.99%	2,702,824	2,820,356	75,000	2,895,356	
2021	July 1, 2020	84,447,700	962,624	83,485,076	1.14%	2,837,027	2,920,045	102,128	3,022,173	
2022	July 1, 2021	87,912,482	1,141,127	86,771,355	1.30%	2,973,995	3,076,934	107,031	3,183,965	
2023	July 1, 2022	91,514,433	1,337,512	90,176,921	1.46%	3,105,499	3,211,923	112,168	3,324,091	
2024	July 1, 2023	95,341,573	1,553,292	93,788,281	1.63%	3,255,529	3,299,619	117,552	3,417,171	
2025	July 1, 2024	99,316,995	1,790,101	97,526,894	1.80%	3,410,347	3,459,101	123,195	3,582,296	
2026	July 1, 2025	103,466,410	2,049,699	101,416,711	1.98%	3,580,378	3,584,462	129,108	3,713,570	
2027	July 1, 2026	107,806,033	2,333,985	105,472,048	2.16%	3,743,396	3,739,625	135,305	3,874,930	
2028	July 1, 2027	112,272,090	2,645,004	109,627,086	2.36%	3,918,151	3,945,724	141,800	4,087,524	
2029	July 1, 2028	116,885,530	2,984,960	113,900,570	2.55%	4,075,334	4,106,465	148,606	4,255,071	
2030	July 1, 2029	121,497,343	3,356,229	118,141,114	2.76%	4,265,659	4,306,856	155,739	4,462,595	
2031	July 1, 2030	126,294,499	3,761,369	122,533,130	2.98%	4,460,386	4,513,994	163,214	4,677,208	
2032	July 1, 2031	131,409,233	4,203,136	127,206,097	3.20%	4,664,303	4,751,181	171,048	4,922,229	
2033	July 1, 2032	136,466,556	4,684,497	131,782,059	3.43%	4,886,240	4,984,914	179,258	5,164,172	
2034	July 1, 2033	141,937,212	5,208,648	136,728,564	3.67%	5,110,410	5,191,667	187,862	5,379,529	
2035	July 1, 2034	147,412,938	5,779,028	141,633,910	3.92%	5,354,361	5,410,616	196,879	5,607,495	
2036	July 1, 2035	153,181,815	6,399,340	146,782,475	4.18%	5,615,156	5,651,351	206,329	5,857,680	
2037	July 1, 2036	159,381,304	10,425,801	148,955,503	6.54%	5,888,594	5,767,520	3,456,353	9,223,873	
2038	July 1, 2037	166,009,494	18,557,311	147,452,183	11.18%	6,178,508	5,971,342	7,150,129	13,121,471	
2039	July 1, 2038	172,919,544	27,272,532	145,647,012	15.77%	6,473,612	6,223,835	7,161,006	13,384,841	
2040	July 1, 2039	180,230,633	36,613,098	143,617,535	20.31%	6,795,933	6,464,228	7,172,405	13,636,633	
2041	July 1, 2040	187,827,634	46,623,601	141,204,033	24.82%	7,139,267	6,732,462	7,184,352	13,916,814	
2042	July 1, 2041	196,034,975	57,351,796	138,683,179	29.26%	7,508,251	7,035,175	7,196,872	14,232,047	
2043	July 1, 2042	204,593,609	68,848,831	135,744,778	33.65%	7,905,170	7,356,267	7,209,993	14,566,260	
2044	July 1, 2043	213,880,285	81,169,484	132,710,801	37.95%	8,317,369	7,525,936	7,223,744	14,749,680	
2045	July 1, 2044	223,667,517	94,372,421	129,295,096	42.19%	8,764,309	7,757,593	7,238,155	14,995,748	
2046	July 1, 2045	233,981,558	108,520,470	125,461,088	46.38%	9,221,187	8,082,406	7,253,258	15,335,664	
2047	July 1, 2046	244,984,122	123,680,917	121,303,205	50.49%	9,715,625	8,303,649	7,269,086	15,572,735	
2048	July 1, 2047	256,737,279	139,925,821	116,811,458	54.50%	10,228,049	8,558,624	7,285,673	15,844,297	
2049	July 1, 2048	269,387,059	157,332,351	112,054,708	58.40%	10,766,061	8,901,774	7,303,056	16,204,830	

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical, Dental & Life Insurance - 7.00% discount rate increasing at 0.00% per year

