

**City of Newburyport Other
Postemployment Benefits Plan**

GASB 74/75 Actuarial Valuation

With a Valuation Date of June 30, 2016

& a Measurement Date of June 30, 2017

For the reporting date of

June 30, 2018

Delivered October 2017

TABLE OF CONTENTSLETTERSECTIONPAGE

I	PRINCIPAL RESULTS OF THE VALUATION	1
II	SUMMARY OF PLAN PROVISIONS	13
III	ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS	14

EXHIBITS

A	FINANCIAL STATEMENT DISCLOSURES	25
B	REQUIRED SUPPLEMENTARY INFORMATION	49
C	RECONCILIATION OF PLAN PARTICIPANTS	56
D	PROJECTED CASH FLOWS (OPEN GROUP)	57
E	PROJECTED CASH FLOWS (OPEN GROUP) - FUNDING	58
F	GLOSSARY OF TERMS	62

October 13, 2017

Personal and Confidential

Mr. Ethan Manning
Finance Director/City Auditor
City of Newburyport
City Hall
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 June 30, 2017 and a Valuation Date of June 30, 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 in a cursive style.

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

October 13, 2017ACTUARIAL 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 June 30, 2016 with a Measurement Date of June 30, 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

SECTION I
PRINCIPAL RESULTS OF THE VALUATION

City of Newburyport
Assuming Partial funding - 3.50% discount rate
Comparison of Plan Liabilities to Prior Valuation

		<u>As of the Measurement Date</u>	
		<u>June 30, 2017</u>	<u>June 30, 2016</u>
I.	Present Value of Future Benefits		
A.	Actives	74,686,485	61,807,366
B.	Retirees/Disabled	<u>40,506,017</u>	<u>37,041,577</u>
C.	Total	115,192,502	98,848,943
II.	Present Value of Future Normal Cost	31,110,015	24,526,413
III.	Total OPEB Liability (Individual Entry Age Normal)		
A.	Actives	43,576,470	37,280,953
B.	Retirees/Disabled	<u>40,506,017</u>	<u>37,041,577</u>
C.	Total	84,082,487	74,322,530
IV.	Fiduciary Net Position	571,053	483,689
V.	Net OPEB Liability (Asset) [III. - IV.]	83,511,434	73,838,841
VI.	Funded Ratio [IV. / III.]	0.68%	0.65%
VII.	Annual Covered Payroll	41,172,058	39,972,872
VIII.	Net OPEB Liability (Asset) as % of Covered Payroll	202.8%	184.7%
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		<u>June 30, 2018</u>	<u>June 30, 2017</u>
X.	Service Cost	3,173,557	2,594,826
XI.	Interest on Net OPEB Liability (Asset) and Service Cost	3,033,974	N/A
XII.	Deferred (Inflows)/Outflows from Plan Design Changes	0	N/A
XIII.	Deferred (Inflows)/Outflows from Expected & Actual Experience	0	N/A
XIV.	Deferred (Inflows)/Outflows from Changes in Assumptions	0	N/A
XV.	Projected Earning on OPEB plan investments	(20,215)	N/A
XVI.	Deferred (Inflows)/Outflows from Earnings on Investments	(6,031)	N/A
XVII.	Employer Share of Costs	(2,656,780)	(2,457,447)
XVIII.	Employer (Payments)/Withdrawals to/from OPEB Trust	(25,000)	(25,000)
XIX.	Total Employer Contribution [XVII. + XVIII.]	(2,681,780)	(2,482,447)
XX.	Other Changes	0	N/A
XXI.	Net OPEB Expense [X.+XI.+XII.+XIII.+XIV.+XVI.+XIX.+XX.]	3,499,505	N/A
XXII.	Discount Rate	3.50%	4.00%

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

City of Newburyport
Comparison of Plan Funding vs. Partial funding

As of the June 30, 2017 Measurement Date

	<u>Partial funding - 3.50%</u> <u>discount rate</u>	<u>Funding - 7.00%</u> <u>discount rate</u>
I. Present Value of Future Benefits		
A. Actives	74,686,485	32,363,686
B. Retirees/Disabled	<u>40,506,017</u>	<u>29,293,360</u>
C. Total	115,192,502	61,657,046
II. Present Value of Future Normal Cost	31,110,015	9,707,961
III. Total OPEB Liability (Individual Entry Age Normal)		
A. Actives	43,576,470	22,655,725
B. Retirees/Disabled	<u>40,506,017</u>	<u>29,293,360</u>
C. Total	<u>84,082,487</u>	51,949,085
IV. Fiduciary Net Position	571,053	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	83,511,434	51,378,032
VI. Funded Ratio [IV. / III.]	0.68%	1.10%
VII. Annual Covered Payroll	41,172,058	41,172,058
VIII. Net OPEB Liability (Asset) as % of Covered Payroll	202.8%	124.8%
IX. Number of Eligible Participants		
A. Actives	550	550
B. Retirees/Disabled	489	489
C. Total	1,039	1,039
 For the Reporting Date and Fiscal Year Ending June 30, 2018		
X. Service Cost	3,173,557	1,301,562
XI. Interest on Net OPEB Liability (Asset) and Service Cost	3,033,974	3,554,122
XII. Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XIII. Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0
XIV. Deferred (Inflows)/Outflows from Changes in Assumptions	0	0
XV. Projected Earning on OPEB plan investments	(20,215)	0
XVI. Deferred (Inflows)/Outflows from Earnings on Investments	(6,031)	(6,031)
XVII. Employer Share of Costs	(2,656,780)	(2,656,780)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(25,000)	(1,803,800)
XIX. Total Employer Contribution [XVII. + XVIII.]	(2,681,780)	(4,460,580)
XX. Other Changes	0	0
XXI. Net OPEB Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.+XIX.+XX.]	3,499,505	389,073

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

City of Newburyport

Assuming Partial funding - 3.50% discount rate

Plan Liabilities as of the June 30, 2017 Measurement Date

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	73,228,305	0	467,575	990,605	74,686,485
B. Retirees/Disabled	<u>39,299,203</u>	<u>0</u>	<u>978,079</u>	<u>228,735</u>	<u>40,506,017</u>
C. Total	112,527,508	0	1,445,654	1,219,340	115,192,502
II. Present Value of Future Normal Cost	30,353,894	0	201,348	554,773	31,110,015
III. Total OPEB Liability					
A. Actives	42,874,411	0	266,227	435,832	43,576,470
B. Retirees/Disabled	<u>39,299,203</u>	<u>0</u>	<u>978,079</u>	<u>228,735</u>	<u>40,506,017</u>
C. Total	82,173,614	0	1,244,306	664,567	84,082,487
IV. Fiduciary Net Position	558,089	0	8,451	4,513	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	81,615,525	0	1,235,855	660,054	83,511,434
VI. Annual Covered Payroll	41,172,058	41,172,058	41,172,058	41,172,058	41,172,058
VII. Net OPEB Liability (Asset) as % of Covered Payroll	198.2%	0.0%	3.0%	1.6%	202.8%
VIII. Number of Eligible Participants					
IX. A. Actives	550	550	550	550	
B. Retirees/Disabled	489	0	384	489	
C. Total	1,039	550	934	1,039	
For the Reporting Date and Fiscal Year Ending June 30, 2018					
X. Service Cost	3,109,492	0	16,033	48,032	3,173,557
XI. Interest on Net OPEB Liability (Asset) and Service Cost	2,965,376	0	43,815	24,783	3,033,974
XII. Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XIII. Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIV. Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XV. Projected Earning on OPEB plan investments	(19,757)	0	(299)	(159)	(20,215)
XVI. Deferred (Inflows)/Outflows from Earnings on Investments	(5,894)	0	(90)	(47)	(6,031)
XVII. Employer Share of Costs	(2,603,513)	0	(53,267)	0	(2,656,780)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(24,471)	0	(339)	(190)	(25,000)
XIX. Total Employer Contribution [XVII. + XVIII.]	(2,627,984)	0	(53,606)	(190)	(2,681,780)
XX. Other Changes	0	0	0	0	0
XXI. Net OPEB Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.+XIX.+XX.]	3,421,233	0	5,853	72,419	3,499,505

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

City of Newburyport

Plan Liabilities as of the June 30, 2017 Measurement Date

Assuming Partial funding

	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	25,991,104	43,668,628	2,547,088	2,479,665	74,686,485
B. Retirees/Disabled	<u>15,406,545</u>	<u>23,542,477</u>	<u>597,593</u>	<u>959,402</u>	<u>40,506,017</u>
C. Total	41,397,649	67,211,105	3,144,681	3,439,067	115,192,502
II. Present Value of Future Normal Cost	11,366,064	17,651,557	1,023,727	1,068,667	31,110,015
III. Total OPEB Liability					
A. Actives	14,625,040	26,017,071	1,523,361	1,410,998	43,576,470
B. Retirees/Disabled	<u>15,406,545</u>	<u>23,542,477</u>	<u>597,593</u>	<u>959,402</u>	<u>40,506,017</u>
C. Total	30,031,585	49,559,548	2,120,954	2,370,400	84,082,487
IV. Fiduciary Net Position	204,585	335,996	14,443	16,029	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	29,827,000	49,223,552	2,106,511	2,354,371	83,511,434
VI. Annual Covered Payroll	14,689,362	24,012,873	1,080,366	1,389,457	41,172,058
VII. Net OPEB Liability (Asset) as % of Covered Payroll	203.1%	205.0%	195.0%	169.4%	202.8%
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	1,084,435	1,859,428	112,288	117,406	3,173,557
X. Interest on Net OPEB Liability (Asset) and Service Cost	1,081,900	1,787,905	77,657	86,512	3,033,974
XI. Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XII. Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIII. Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XIV. Projected Earning on OPEB plan investments	(7,243)	(11,894)	(511)	(567)	(20,215)
XV. Deferred (Inflows)/Outflows from Earnings on Investments	(2,160)	(3,549)	(152)	(170)	(6,031)
XVI. Employer Share of Costs	(952,344)	(1,592,100)	(38,087)	(74,249)	(2,656,780)
XVII. Employer (Payments)/Withdrawals to/from OPEB Trust	(8,929)	(14,735)	(631)	(705)	(25,000)
XVIII. Total Employer Contribution [XVI. + XVII.]	(961,273)	(1,606,835)	(38,718)	(74,954)	(2,681,780)
XIX. Other Changes	0	0	0	0	0
XX. Net OPEB Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.+XVIII.+XIX.]	1,195,659	2,025,055	150,564	128,227	3,499,505

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

City of Newburyport
Detail of Plan Liabilities by Group and Dependency Status
Assuming Partial funding - 3.50% discount rate
Plan Liabilities as of the June 30, 2017 Measurement Date

	<u>Present Value of Future Benefits</u>	<u>Total OPEB Liability (Individual Entry Age Normal)</u>	<u>Service Cost</u>
Actives			
Under Age 65			
A. Participants	14,203,466	8,690,850	598,209
B. Spouses	<u>10,168,042</u>	<u>6,217,480</u>	<u>421,718</u>
C. Total	24,371,508	14,908,330	1,019,927
Age 65 and Over			
A. Participants	31,884,292	17,889,606	1,253,581
B. Spouses	<u>18,430,685</u>	<u>10,778,534</u>	<u>900,049</u>
C. Total	50,314,977	28,668,140	2,153,630
Actives Total			
A. Participants	46,087,758	26,580,456	1,851,790
B. Spouses	<u>28,598,727</u>	<u>16,996,014</u>	<u>1,321,767</u>
C. Total	74,686,485	43,576,470	3,173,557
Retirees/Disabled			
Under Age 65			
A. Participants	2,801,292	2,801,292	0
B. Spouses	<u>1,734,369</u>	<u>1,734,369</u>	<u>0</u>
C. Total	4,535,661	4,535,661	0
Age 65 and Over			
A. Participants	27,008,172	27,008,172	0
B. Spouses	<u>8,962,184</u>	<u>8,962,184</u>	<u>0</u>
C. Total	35,970,356	35,970,356	0
Retirees/Disabled Total			
A. Participants	29,809,464	29,809,464	0
B. Spouses	<u>10,696,553</u>	<u>10,696,553</u>	<u>0</u>
C. Total	40,506,017	40,506,017	0
Total Population			
A. Participants	75,897,222	56,389,920	1,851,790
B. Spouses	<u>39,295,280</u>	<u>27,692,567</u>	<u>1,321,767</u>
C. Total	115,192,502	84,082,487	3,173,557

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

City of Newburyport
Assuming Funding over 30 years at 7.00% discount rate
Plan Liabilities as of the June 30, 2017 Measurement Date

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	31,751,819	0	159,547	452,320	32,363,686
B. Retirees/Disabled	<u>28,489,544</u>	<u>0</u>	<u>672,512</u>	<u>131,304</u>	<u>29,293,360</u>
C. Total	60,241,363	0	832,059	583,624	61,657,046
II. Present Value of Future Normal Cost	9,468,311	0	39,472	200,178	9,707,961
III. Total OPEB Liability (Individual Entry Age Normal)					
A. Actives	22,283,508	0	120,075	252,142	22,655,725
B. Retirees/Disabled	<u>28,489,544</u>	<u>0</u>	<u>672,512</u>	<u>131,304</u>	<u>29,293,360</u>
C. Total	50,773,052	0	792,587	383,446	51,949,085
IV. Fiduciary Net Position	558,682	0	8,655	3,716	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	50,214,370	0	783,932	379,730	51,378,032
VI. Annual Covered Payroll	41,172,058	41,172,058	41,172,058	41,172,058	41,172,058
VII. Net OPEB Liability (Asset) as % of Covered Payroll	122.0%	0.0%	1.9%	0.9%	124.8%
VIII. Number of Eligible Participants					
A. Actives	550	550	550	550	
B. Retirees/Disabled	<u>489</u>	<u>0</u>	<u>384</u>	<u>489</u>	
C. Total	1,039	550	934	1,039	

For the Reporting Date and Fiscal Year Ending June 30, 2018

IX. Service Cost	1,274,782	0	6,192	20,588	1,301,562
X. Interest on Net OPEB Liability (Asset) and Service Cost	3,473,693	0	53,375	27,054	3,554,122
XI. Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XII. Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIII. Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XIV. Projected Earning on OPEB plan investments	0	0	0	0	0
XV. Deferred (Inflows)/Outflows from Earnings on Investments	(5,894)	0	(92)	(45)	(6,031)
XVI. Employer Share of Costs	(2,603,513)	0	(53,267)	0	(2,656,780)
XVII. Employer (Payments)/Withdrawals to/from OPEB Trust	(1,762,965)	0	(27,521)	(13,314)	(1,803,800)
XVIII. Total Employer Contribution [XVI. + XVII.]	(4,366,478)	0	(80,788)	(13,314)	(4,460,580)
XIX. Other Changes	0	0	0	0	0
XX. Net OPEB Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.+XVIII.+XIX.]	376,102	0	(21,313)	34,283	389,073

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

City of Newburyport
Plan Liabilities as of the June 30, 2017 Measurement Date
Assuming Funding over 30 years at 7.00% 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	11,262,652	18,922,805	1,103,723	1,074,506	32,363,686
B. Retirees/Disabled	<u>11,141,787</u>	<u>17,025,576</u>	<u>432,171</u>	<u>693,826</u>	<u>29,293,360</u>
C. Total	22,404,439	35,948,381	1,535,894	1,768,332	61,657,046
II. Present Value of Future Normal Cost	3,546,810	5,508,214	319,457	333,480	9,707,961
III. Total OPEB Liability					
A. Actives	7,603,665	13,526,465	792,007	733,588	22,655,725
B. Retirees/Disabled	<u>11,141,787</u>	<u>17,025,576</u>	<u>432,171</u>	<u>693,826</u>	<u>29,293,360</u>
C. Total	18,745,452	30,552,041	1,224,178	1,427,414	51,949,085
IV. Fiduciary Net Position	204,585	335,996	14,443	16,029	571,053
V. Net OPEB Liability (Asset) [III. - IV.]	18,540,867	30,216,045	1,209,735	1,411,385	51,378,032
VI. Annual Covered Payroll	14,689,362	24,012,873	1,080,366	1,389,457	41,172,058
VII. Net OPEB Liability (Asset) as % of Covered Payroll	126.2%	125.8%	112.0%	101.6%	124.8%
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	444,757	762,602	46,052	48,151	1,301,562
X. Interest on Net OPEB Liability (Asset) and Service Cost	1,242,385	2,127,210	85,165	99,362	3,554,122
XI. Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XII. Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIII. Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XIV. Projected Earning on OPEB plan investments	0	0	0	0	0
XV. Deferred (Inflows)/Outflows from Earnings on Investments	(2,160)	(3,549)	(152)	(170)	(6,031)
XVI. Employer Share of Costs	(952,344)	(1,592,100)	(38,087)	(74,249)	(2,656,780)
XVII. Employer (Payments)/Withdrawals to/from OPEB Trust	(650,889)	(1,060,842)	(42,506)	(49,563)	(1,803,800)
XVIII. Total Employer Contribution [XVI. + XVII.]	(1,603,233)	(2,652,942)	(80,593)	(123,812)	(4,460,580)
XIX. Other Changes	0	0	0	0	0
XX. Net OPEB Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.+XVIII.+XIX.]	81,749	233,321	50,472	23,531	389,073

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.