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net		IV Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
			Position as of Measurement Date with expected 7.00% return	III. Net OPEB (Asset) ("NOL") [I. - II.]					
2018	July 1, 2017	51,949,085	571,053	51,378,032	1.10%	1,230,504	2,457,447	25,000	2,482,447
2019	July 1, 2018	54,135,438	675,453	53,459,985	1.25%	1,301,562	2,656,780	1,946,014	4,602,794
2020	July 1, 2019	56,368,108	2,736,354	53,631,754	4.85%	1,365,393	2,820,356	1,946,014	4,766,370
2021	July 1, 2020	58,725,025	4,942,342	53,782,683	8.42%	1,435,137	2,920,045	1,946,014	4,866,059
2022	July 1, 2021	61,154,572	7,303,632	53,850,940	11.94%	1,505,883	3,076,934	1,946,014	5,022,948
2023	July 1, 2022	63,678,411	9,831,156	53,847,255	15.44%	1,572,460	3,211,923	1,946,014	5,157,937
2024	July 1, 2023	66,369,524	12,536,618	53,832,906	18.89%	1,648,800	3,299,619	1,946,014	5,245,633
2025	July 1, 2024	69,159,836	15,432,545	53,727,291	22.31%	1,727,414	3,459,101	1,946,014	5,405,115
2026	July 1, 2025	72,075,745	18,532,345	53,543,400	25.71%	1,813,656	3,584,462	1,946,014	5,530,476
2027	July 1, 2026	75,123,579	21,850,371	53,273,208	29.09%	1,895,812	3,739,625	1,946,014	5,685,639
2028	July 1, 2027	78,247,172	25,401,986	52,845,186	32.46%	1,983,709	3,945,724	1,946,014	5,891,738
2029	July 1, 2028	81,472,231	29,203,635	52,268,596	35.84%	2,059,234	4,106,465	1,946,014	6,052,479
2030	July 1, 2029	84,679,062	33,272,920	51,406,142	39.29%	2,152,786	4,306,856	1,946,014	6,252,870
2031	July 1, 2030	87,999,493	37,628,682	50,370,811	42.76%	2,248,326	4,513,994	1,946,014	6,460,008
2032	July 1, 2031	91,525,008	42,291,090	49,233,918	46.21%	2,348,711	4,751,181	1,946,014	6,697,195
2033	July 1, 2032	94,977,876	47,281,731	47,696,145	49.78%	2,458,742	4,984,914	1,946,014	6,930,928
2034	July 1, 2033	98,719,715	52,623,714	46,096,001	53.31%	2,569,352	5,191,667	1,946,014	7,137,681
2035	July 1, 2034	102,444,320	58,341,772	44,102,548	56.95%	2,690,384	5,410,616	1,946,014	7,356,630
2036	July 1, 2035	106,344,549	64,462,382	41,882,167	60.62%	2,819,938	5,651,351	1,946,014	7,597,365
2037	July 1, 2036	110,540,970	71,013,882	39,527,088	64.24%	2,955,695	5,767,520	1,946,014	7,713,534
2038	July 1, 2037	115,037,083	78,026,608	37,010,475	67.83%	3,099,731	5,971,342	1,946,014	7,917,356
2039	July 1, 2038	119,718,037	85,533,030	34,185,007	71.45%	3,246,027	6,223,835	1,946,014	8,169,849
2040	July 1, 2039	124,650,919	93,567,904	31,083,015	75.06%	3,405,996	6,464,228	1,946,014	8,410,242
2041	July 1, 2040	129,774,639	102,168,433	27,606,206	78.73%	3,576,245	6,732,462	1,946,014	8,678,476
2042	July 1, 2041	135,272,088	111,374,439	23,897,649	82.33%	3,759,517	7,035,175	1,946,014	8,981,189
2043	July 1, 2042	140,985,985	121,228,548	19,757,437	85.99%	3,956,558	7,356,267	1,946,014	9,302,281
2044	July 1, 2043	147,200,601	131,776,387	15,424,214	89.52%	4,161,135	7,525,936	1,946,014	9,471,950
2045	July 1, 2044	153,769,098	143,066,793	10,702,305	93.04%	4,382,894	7,757,593	1,946,014	9,703,607
2046	July 1, 2045	160,686,187	155,152,044	5,534,143	96.56%	4,609,494	8,082,406	1,946,014	10,028,420
2047	July 1, 2046	168,081,309	168,088,097	(6,788)	100.00%	4,854,541	8,303,649	(6,788)	8,296,861
2048	July 1, 2047	176,012,597	179,914,476	(3,901,879)	102.22%	5,108,280	8,558,624	(3,901,879)	4,656,745
2049	July 1, 2048	184,523,950	188,543,566	(4,019,616)	102.18%	5,374,664	8,901,774	(4,019,616)	4,882,158