Commentary on Plan Experience and Contribution Amounts

1. 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.

2. 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.

3. Summary of Results:

Plan experience was in line with expectation - for the year ending on the Measurement Date June 30, 2017, the Plan saw an experience gain of \$30,157 or 0.04%. This was due to assets performing more favorably than expected. The actuarial experience gain is amortized into the net OPEB expense over time until fully recognized.

Commentary on Plan Experience and Contribution Amounts
(continued)

4. **Balance Sheet Items as of the Measurement Date**

	June 30, 2017	June 30, 2016
Total OPEB Liability	\$84,082,487	\$74,322,530
Fiduciary Net Position	\$571,053	\$483,689
Net OPEB Liability	\$83,511,434	\$73,838,841
Funded Ratio	0.68%	0.65%

5. **Income Statement Items as of the Fiscal Year Ending**

	June 30, 2018	June 30, 2017
Service Cost	\$3,173,557	\$2,594,826
Interest Expense	\$3,033,974	N/A
(Inflow)/Outflow from Plan Design Changes	\$0	N/A
(Inflow)/Outflow from Plan Experience	\$0	N/A
(Inflow)/Outflow from Changes in Assumptions	\$0	N/A
Projected Investment Earnings	\$(20,215)	N/A
(Inflow)/Outflow from Earnings on Investments	\$(6,031)	N/A
Employer Share of Costs	\$(2,656,780)	\$(2,457,447)
Employer Payments (Withdrawals) to/from Trust	\$(25,000)	\$(25,000)
Total Employer Payments	\$(2,681,780)	\$(2,482,447)
Other Changes	\$0	N/A
Net OPEB Expense	\$3,499,505	N/A
Interest Rate	3.50%	4.00%

Commentary on Plan Experience and Contribution Amounts
(continued)

5. **Implicit Subsidy:**

The implicit subsidy arises because pre-Medicare retirees 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		
	As Of The Measurement Date	
Impact on Liability	<u>June 30, 2017</u>	<u>June 30, 2016</u>
I. Actuarial Accrued Liability	84,082,487	74,322,530
II. Actuarial Accrued Liability (Excluding Implicit Subsidy)	<u>75,259,200</u>	<u>66,308,052</u>
III. Liability from Implicit Subsidy [I. - II.]	8,823,287	8,014,478

	For The Fiscal Year Ending	
Impact on Payments	<u>June 30, 2018</u>	<u>June 30, 2017</u>
IV. Employer Payments (Including Implicit Subsidy)	2,656,780	2,457,447
V. Actual Employer Payments	<u>2,318,266</u>	<u>2,168,509</u>
VI. Implicit Subsidy [IV. - V.]	338,514	288,938

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>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 (5.84 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 IIIACTUARIAL 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

Discount Rate

3.50% per annum (previously 4.00%)

Long Term Rate of Return

7.04% (based on investment policy)

Municipal Bond Rate

3.13% as of June 30, 2017 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

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 for non-teachers

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

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

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Retirement Rates for teachers

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

<u>Age</u>	<u>Male Teachers</u>	<u>Female Teachers</u>
45	0.00%	0.00%
46	0.00%	0.00%
47	0.00%	0.00%
48	0.00%	0.00%
49	0.00%	0.00%
50	2.00%	1.50%
51	2.00%	1.50%
52	2.00%	1.50%
53	2.00%	1.50%
54	2.00%	2.00%
55	6.00%	5.00%
56	20.00%	15.00%
57	40.00%	35.00%
58	50.00%	35.00%
59	50.00%	35.00%
60	40.00%	35.00%
61	40.00%	35.00%
62	35.00%	35.00%
63	35.00%	35.00%
64	35.00%	35.00%
65	35.00%	35.00%
66	40.00%	35.00%
67	40.00%	30.00%
68	40.00%	30.00%
69	40.00%	30.00%
70	100.00%	100.00%
71	100.00%	100.00%
72	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 and dental 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 participants and 70% of female participants who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement. It was further assumed that a male spouse is three years older than a female spouse and same sex spouses are assumed to be the same age. For current retirees, the actual census information was used.

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	0.00	2,022.72
PPO Blue Care Elect	894.59	0.00	2,344.08
HMO Limited Network	717.95	0.00	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

	<u>Employer</u> <u>Primary</u>	<u>Medicare</u> <u>Primary</u>
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	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
24 & Under	1.312	0.549	8,061	3,373	19,495
25 to 29	1.312	0.591	8,061	3,631	201,960
30 to 34	1.312	0.712	8,061	4,375	416,382
35 to 39	1.312	0.850	8,061	5,222	505,666
40 to 44	1.312	1.000	8,061	6,144	708,726
45 to 49	1.456	1.193	8,946	7,330	908,108
50 to 54	1.599	1.441	9,824	8,854	1,096,182
55 to 59	1.740	1.753	10,691	10,770	1,212,270
60 to 64	1.968	2.102	12,091	12,915	1,190,669
65 to 69	2.168	2.316	13,320	14,230	460,490
70 & Over	2.396	2.557	14,721	15,710	<u>121,724</u>
Total					6,841,672

ALL RETIREES AND SPOUSES - NOT MEDICARE ELIGIBLE

Age Bracket	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
44 & Under	1.312	1.000	8,061	6,144	14,205
45 to 49	1.456	1.193	8,946	7,330	14,660
50 to 54	1.599	1.441	9,824	8,854	9,824
55 to 59	1.740	1.753	10,691	10,770	235,834
60 to 64	1.968	2.102	12,091	12,915	748,532
65 to 69	2.168	2.316	13,320	14,230	95,060
70 to 74	2.396	2.557	14,721	15,710	152,155
75 to 79	2.593	2.769	15,931	17,013	97,750
80 to 84	2.724	2.910	16,736	17,879	70,373
85 to 89	2.864	3.059	17,596	18,794	71,582
90 & Over	3.010	3.215	18,493	19,753	<u>18,493</u>
Total					1,528,468

ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE

Age Bracket	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
65 to 69	2.168	2.316	3,278	3,502	272,238
70 to 74	2.396	2.557	3,623	3,867	453,511
75 to 79	2.593	2.769	3,921	4,187	300,262
80 to 84	2.724	2.910	4,119	4,401	178,920
85 to 89	2.864	3.059	4,331	4,626	138,686
90 & Over	3.010	3.215	4,552	4,862	<u>97,142</u>
Total					1,440,759
Grand Totals					9,810,899

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 June 30, 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 June 30, 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 2018 fiscal year, total City premiums plus implicit costs for the retiree medical program are \$2,656,780. The City is also projected to make a contribution to an OPEB Trust of \$25,000 for the 2018 fiscal year for a total contribution of \$2,681,780.

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 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 Statement.

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 June 30, 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 Fiscal Year Ending June 30, 2018</u>	
I. Service Cost	3,173,557
II. 30 year amortization of NOL at 3.50%	<u>4,387,080</u>
III. Actuarial Determined Contribution [I. + II.]	7,560,637
IV. Contributions in relation to the actuarially determined contribution	<u>(2,681,780)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>4,878,857</u>
Covered employee payroll	41,172,058
Contributions as a % of covered employee payroll	6.51%

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

8. FUNDED STATUS AND FUNDING PROGRESS

As of the June 30, 2017 Measurement Date, the plan was 0.68% funded. The Total OPEB Liability (TOL) for benefits was \$84,082,487, and the Fiduciary Net Position was \$571,053, resulting in a Net OPEB Liability (NOL) of \$83,511,434. The covered payroll (annual payroll of active employees covered by the plan) was \$ 41,172,058 and the ratio of the NOL to the covered payroll was 202.8%.

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.

Measurement Date	Fiduciary Net Position	Total OPEB Liability	Net OPEB Liability	Funded Ratio	Covered Payroll	NOL as a % of Covered Payroll
06/30/2019 (est.)	\$707,838	\$91,128,518	\$90,420,680	0.8%	\$43,679,436	207.0%
06/30/2018 (est.)	\$637,120	\$87,555,746	\$86,918,626	0.7%	\$42,407,220	205.0%
06/30/2017	\$571,053	\$84,082,487	\$83,511,434	0.7%	\$41,172,058	202.8%
06/30/2016	\$483,689	\$74,322,530	\$73,838,841	0.7%	\$39,972,872	184.7%
06/30/2015	\$475,010	\$69,669,240	\$69,194,230	0.7%	\$33,353,201	207.5%
06/30/2014	\$25,000	\$66,815,622	\$66,790,622	0.0%	\$32,381,749	206.3%

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

9. **FIDUCIARY NET POSITION**

Statement of Fiduciary Net Position		
June 30, 2017 and June 30, 2018		
	<u>June 30, 2018 (Projected)</u>	<u>June 30, 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	146,537	131,342
VIII. Stocks	254,848	228,421
IX. Cash and cash equivalents	0	0
X. Real estate	89,197	79,948
XI. Alternative investments	<u>146,538</u>	<u>131,342</u>
XII. Total Investments [VII.+VIII.+IX.+X.+XI.]	<u>637,120</u>	<u>571,053</u>
Invested securities lending cash collateral	0	0
Capital assets, net of accumulated depreciation	0	0
Total Assets	637,120	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.]	637,120	571,053

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

9. **FIDUCIARY NET POSITION (CONTINUED)**

Statement of Changes in Fiduciary Net Position for the Year ended June 30, 2018 (Projected)	
	<u>June 30, 2017</u>
Additions	
<u>Contributions</u>	
Employer Contributions to OPEB Trust	25,000
Total Contributions	25,000
<u>Investment Income / (loss)</u>	
Interest	6,567
Dividends	4,568
Equity fund income, net	0
Net increase in fair value of investments	29,932
Securities lending income	0
Less investment expenses:	
Direct investment expense	0
Securities lending management fees	0
Securities lending borrower rebates	0
Net investment income	41,067
Other income	0
Total Additions	<u>66,067</u>
Deductions	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
Total deductions	<u>0</u>
Net increase (decrease)	66,067
Net Position restricted for OPEB	
Beginning of year	<u>571,053</u>
End of year	637,120

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

10. OPEB LIABILITY, OPEB EXPENSE AND ADC

	Fiscal Year Ending June 30, 2018				Total
	General Government Employees and Retirees	School Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	
I. Total OPEB Liability	30,031,585	49,559,548	2,120,954	2,370,400	84,082,487
II. Fiduciary Net Position as of June 30, 2017	204,585	335,996	14,443	16,029	571,053
III. Net OPEB Liability (Asset) [I.-II.]	29,827,000	49,223,552	2,106,511	2,354,371	83,511,434
IV. Service Cost	1,084,435	1,859,428	112,288	117,406	3,173,557
V. Interest on Net OPEB Liability (Asset) and Service Cost	1,081,900	1,787,905	77,657	86,512	3,033,974
VI. Deferred (Inflows)/Outflows from Plan Design Changes	-	-	-	-	-
VII. Deferred (Inflows)/Outflows from Plan Experience	-	-	-	-	-
VIII. Deferred (Inflows)/Outflows from Changes in Assumptions	-	-	-	-	-
IX. Projected Earnings on OPEB plan investments	(7,243)	(11,894)	(511)	(567)	(20,215)
X. Deferred (Inflows)/Outflows from Earnings on Investments	(2,160)	(3,549)	(152)	(170)	(6,031)
XI. Employer Share of Costs	(952,344)	(1,592,100)	(38,087)	(74,249)	(2,656,780)
XII. Employer Payments (Withdrawals) to/from OPEB Trust	(8,929)	(14,735)	(631)	(705)	(25,000)
XIII. Total Employer Contribution [X.+XI.]	(961,273)	(1,606,835)	(38,718)	(74,954)	(2,681,780)
XIV. Net OPEB Expense [IV.+V.+VI.+VII.+VIII.+IX.+X.++XIII.]	1,195,659	2,025,055	150,564	128,227	3,499,505
XV. Actuarial Determined Contribution (ADC)	2,700,418	4,456,359	190,715	213,145	7,560,637
XVI. Total Expected Contribution	961,273	1,606,835	38,718	74,954	2,681,780
XVII. Percentage of ADC Contributed [XVI./XV.]	36%	36%	20%	35%	35%

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

11. EFFECT OF 1% CHANGE IN HEALTHCARE TREND

In the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Net OPEB Liability would increase to \$105,103,186 or by 25.9% and the corresponding Service Cost would increase to \$4,571,970 or by 44.1%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Net OPEB Liability would decrease to \$66,832,685 or by 20.0% and the corresponding Service Cost would decrease to \$2,180,630 or by 31.3%.

Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2017 Measurement Date

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
Net OPEB Liability	66,832,685	83,511,434	105,103,186
Service Cost	2,180,630	3,173,557	4,571,970

12. EFFECT OF 1% CHANGE IN DISCOUNT RATES

If the discount rate were 1% higher than what was used in this valuation, the Net OPEB Liability would decrease to \$71,655,328 or by 14.2% and the corresponding Service Cost would decrease to \$2,423,566 or by 23.6%. If the discount rate were 1% lower than was used in this valuation, the Net OPEB Liability would increase to \$99,971,204 or by 19.7% and the corresponding Service Cost would increase to \$4,259,645 or by 34.2%.

Impact of a 1% Change in the Discount Rate as of the June 30, 2017 Measurement Date

	<u>1% Decrease (2.50%)</u>	<u>Current Discount Rate (3.50%)</u>	<u>1% Increase (4.50%)</u>
Net OPEB Liability	99,971,204	83,511,434	71,655,328
Service Cost	4,259,645	3,173,557	2,423,566

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

13. 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: 3.50% 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 June 30, 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	3,173,557
II. Interest on Net OPEB Liability	3,033,974
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	(20,215)
VII. Deferred (Inflows)/Outflows from Earnings on Plan Investments***	(6,031)
VIII. Total Employer Contributions	(2,681,780)
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.]	3,499,505

* Recognized Immediately

** Amortized over 5.84 years

*** Amortized over 5 years

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 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 June 30, 2016 GASB 45	74,322,530	483,689	73,838,841
II. Change in Assumptions for GASB 75	6,326,184	0	6,326,184
III. Balances at June 30, 2016 GASB 75 [I. + II.]	80,648,714	483,689	80,165,025
Changes for the year:			
IV. Service Cost	3,005,942	0	3,005,942
V. Interest on Net OPEB Liability and Service Cost	2,885,278	16,929	2,868,349
VI. Changes in Benefit terms *	0	0	0
VII. Change in assumptions **	0	0	0
VIII. Differences between actual and expected experience **	0	30,157	(30,157)
IX. Net Investment Income	0	15,277	(15,277)
X. Employer Contributions (Withdrawals) to/from Trust	0	25,000	(25,000)
XI. Employee Contributions to Trust	0	0	0
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.]	3,433,773	87,364	888,962
XVII. Balances at June 30, 2017 [III.+XVII.]	84,082,487	571,053	83,511,434

* Recognized Immediately

** Amortized over 5.84 years

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 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		
	Ending OPEB Plan Investments *	Beginning OPEB Plan Investments **
Assets		
Cash and cash equivalents	0	0
Receivables:		
Investment income	0	0
Receivables from brokers for unsettled trades	0	0
Investments		
Fixed income	146,537	131,342
Stocks	254,848	228,421
Cash and cash equivalents	0	0
Real estate	89,197	79,948
Alternative investments	146,538	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	637,120	571,053
* From balances at June 30, 2018 (Projected)		
** From balances at June 30, 2017		

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

18. MONEY WEIGHTED RATE OF RETURN (CONTINUED)

	Plan Investments / Net External	Periods Invested	Period Weight
Beginning value - July 1, 2016	483,689	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
June	0	0	0.0000
Ending value - June 30, 2017	571,053		
Money Weighted Rate of Return	12.74%		
Asset Value - June 30, 2017	571,053		