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical, Dental & Life Insurance - 7.00% discount rate and increasing at 3.00% per year

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 7.04% return	III. Net OPEB Liability (Asset) ("NOL") [I. - II.]	IV Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
2018	July 1, 2017	51,949,085	571,053	51,378,032	1.10%	1,230,504	2,457,447	25,000	2,482,447
2019	July 1, 2018	54,135,438	675,453	53,459,985	1.25%	1,301,562	2,656,780	1,447,320	4,104,100
2020	July 1, 2019	56,368,108	2,220,404	54,147,704	3.94%	1,365,393	2,820,356	1,490,740	4,311,096
2021	July 1, 2020	58,725,025	3,919,042	54,805,983	6.67%	1,435,137	2,920,045	1,535,462	4,455,507
2022	July 1, 2021	61,154,572	5,783,534	55,371,038	9.46%	1,505,883	3,076,934	1,581,526	4,658,460
2023	July 1, 2022	63,678,411	7,826,944	55,851,467	12.29%	1,572,460	3,211,923	1,628,972	4,840,895
2024	July 1, 2023	66,369,524	10,063,298	56,306,226	15.16%	1,648,800	3,299,619	1,677,841	4,977,460
2025	July 1, 2024	69,159,836	12,507,651	56,652,185	18.09%	1,727,414	3,459,101	1,728,176	5,187,277
2026	July 1, 2025	72,075,745	15,176,163	56,899,582	21.06%	1,813,656	3,584,462	1,780,021	5,364,483
2027	July 1, 2026	75,123,579	18,086,177	57,037,402	24.08%	1,895,812	3,739,625	1,833,422	5,573,047
2028	July 1, 2027	78,247,172	21,256,305	56,990,867	27.17%	1,983,709	3,945,724	1,888,425	5,834,149
2029	July 1, 2028	81,472,231	24,706,516	56,765,715	30.33%	2,059,234	4,106,465	1,945,078	6,051,543
2030	July 1, 2029	84,679,062	28,458,235	56,220,827	33.61%	2,152,786	4,306,856	2,003,430	6,310,286
2031	July 1, 2030	87,999,493	32,534,446	55,465,047	36.97%	2,248,326	4,513,994	2,063,533	6,577,527
2032	July 1, 2031	91,525,008	36,959,805	54,565,203	40.38%	2,348,711	4,751,181	2,125,439	6,876,620
2033	July 1, 2032	94,977,876	41,760,757	53,217,119	43.97%	2,458,742	4,984,914	2,189,202	7,174,116
2034	July 1, 2033	98,719,715	46,965,666	51,754,049	47.57%	2,569,352	5,191,667	2,254,878	7,446,545
2035	July 1, 2034	102,444,320	52,604,949	49,839,371	51.35%	2,690,384	5,410,616	2,322,524	7,733,140
2036	July 1, 2035	106,344,549	58,711,224	47,633,325	55.21%	2,819,938	5,651,351	2,392,200	8,043,551
2037	July 1, 2036	110,540,970	65,319,468	45,221,502	59.09%	2,955,695	5,767,520	2,463,966	8,231,486
2038	July 1, 2037	115,037,083	72,467,181	42,569,902	62.99%	3,099,731	5,971,342	2,537,885	8,509,227
2039	July 1, 2038	119,718,037	80,194,570	39,523,467	66.99%	3,246,027	6,223,835	2,614,022	8,837,857
2040	July 1, 2039	124,650,919	88,544,738	36,106,181	71.03%	3,405,996	6,464,228	2,692,443	9,156,671
2041	July 1, 2040	129,774,639	97,563,893	32,210,746	75.18%	3,576,245	6,732,462	2,773,216	9,505,678
2042	July 1, 2041	135,272,088	107,301,564	27,970,524	79.32%	3,759,517	7,035,175	2,856,412	9,891,587
2043	July 1, 2042	140,985,985	117,810,842	23,175,143	83.56%	3,956,558	7,356,267	2,942,104	10,298,371
2044	July 1, 2043	147,200,601	129,148,630	18,051,971	87.74%	4,161,135	7,525,936	3,030,367	10,556,303
2045	July 1, 2044	153,769,098	141,375,915	12,393,183	91.94%	4,382,894	7,757,593	3,121,278	10,878,871
2046	July 1, 2045	160,686,187	154,558,058	6,128,129	96.19%	4,609,494	8,082,406	3,214,916	11,297,322
2047	July 1, 2046	168,081,309	168,765,102	(683,793)	100.41%	4,854,541	8,303,649	(683,793)	7,619,856
2048	July 1, 2047	176,012,597	179,938,712	(3,926,115)	102.23%	5,108,280	8,558,624	(3,926,115)	4,632,509
2049	July 1, 2048	184,523,950	188,544,433	(4,020,483)	102.18%	5,374,664	8,901,774	(4,020,483)	4,881,291