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

19. PLAN CASH FLOWS

Aggregate External (Noninvestment Cash Flows)	
<u>June 30, 2018</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
* From balances at June 30, 2018 (Projected)	
** From balances at June 30, 2017	

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 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>June 30, 2018 (Projected)</u>	
I. Total OPEB plan investments, beginning of year	571,053
II. Aggregate external cash flows	25,000
III. Net investment income	<u>41,067</u>
IV. Total OPEB plan investments, end of year [I.+II.+III.]	<u>637,120</u>

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES

Projection of Contributions as of the June 30, 2016 Valuation Date

Fiscal Year	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.]
2018	41,172,058	0	41,172,058	0	2,656,780	0	2,656,780
2019	38,264,334	4,142,886	42,407,220	0	2,820,356	0	2,820,356
2020	35,960,614	7,718,823	43,679,437	0	2,920,045	0	2,920,045
2021	34,083,463	10,906,357	44,989,820	0	3,076,934	0	3,076,934
2022	32,448,380	13,891,135	46,339,515	0	3,211,923	0	3,211,923
2023	30,813,895	16,915,805	47,729,700	0	3,299,619	0	3,299,619
2024	29,319,591	19,842,000	49,161,591	0	3,459,101	0	3,459,101
2025	27,866,967	22,769,472	50,636,439	0	3,584,462	0	3,584,462
2026	26,527,868	25,627,664	52,155,532	0	3,739,625	0	3,739,625
2027	25,137,275	28,582,923	53,720,198	0	3,945,724	0	3,945,724
2028	23,676,832	31,654,972	55,331,804	0	4,082,804	23,661	4,106,465
2029	22,041,946	34,949,812	56,991,758	0	4,244,125	62,731	4,306,856
2030	20,628,624	38,072,887	58,701,511	0	4,394,918	119,076	4,513,994
2031	19,305,071	41,157,485	60,462,556	0	4,557,435	193,746	4,751,181
2032	18,080,407	44,196,026	62,276,433	0	4,700,039	284,875	4,984,914
2033	16,957,651	47,187,075	64,144,726	0	4,838,242	353,425	5,191,667
2034	15,852,968	50,216,100	66,069,068	0	4,976,453	434,163	5,410,616
2035	14,727,109	53,324,031	68,051,140	0	5,125,044	526,307	5,651,351
2036	13,720,293	56,372,381	70,092,674	0	5,165,419	602,101	5,767,520
2037	12,794,156	59,401,298	72,195,454	0	5,283,503	687,839	5,971,342
2038	11,874,014	62,487,304	74,361,318	0	5,412,057	811,778	6,223,835
2039	10,931,113	65,661,045	76,592,158	0	5,483,124	981,104	6,464,228
2040	9,952,535	68,937,388	78,889,923	0	5,538,768	1,193,694	6,732,462
2041	8,975,372	72,281,249	81,256,621	0	5,581,722	1,453,453	7,035,175
2042	8,039,261	75,655,059	83,694,320	0	5,603,095	1,753,172	7,356,267
2043	7,218,718	78,986,432	86,205,150	0	5,526,440	1,999,496	7,525,936
2044	6,434,345	82,356,960	88,791,305	0	5,480,918	2,276,675	7,757,593
2045	5,731,082	85,723,962	91,455,044	0	5,500,084	2,582,322	8,082,406
2046	4,983,726	89,214,969	94,198,695	0	5,442,846	2,860,803	8,303,649
2047	4,348,897	92,675,759	97,024,656	0	5,394,111	3,164,513	8,558,624
2048	3,708,687	96,226,709	99,935,396	0	5,383,159	3,518,615	8,901,774
2049	3,142,329	99,791,129	102,933,458	0	5,379,383	3,913,343	9,292,726

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Projection of OPEB Plan's Fiduciary Net Position as of the June 30, 2016 Valuation Date

Fiscal Year	I. Projected	II. Portion of	III. Total	IV. Projected	V. Total	VI. Contributions	VII. Projected	VIII. Projected
	Beginning Fiduciary Net Position	Employer Contributions for Current Plan Members	Projected Benefit Payments	Administrative Expense	Contributions to Trust	to Trust for Current Plan Members	Investment Earnings	Ending Fiduciary Net Position [I. + II. - III. - IV. + VI. + VII.]
2018	571,053	2,656,780	2,656,780	0	25,000	25,000	41,067	637,120
2019	637,120	2,820,356	2,820,356	0	25,000	22,558	45,718	705,396
2020	705,396	2,920,045	2,920,045	0	25,000	20,582	50,525	776,503
2021	776,503	3,076,934	3,076,934	0	25,000	18,940	55,531	850,974
2022	850,974	3,211,923	3,211,923	0	25,000	17,506	60,774	929,254
2023	929,254	3,299,619	3,299,619	0	25,000	16,140	66,285	1,011,679
2024	1,011,679	3,459,101	3,459,101	0	25,000	14,910	72,087	1,098,676
2025	1,098,676	3,584,462	3,584,462	0	25,000	13,758	78,212	1,190,646
2026	1,190,646	3,739,625	3,739,625	0	25,000	12,716	84,687	1,288,049
2027	1,288,049	3,945,724	3,945,724	0	25,000	11,698	91,544	1,391,291
2028	1,391,291	4,082,804	4,106,465	0	25,000	10,698	98,812	1,477,140
2029	1,477,140	4,244,125	4,306,856	0	25,000	9,669	104,856	1,528,934
2030	1,528,934	4,394,918	4,513,994	0	25,000	8,785	108,502	1,527,145
2031	1,527,145	4,557,435	4,751,181	0	25,000	7,982	108,376	1,449,757
2032	1,449,757	4,700,039	4,984,914	0	25,000	7,258	102,928	1,275,068
2033	1,275,068	4,838,242	5,191,667	0	25,000	6,609	90,630	1,018,882
2034	1,018,882	4,976,453	5,410,616	0	25,000	5,999	72,594	663,312
2035	663,312	5,125,044	5,651,351	0	25,000	5,410	47,562	189,977
2036	189,977	5,165,419	5,767,520	0	25,000	4,894	14,239	19,133
2037	19,133	5,283,503	5,971,342	0	25,000	4,430	2,212	6,642
2038	6,642	5,412,057	6,223,835	0	25,000	3,992	1,333	5,325
2039	5,325	5,483,124	6,464,228	0	25,000	3,568	1,240	4,808
2040	4,808	5,538,768	6,732,462	0	25,000	3,154	1,204	4,358
2041	4,358	5,581,722	7,035,175	0	25,000	2,761	1,172	3,933
2042	3,933	5,603,095	7,356,267	0	25,000	2,401	1,142	3,543
2043	3,543	5,526,440	7,525,936	0	25,000	2,093	1,114	3,207
2044	3,207	5,480,918	7,757,593	0	25,000	1,812	1,091	2,903
2045	2,903	5,500,084	8,082,406	0	25,000	1,567	1,069	2,636
2046	2,636	5,442,846	8,303,649	0	25,000	1,323	1,051	2,374
2047	2,374	5,394,111	8,558,624	0	25,000	1,121	1,032	2,153
2048	2,153	5,383,159	8,901,774	0	25,000	928	1,017	1,945
2049	1,945	5,379,383	9,292,726	0	25,000	763	1,002	1,765

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)

20. PLAN PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments as of the June 30, 2016 Valuation Date

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	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 Discount Rate
2018	571,053	2,656,780	571,053	2,085,727	571,053	2,085,727	2,656,780
2019	637,120	2,820,356	637,120	2,183,236	595,217	2,117,017	2,730,632
2020	705,396	2,920,045	705,396	2,214,649	615,660	2,082,343	2,737,210
2021	776,503	3,076,934	776,503	2,300,431	633,147	2,097,395	2,792,519
2022	850,974	3,211,923	850,974	2,360,949	648,234	2,087,282	2,822,295
2023	929,254	3,299,619	929,254	2,370,365	661,308	2,032,045	2,807,116
2024	1,011,679	3,459,101	1,011,679	2,447,422	672,614	2,034,467	2,849,175
2025	1,098,676	3,584,462	1,098,676	2,485,786	682,412	2,003,684	2,858,507
2026	1,190,646	3,739,625	1,190,646	2,548,979	690,898	1,992,303	2,887,371
2027	1,288,049	3,945,724	1,288,049	2,657,675	698,261	2,014,256	2,949,583
2028	1,391,291	4,082,804	1,391,291	2,691,513	704,623	1,978,030	2,954,961
2029	1,477,140	4,244,125	1,477,140	2,766,985	698,899	1,971,818	2,973,998
2030	1,528,934	4,394,918	1,528,934	2,865,984	675,827	1,980,421	2,981,691
2031	1,527,145	4,557,435	1,527,145	3,030,290	630,639	2,030,446	2,993,585
2032	1,449,757	4,700,039	1,449,757	3,250,282	559,306	2,111,796	2,989,041
2033	1,275,068	4,838,242	1,275,068	3,563,174	459,560	2,244,872	2,979,047
2034	1,018,882	4,976,453	1,018,882	3,957,571	343,073	2,417,725	2,966,668
2035	663,312	5,125,044	663,312	4,461,732	208,658	2,643,050	2,958,053
2036	189,977	5,165,419	189,977	4,975,442	55,830	2,857,967	2,886,511
2037	19,133	5,283,503	19,133	5,264,370	5,253	2,932,213	2,858,571
2038	6,642	5,412,057	6,642	5,405,415	1,704	2,919,455	2,834,972
2039	5,325	5,483,124	5,325	5,477,799	1,276	2,868,815	2,780,825
2040	4,808	5,538,768	4,808	5,533,960	1,076	2,810,322	2,719,682
2041	4,358	5,581,722	4,358	5,577,364	911	2,746,456	2,653,582
2042	3,933	5,603,095	3,933	5,599,162	768	2,673,563	2,579,002
2043	3,543	5,526,440	3,543	5,522,897	647	2,557,160	2,462,796
2044	3,207	5,480,918	3,207	5,477,711	547	2,459,313	2,364,806
2045	2,903	5,500,084	2,903	5,497,181	462	2,393,196	2,297,581
2046	2,636	5,442,846	2,636	5,440,210	392	2,296,559	2,201,339
2047	2,374	5,394,111	2,374	5,391,737	330	2,207,061	2,112,225
2048	2,153	5,383,159	2,153	5,381,006	280	2,135,859	2,040,877
2049	1,945	5,379,383	1,945	5,377,438	236	2,069,704	1,974,564

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 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)							
2009								
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	5.84	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 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)						
2009								
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	5.84	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT A

Financial Statement Disclosure
(As of the June 30, 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 between actual & expected		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	experience	Recognition Period (years)						
2009								
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	(30,157)	5.00	(6,031)	(6,031)	(6,031)	(6,031)	(6,033)	0
Net increase (decrease) in OPEB expense			(6,031)	(6,031)	(6,031)	(6,031)	(6,033)	0

EXHIBIT AFinancial Statement Disclosure
(As of the June 30, 2017 Measurement Date)
(continued)**22. Impact of Patient Protection and Affordable Care Act ("PPACA") Excise Tax**

Under the Patient Protection and Affordable Care Act ("PPACA"), an excise tax will be imposed for tax years beginning after December 31, 2019 (formerly December 31, 2017, but amended by Consolidated Appropriations Act) for high cost employer sponsored health coverage. The law specifies a 40% excise tax, to be paid by the provider of such coverage, of the excess value beyond a basic dollar amount plus an additional "kicker" for qualified retirees or those engaged in a high risk profession. The projected 2020 threshold amounts are \$11,850 for single coverage and \$30,950 for family coverage and a "kicker" amount of \$1,650 for single coverage and \$3,450 for family coverage.

For the fiscal year ending June 30, 2018, the TOL for the excise tax is \$664,567 and the increase in OPEB Expense is \$72,419. Given your premiums through the 2018 fiscal year and the excise tax threshold, your average single premiums are \$4,916 below the excise tax threshold and your average family premiums are \$5,813 below the excise tax threshold. As more regulatory guidance becomes available, the calculation of the excise tax liability will evolve.

EXHIBIT B

Required Supplementary Information (As of the June 30, 2017 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of June 30, 2016.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, June 30, 2017.
<u>Actuarial Assumptions:</u>	
Investment Rate of Return:	7.04%, net of OPEB plan investment expense, including inflation.
Single Equivalent Discount Rate:	3.50%, net of OPEB plan investment expense, including inflation.
Inflation:	2.75% as of June 30, 2017 and for future periods
Salary Increases:	3.00% annually as of June 30, 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
Disabled Mortality:	RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

EXHIBIT B

Required Supplementary Information
(As of the June 30, 2017 Measurement Date)
(continued)

Notes to Required Supplementary Information (Continued):

Plan Membership

Plan Membership: At June 30, 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 June 30, 2017

- Discount rate is 3.50% previously 4.00%

EXHIBIT B

Required Supplementary Information
(As of the June 30, 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 June 30, 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 June 30, 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					
<u>Balances at June 30, 2018</u>					
<u>Fiscal Year</u>	<u>Increase in the Total OPEB Liability</u>	<u>Decrease in the Total OPEB Liability</u>	<u>Amounts recognized in OPEB Expense through June 30, 2018</u>	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
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	(30,157)	(6,031)	0	(24,126)
Total				0	(24,126)

EXHIBIT B

Required Supplementary Information
(As of the June 30, 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	0	<u>(24,126)</u>
IV. Total [I.+II.+III.]	0	<u>(24,126)</u>
Year ended June 30:		
	2019	(6,031)
	2020	(6,031)
	2021	(6,031)
	2022	(6,033)
	2023	0
	Thereafter	(0)

EXHIBIT BRequired Supplementary Information
(As of the June 30, 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 expects to contribute \$25,000 beyond the pay-as-you-go cost for the 2018 fiscal year. Total City premiums plus implicit costs for the retiree medical program are \$2,656,780 for the 2018 fiscal year.

EXHIBIT C

Reconciliation of Plan Participation
(As of the June 30, 2016 Valuation Date)

ACTIVE EMPLOYEES

	<u>June 30, 2016</u>	<u>June 30, 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>June 30, 2016</u>	<u>June 30, 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) – Partial funding Approach

Total Medical, Dental & Life Insurance - Partial funding - 3.50% discount rate

Measurement Date	I. Total OPEB Liability 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.]
June 30, 2017	84,082,487	571,053	83,511,434	0.68%	3,173,557	2,656,780	25,000	2,681,780
June 30, 2018	87,555,746	637,120	86,918,626	0.73%	3,323,794	2,820,356	25,000	2,845,356
June 30, 2019	91,128,518	707,838	90,420,680	0.78%	3,488,830	2,920,045	25,000	2,945,045
June 30, 2020	94,893,107	783,535	94,109,572	0.83%	3,657,264	3,076,934	25,000	3,101,934
June 30, 2021	98,786,399	864,561	97,921,838	0.88%	3,818,981	3,211,923	25,000	3,236,923
June 30, 2022	102,833,825	951,291	101,882,534	0.93%	4,003,482	3,299,619	25,000	3,324,619
June 30, 2023	107,134,295	1,044,127	106,090,168	0.97%	4,193,868	3,459,101	25,000	3,484,101
June 30, 2024	111,601,385	1,143,499	110,457,886	1.02%	4,402,963	3,584,462	25,000	3,609,462
June 30, 2025	116,263,995	1,249,866	115,014,129	1.08%	4,603,434	3,739,625	25,000	3,764,625
June 30, 2026	121,140,348	1,363,722	119,776,626	1.13%	4,818,339	3,945,724	25,000	3,970,724
June 30, 2027	126,158,777	1,485,593	124,673,184	1.18%	5,011,635	4,106,465	25,000	4,131,465
June 30, 2028	131,342,827	1,616,044	129,726,783	1.23%	5,245,686	4,306,856	25,000	4,331,856
June 30, 2029	136,525,048	1,755,679	134,769,369	1.29%	5,485,151	4,513,994	25,000	4,538,994
June 30, 2030	141,915,569	1,905,144	140,010,425	1.34%	5,735,918	4,751,181	25,000	4,776,181
June 30, 2031	147,662,994	2,065,131	145,597,863	1.40%	6,008,846	4,984,914	25,000	5,009,914
June 30, 2032	153,345,950	2,236,381	151,109,569	1.46%	6,284,517	5,191,667	25,000	5,216,667
June 30, 2033	159,493,415	2,419,687	157,073,728	1.52%	6,584,516	5,410,616	25,000	5,435,616
June 30, 2034	165,646,623	2,615,898	163,030,725	1.58%	6,905,227	5,651,351	25,000	5,676,351
June 30, 2035	172,129,300	2,825,922	169,303,378	1.64%	7,241,487	5,767,520	25,000	5,792,520
June 30, 2036	179,095,885	3,050,732	176,045,153	1.70%	7,598,009	5,971,342	25,000	5,996,342
June 30, 2037	186,544,252	3,291,369	183,252,883	1.76%	7,960,912	6,223,835	25,000	6,248,835
June 30, 2038	194,309,394	3,548,946	190,760,448	1.83%	8,357,286	6,464,228	25,000	6,489,228
June 30, 2039	202,525,269	3,824,657	198,700,612	1.89%	8,779,502	6,732,462	25,000	6,757,462
June 30, 2040	211,062,477	4,119,778	206,942,699	1.95%	9,233,259	7,035,175	25,000	7,060,175
June 30, 2041	220,285,565	4,435,675	215,849,890	2.01%	9,721,368	7,356,267	25,000	7,381,267
June 30, 2042	229,903,459	4,773,812	225,129,647	2.08%	10,228,269	7,525,936	25,000	7,550,936
June 30, 2043	240,339,414	5,135,753	235,203,661	2.14%	10,777,893	7,757,593	25,000	7,782,593
June 30, 2044	251,337,875	5,523,175	245,814,700	2.20%	11,339,738	8,082,406	25,000	8,107,406
June 30, 2045	262,928,321	5,937,872	256,990,449	2.26%	11,947,771	8,303,649	25,000	8,328,649
June 30, 2046	275,292,458	6,381,763	268,910,695	2.32%	12,577,924	8,558,624	25,000	8,583,624
June 30, 2047	288,500,020	6,856,904	281,643,116	2.38%	13,239,544	8,901,774	25,000	8,926,774
June 30, 2048	302,715,121	7,365,495	295,349,626	2.43%	13,955,587	9,292,726	25,000	9,317,726