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

City of Newburyport

OPEB Projection of Funding Annual Service Cost and Impact on Unfunded Obligation

Total Medical, Dental & Life Insurance - Funding Annual Service Cost - 4.25% discount rate

Measurement Date	I. Total OPEB		III. Employer	IV. Funding	V. Total	VI. Present	VII. Present	VIII. Present	IX. Fiduciary	X. Net OPEB	XI. Present
	Liability	Service Cost	Share of Premiums / Claims including "implicit cost"	Service Cost beyond claims	Funding Costs [III. + IV.]	Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"	Value at 3.00% of Funding Service Cost beyond claims	Value at 3.00% of Total Funding Costs [VI. + VII.]			
July 1, 2017	74,858,019	2,444,356	2,457,447	(13,091)	2,444,356	2,457,447	(13,091)	2,444,356	571,053	74,286,966	74,286,966
July 1, 2018	78,017,171	2,580,657	2,656,780	(76,123)	2,580,657	2,579,398	(73,906)	2,505,492	582,231	77,434,940	75,179,553
July 1, 2019	81,097,457	2,702,824	2,820,356	(117,532)	2,702,824	2,658,456	(110,785)	2,547,671	530,853	80,566,604	75,941,751
July 1, 2020	84,447,700	2,837,027	2,920,045	(83,018)	2,837,027	2,672,255	(75,973)	2,596,282	435,882	84,011,818	76,882,715
July 1, 2021	87,912,482	2,973,995	3,076,934	(102,939)	2,973,995	2,733,816	(91,460)	2,642,356	371,389	87,541,093	77,779,127
July 1, 2022	91,514,433	3,105,499	3,211,923	(106,424)	3,105,499	2,770,633	(91,802)	2,678,831	284,234	91,230,199	78,695,971
July 1, 2023	95,341,573	3,255,529	3,299,619	(44,090)	3,255,529	2,763,379	(36,925)	2,726,454	189,890	95,151,683	79,688,037
July 1, 2024	99,316,995	3,410,347	3,459,101	(48,754)	3,410,347	2,812,566	(39,641)	2,772,925	153,870	99,163,125	80,628,695
July 1, 2025	103,466,410	3,580,378	3,584,462	(4,084)	3,580,378	2,829,607	(3,224)	2,826,383	111,655	103,354,755	81,589,198
July 1, 2026	107,806,033	3,743,396	3,739,625	3,771	3,743,396	2,866,111	2,890	2,869,001	112,316	107,693,717	82,538,267
July 1, 2027	112,272,090	3,918,151	3,945,724	(27,573)	3,918,151	2,935,989	(20,517)	2,915,472	120,860	112,151,230	83,451,048
July 1, 2028	116,885,530	4,075,334	4,106,465	(31,131)	4,075,334	2,966,598	(22,490)	2,944,108	98,424	116,787,106	84,369,490
July 1, 2029	121,497,343	4,265,659	4,306,856	(41,197)	4,265,659	3,020,742	(28,895)	2,991,847	71,476	121,425,867	85,165,660
July 1, 2030	126,294,499	4,460,386	4,513,994	(53,608)	4,460,386	3,073,810	(36,504)	3,037,306	33,317	126,261,182	85,977,721
July 1, 2031	131,409,233	4,664,303	4,751,181	(86,878)	4,664,303	3,141,090	(57,437)	3,083,653	0	131,409,233	86,876,984
July 1, 2032	136,466,556	4,886,240	4,984,914	(98,674)	4,886,240	3,199,627	(63,335)	3,136,292	0	136,466,556	87,592,689
July 1, 2033	141,937,212	5,110,410	5,191,667	(81,257)	5,110,410	3,235,275	(50,637)	3,184,638	0	141,937,212	88,450,578
July 1, 2034	147,412,938	5,354,361	5,410,616	(56,255)	5,354,361	3,273,512	(34,035)	3,239,477	0	147,412,938	89,187,252
July 1, 2035	153,181,815	5,615,156	5,651,351	(36,195)	5,615,156	3,319,573	(21,261)	3,298,312	0	153,181,815	89,978,172
July 1, 2036	159,381,304	5,888,594	5,767,520	121,074	5,888,594	3,289,136	69,047	3,358,183	0	159,381,304	90,892,931
July 1, 2037	166,009,494	6,178,508	5,971,342	207,166	6,178,508	3,306,187	114,703	3,420,890	121,074	165,888,420	91,848,396
July 1, 2038	172,919,544	6,473,612	6,223,835	249,777	6,473,612	3,345,618	134,267	3,479,885	333,386	172,586,158	92,773,564
July 1, 2039	180,230,633	6,795,933	6,464,228	331,705	6,795,933	3,373,632	173,114	3,546,746	597,332	179,633,301	93,749,273
July 1, 2040	187,827,634	7,139,267	6,732,462	406,805	7,139,267	3,411,283	206,125	3,617,408	954,424	186,873,210	94,687,114
July 1, 2041	196,034,975	7,508,251	7,035,175	473,076	7,508,251	3,460,840	232,722	3,693,562	1,401,792	194,633,183	95,746,629
July 1, 2042	204,593,609	7,905,170	7,356,267	548,903	7,905,170	3,513,394	262,159	3,775,553	1,934,444	202,659,165	96,791,146
July 1, 2043	213,880,285	8,317,369	7,525,936	791,433	8,317,369	3,489,737	366,983	3,856,720	2,565,561	211,314,724	97,985,523
July 1, 2044	223,667,517	8,764,309	7,757,593	1,006,716	8,764,309	3,492,383	453,213	3,945,596	3,466,030	220,201,487	99,132,300
July 1, 2045	233,981,558	9,221,187	8,082,406	1,138,781	9,221,187	3,532,632	497,735	4,030,367	4,620,052	229,361,506	100,248,582
July 1, 2046	244,984,122	9,715,625	8,303,649	1,411,976	9,715,625	3,523,623	599,167	4,122,790	5,955,185	239,028,937	101,431,060
July 1, 2047	256,737,279	10,228,049	8,558,624	1,669,425	10,228,049	3,526,040	687,781	4,213,821	7,620,256	249,117,023	102,632,915