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

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

Measurement Date	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.]
June 30, 2017	51,949,085	571,053	51,378,032	1.10%	1,301,562	2,656,780	1,803,800	4,460,580
June 30, 2018	54,135,438	2,477,469	51,657,969	4.58%	1,365,393	2,820,356	1,803,800	4,624,156
June 30, 2019	56,368,108	4,518,097	51,850,011	8.02%	1,435,137	2,920,045	1,803,800	4,723,845
June 30, 2020	58,725,025	6,702,385	52,022,640	11.41%	1,505,883	3,076,934	1,803,800	4,880,734
June 30, 2021	61,154,572	9,040,447	52,114,125	14.78%	1,572,460	3,211,923	1,803,800	5,015,723
June 30, 2022	63,678,411	11,543,108	52,135,303	18.13%	1,648,800	3,299,619	1,803,800	5,103,419
June 30, 2023	66,369,524	14,221,957	52,147,567	21.43%	1,727,414	3,459,101	1,803,800	5,262,901
June 30, 2024	69,159,836	17,089,397	52,070,439	24.71%	1,813,656	3,584,462	1,803,800	5,388,262
June 30, 2025	72,075,745	20,158,705	51,917,040	27.97%	1,895,812	3,739,625	1,803,800	5,543,425
June 30, 2026	75,123,579	23,444,092	51,679,487	31.21%	1,983,709	3,945,724	1,803,800	5,749,524
June 30, 2027	78,247,172	26,960,770	51,286,402	34.46%	2,059,234	4,106,465	1,803,800	5,910,265
June 30, 2028	81,472,231	30,725,022	50,747,209	37.71%	2,152,786	4,306,856	1,803,800	6,110,656
June 30, 2029	84,679,062	34,754,278	49,924,784	41.04%	2,248,326	4,513,994	1,803,800	6,317,794
June 30, 2030	87,999,493	39,067,193	48,932,300	44.39%	2,348,711	4,751,181	1,803,800	6,554,981
June 30, 2031	91,525,008	43,683,737	47,841,271	47.73%	2,458,742	4,984,914	1,803,800	6,788,714
June 30, 2032	94,977,876	48,625,286	46,352,590	51.20%	2,569,352	5,191,667	1,803,800	6,995,467
June 30, 2033	98,719,715	53,914,720	44,804,995	54.61%	2,690,384	5,410,616	1,803,800	7,214,416
June 30, 2034	102,444,320	59,576,530	42,867,790	58.16%	2,819,938	5,651,351	1,803,800	7,455,151
June 30, 2035	106,344,549	65,636,932	40,707,617	61.72%	2,955,695	5,767,520	1,803,800	7,571,320
June 30, 2036	110,540,970	72,123,986	38,416,984	65.25%	3,099,731	5,971,342	1,803,800	7,775,142
June 30, 2037	115,037,083	79,067,729	35,969,354	68.73%	3,246,027	6,223,835	1,803,800	8,027,635
June 30, 2038	119,718,037	86,500,311	33,217,726	72.25%	3,405,996	6,464,228	1,803,800	8,268,028
June 30, 2039	124,650,919	94,456,147	30,194,772	75.78%	3,576,245	6,732,462	1,803,800	8,536,262
June 30, 2040	129,774,639	102,972,074	26,802,565	79.35%	3,759,517	7,035,175	1,803,800	8,838,975
June 30, 2041	135,272,088	112,087,522	23,184,566	82.86%	3,956,558	7,356,267	1,803,800	9,160,067
June 30, 2042	140,985,985	121,844,698	19,141,287	86.42%	4,161,135	7,525,936	1,803,800	9,329,736
June 30, 2043	147,200,601	132,288,779	14,911,822	89.87%	4,382,894	7,757,593	1,803,800	9,561,393
June 30, 2044	153,769,098	143,468,123	10,300,975	93.30%	4,609,494	8,082,406	1,803,800	9,886,206
June 30, 2045	160,686,187	155,434,493	5,251,694	96.73%	4,854,541	8,303,649	1,803,800	10,107,449
June 30, 2046	168,081,309	168,243,295	(161,986)	100.10%	5,108,280	8,558,624	1,803,800	10,362,424
June 30, 2047	176,012,597	181,953,837	(5,941,240)	103.38%	5,374,664	8,901,774	0	8,901,774
June 30, 2048	184,523,950	194,763,387	(10,239,437)	105.55%	5,662,519	9,292,726	0	9,292,726

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - 7.00% discount rate and increasing at 2.75% per year