EXHIBIT D

PROJECTED CASH FLOWS (OPEN GROUP)

Total Medical & Life Insurance - Funding

Measurement Date	Number of Retirees, Spouses & Surviving Spouses	Total OPEB Liability	Present Value at 3.00% of Total OPEB Liability	Employer Share of Premiums / Claims including "implicit cost"	Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"
July 1, 2017	489	74,858,019	74,858,019	2,457,447	2,457,447
July 1, 2018	516	78,017,171	75,744,826	2,656,780	2,579,398
July 1, 2019	525	81,097,457	76,442,131	2,820,356	2,658,456
July 1, 2020	531	84,447,700	77,281,608	2,920,045	2,672,255
July 1, 2021	538	87,912,482	78,109,102	3,076,934	2,733,816
July 1, 2022	544	91,514,433	78,941,154	3,211,923	2,770,633
July 1, 2023	547	95,341,573	79,847,066	3,299,619	2,763,379
July 1, 2024	552	99,316,995	80,753,806	3,459,101	2,812,566
July 1, 2025	554	103,466,410	81,677,339	3,584,462	2,829,607
July 1, 2026	558	107,806,033	82,624,348	3,739,625	2,866,111
July 1, 2027	564	112,272,090	83,540,979	3,945,724	2,935,989
July 1, 2028	568	116,885,530	84,440,594	4,106,465	2,966,598
July 1, 2029	571	121,497,343	85,215,792	4,306,856	3,020,742
July 1, 2030	572	126,294,499	86,000,408	4,513,994	3,073,810
July 1, 2031	573	131,409,233	86,876,984	4,751,181	3,141,090
July 1, 2032	572	136,466,556	87,592,689	4,984,914	3,199,627
July 1, 2033	572	141,937,212	88,450,578	5,191,667	3,235,275
July 1, 2034	571	147,412,938	89,187,252	5,410,616	3,273,512
July 1, 2035	570	153,181,815	89,978,172	5,651,351	3,319,573
July 1, 2036	567	159,381,304	90,892,931	5,767,520	3,289,136
July 1, 2037	564	166,009,494	91,915,432	5,971,342	3,306,187
July 1, 2038	562	172,919,544	92,952,776	6,223,835	3,345,618
July 1, 2039	560	180,230,633	94,061,016	6,464,228	3,373,632
July 1, 2040	560	187,827,634	95,170,712	6,732,462	3,411,283
July 1, 2041	559	196,034,975	96,436,218	7,035,175	3,460,840
July 1, 2042	557	204,593,609	97,715,047	7,356,267	3,513,394
July 1, 2043	557	213,880,285	99,175,160	7,525,936	3,489,737
July 1, 2044	555	223,667,517	100,692,668	7,757,593	3,492,383
July 1, 2045	554	233,981,558	102,267,900	8,082,406	3,532,632
July 1, 2046	553	244,984,122	103,958,121	8,303,649	3,523,623
July 1, 2047	551	256,737,279	105,772,360	8,558,624	3,526,040
July 1, 2048	550	269,387,059	107,751,361	8,901,774	3,560,595
July 1, 2049	550	282,802,090	109,822,525	9,292,726	3,608,710
July 1, 2050	550	296,924,375	111,948,283	9,680,416	3,649,771
July 1, 2051	549	312,013,115	114,210,809	10,091,808	3,694,055
July 1, 2052	549	327,883,410	116,524,320	10,563,543	3,754,108
July 1, 2053	549	344,969,403	119,025,630	10,981,054	3,788,820
July 1, 2054	548	362,962,014	121,586,081	11,431,451	3,829,341
July 1, 2055	548	382,230,475	124,311,347	12,001,442	3,903,183
July 1, 2056	548	402,246,243	127,010,678	12,531,672	3,956,920

EXHIBIT E**GLOSSARY**

Accrual Accounting - A system of accounting in which revenues are recorded when earned and outlays are recorded when goods are received or services performed, even though the actual receipt of revenues and payment for goods or services may occur, in whole or in part, at a different time.

Actuarially Determined Contribution - Amount of funding required annually to fully fund plan benefits. Determined by the actuary using a consistent methodology.

Amortization - Allows the recognition of liability over a fixed period of time.

Cash Basis Accounting - A system of accounting in which revenues are recorded when received and outlays are recorded when payment is made.

Deferred Inflows/Outflows of Resources - Amounts arising from experience gains and losses that have not been recognized into the OPEB Expense, but will be recognized in the future.

Discount Rate - The interest rate used to calculate the present value of future cash flows. Under GASB 75, the rate should be the expected long term rate of return on investments for a plan that is being fully funded, the 20 year municipal bond index for a pay-as-you-go plan, and a blend of the two rates for a plan that is being partially funded.

Fiduciary Net Position - The value of cash, investments, other assets and property belonging to an OPEB trust.

GASB - Government Accounting Standards Board. "The Governmental Accounting Standards Board (GASB) was organized in 1984 by the Financial Accounting Foundation (FAF) to establish standards of financial accounting and reporting for state and local governmental entities. Its standards guide the preparation of external financial reports of those entities."

Implicit Subsidy - The liability that arises because retirees who are not eligible for Medicare are charged the same premium as active employees even though their actual medical costs are higher on average.

Irrevocable Contribution - The transfer of assets to a qualified trust in which assets may only be withdrawn for the purpose of providing retiree other post employment benefits.

EXHIBIT E**GLOSSARY***(continued)*

Net OPEB Liability (NOL) - Total OPEB Liability less the Fiduciary Net Position.

Other Post Employment Benefits (OPEB) - Benefits that an employee will begin to receive at the start of retirement. This does not include pension benefits paid to the retired employee.

OPEB Trust - An entity which holds assets for the sole purpose of funding OPEB. All contributions and earning within this entity must be irrevocable and protected from creditors.

Pay-as-you-go funding - Paying benefits (such as pensions or OPEB) on a cash basis, with no money set aside for future liabilities which are already incurred.

Service Cost - The actuarially determined present value contribution needed to fund benefits which are earned for employee service rendered during the current year. Service cost depends on many factors, including the interest rate used to discount future cashflows, and expected inflation.

Total OPEB Liability (TOL) - That portion, as determined by the Individual Entry Age Normal Actuarial Cost Method, of the Actuarial Present Value of benefits and expenses which are not provided for by future Service Costs.