Measurement Date	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.]
	Measurement Date	Measurement Date	Measurement Date	Measurement Date	Measurement Date	Measurement Date	Measurement Date	Measurement Date
June 30, 2017	51,949,085	571,053	51,378,032	1.10%	1,301,562	2,656,780	1,392,100	4,048,880
June 30, 2018	54,135,438	2,051,523	52,083,915	3.79%	1,365,393	2,820,356	1,430,383	4,250,739
June 30, 2019	56,368,108	3,675,826	52,692,282	6.52%	1,435,137	2,920,045	1,469,719	4,389,764
June 30, 2020	58,725,025	5,455,177	53,269,848	9.29%	1,505,883	3,076,934	1,510,136	4,587,070
June 30, 2021	61,154,572	7,401,610	53,752,962	12.10%	1,572,460	3,211,923	1,551,665	4,763,588
June 30, 2022	63,678,411	9,528,038	54,150,373	14.96%	1,648,800	3,299,619	1,594,336	4,893,955
June 30, 2023	66,369,524	11,848,314	54,521,210	17.85%	1,727,414	3,459,101	1,638,180	5,097,281
June 30, 2024	69,159,836	14,377,299	54,782,537	20.79%	1,813,656	3,584,462	1,683,230	5,267,692
June 30, 2025	72,075,745	17,130,933	54,944,812	23.77%	1,895,812	3,739,625	1,729,519	5,469,144
June 30, 2026	75,123,579	20,126,313	54,997,266	26.79%	1,983,709	3,945,724	1,777,081	5,722,805
June 30, 2027	78,247,172	23,381,776	54,865,396	29.88%	2,059,234	4,106,465	1,825,951	5,932,416
June 30, 2028	81,472,231	26,916,984	54,555,247	33.04%	2,152,786	4,306,856	1,876,165	6,183,021
June 30, 2029	84,679,062	30,753,023	53,926,039	36.32%	2,248,326	4,513,994	1,927,760	6,441,754
June 30, 2030	87,999,493	34,912,499	53,086,994	39.67%	2,348,711	4,751,181	1,980,773	6,731,954
June 30, 2031	91,525,008	39,419,649	52,105,359	43.07%	2,458,742	4,984,914	2,035,244	7,020,158
June 30, 2032	94,977,876	44,300,459	50,677,417	46.64%	2,569,352	5,191,667	2,091,213	7,282,880
June 30, 2033	98,719,715	49,582,783	49,136,932	50.23%	2,690,384	5,410,616	2,148,721	7,559,337
June 30, 2034	102,444,320	55,296,481	47,147,839	53.98%	2,819,938	5,651,351	2,207,811	7,859,162
June 30, 2035	106,344,549	61,473,558	44,870,991	57.81%	2,955,695	5,767,520	2,268,526	8,036,046
June 30, 2036	110,540,970	68,148,317	42,392,653	61.65%	3,099,731	5,971,342	2,330,910	8,302,252
June 30, 2037	115,037,083	75,357,521	39,679,562	65.51%	3,246,027	6,223,835	2,395,010	8,618,845
June 30, 2038	119,718,037	83,140,571	36,577,466	69.45%	3,405,996	6,464,228	2,460,873	8,925,101
June 30, 2039	124,650,919	91,539,690	33,111,229	73.44%	3,576,245	6,732,462	2,528,547	9,261,009
June 30, 2040	129,774,639	100,600,122	29,174,517	77.52%	3,759,517	7,035,175	2,598,082	9,633,257
June 30, 2041	135,272,088	110,370,350	24,901,738	81.59%	3,956,558	7,356,267	2,669,529	10,025,796
June 30, 2042	140,985,985	120,902,321	20,083,664	85.75%	4,161,135	7,525,936	2,742,941	10,268,877
June 30, 2043	147,200,601	132,251,695	14,948,906	89.84%	4,382,894	7,757,593	2,818,372	10,575,965
June 30, 2044	153,769,098	144,478,106	9,290,992	93.96%	4,609,494	8,082,406	2,895,877	10,978,283
June 30, 2045	160,686,187	157,645,443	3,040,744	98.11%	4,854,541	8,303,649	2,975,514	11,279,163
June 30, 2046	168,081,309	171,822,153	(3,740,844)	102.23%	5,108,280	8,558,624	3,040,744	11,599,368
June 30, 2047	176,012,597	187,064,390	(11,051,793)	106.28%	5,374,664	8,901,774	0	8,901,774
June 30, 2048	184,523,950	200,233,723	(15,709,773)	108.51%	5,662,519	9,292,726	0	9,292,726

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

City of Newburyport

GASB 45 Projection of Funding Annual Service Cost and Impact on Unfunded Obligation

Total Medical, Dental & Life Insurance - Funding Annual Service Cost - 3.50% discount rate

Measurement Date	I. Total OPEB Liability	II. Service Cost	III. Employer Share of Premiums / Claims including "implicit cost"	IV. Funding Service Cost beyond claims	V. Total Funding Costs [III. + IV.]	VI. Present Value at 2.75% of Employer Share of Premiums / Claims including "implicit cost"	VII. Present Value at 2.75% of Funding Service Cost beyond claims	VIII. Present Value at 2.75% of Total Funding Costs [VI. + VII.]	IX. Fiduciary Net Position at Beginning of year	X. Net OPEB Liability (Asset) [I. - IX.]	XI. Present Value at 2.75% of Net OPEB Liability (Asset)
June 30, 2017	84,082,487	3,173,557	2,656,780	516,777	3,173,557	2,656,780	516,777	3,173,557	571,053	83,511,434	83,511,434
June 30, 2018	87,555,746	3,323,794	2,820,356	503,438	3,323,794	2,744,872	489,964	3,234,836	1,107,816	86,447,930	84,134,238
June 30, 2019	91,128,518	3,488,830	2,920,045	568,785	3,488,830	2,765,833	538,747	3,304,580	1,650,028	89,478,490	84,752,982
June 30, 2020	94,893,107	3,657,264	3,076,934	580,330	3,657,264	2,836,434	534,970	3,371,404	2,276,564	92,616,543	85,377,429
June 30, 2021	98,786,399	3,818,981	3,211,923	607,058	3,818,981	2,881,627	544,632	3,426,259	2,936,574	95,849,825	85,993,179
June 30, 2022	102,833,825	4,003,482	3,299,619	703,863	4,003,482	2,881,076	614,581	3,495,657	3,646,412	99,187,413	86,605,886
June 30, 2023	107,134,295	4,193,868	3,459,101	734,767	4,193,868	2,939,492	624,394	3,563,886	4,477,899	102,656,396	87,235,857
June 30, 2024	111,601,385	4,402,963	3,584,462	818,501	4,402,963	2,964,498	676,934	3,641,432	5,369,392	106,231,993	87,858,243
June 30, 2025	116,263,995	4,603,434	3,739,625	863,809	4,603,434	3,010,048	695,285	3,705,333	6,375,822	109,888,173	88,449,689
June 30, 2026	121,140,348	4,818,339	3,945,724	872,615	4,818,339	3,090,938	683,575	3,774,513	7,462,785	113,677,563	89,050,893
June 30, 2027	126,158,777	5,011,635	4,106,465	905,170	5,011,635	3,130,760	690,100	3,820,860	8,596,597	117,562,180	89,629,160
June 30, 2028	131,342,827	5,245,686	4,306,856	938,830	5,245,686	3,195,657	696,605	3,892,262	9,802,648	121,540,179	90,181,974
June 30, 2029	136,525,048	5,485,151	4,513,994	971,157	5,485,151	3,259,710	701,306	3,961,016	11,084,571	125,440,477	90,584,884
June 30, 2030	141,915,569	5,735,918	4,751,181	984,737	5,735,918	3,339,164	692,080	4,031,244	12,443,688	129,471,881	90,993,770
June 30, 2031	147,662,994	6,008,846	4,984,914	1,023,932	6,008,846	3,409,668	700,367	4,110,035	13,863,954	133,799,040	91,518,179
June 30, 2032	153,345,950	6,284,517	5,191,667	1,092,850	6,284,517	3,456,045	727,500	4,183,545	15,373,124	137,972,826	91,847,238
June 30, 2033	159,493,415	6,584,516	5,410,616	1,173,900	6,584,516	3,505,399	760,540	4,265,939	17,004,033	142,489,382	92,315,200
June 30, 2034	165,646,623	6,905,227	5,651,351	1,253,876	6,905,227	3,563,372	790,612	4,353,984	18,773,074	146,873,549	92,608,845
June 30, 2035	172,129,300	7,241,487	5,767,520	1,473,967	7,241,487	3,539,290	904,513	4,443,803	20,684,008	151,445,292	92,935,754
June 30, 2036	179,095,885	7,598,009	5,971,342	1,626,667	7,598,009	3,566,294	971,502	4,537,796	22,881,915	156,213,970	93,296,444
June 30, 2037	186,544,252	7,960,912	6,223,835	1,737,077	7,960,912	3,617,608	1,009,677	4,627,285	25,309,449	161,234,803	93,717,821
June 30, 2038	194,309,394	8,357,286	6,464,228	1,893,058	8,357,286	3,656,775	1,070,892	4,727,667	27,932,357	166,377,037	94,118,489
June 30, 2039	202,525,269	8,779,502	6,732,462	2,047,040	8,779,502	3,706,582	1,127,006	4,833,588	30,803,047	171,722,222	94,542,314
June 30, 2040	211,062,477	9,233,259	7,035,175	2,198,084	9,233,259	3,769,579	1,177,775	4,947,354	33,928,194	177,134,283	94,911,868
June 30, 2041	220,285,565	9,721,368	7,356,267	2,365,101	9,721,368	3,836,132	1,233,348	5,069,480	37,313,765	182,971,800	95,415,785
June 30, 2042	229,903,459	10,228,269	7,525,936	2,702,333	10,228,269	3,819,572	1,371,491	5,191,063	40,984,848	188,918,611	95,880,211
June 30, 2043	240,339,414	10,777,893	7,757,593	3,020,300	10,777,893	3,831,770	1,491,841	5,323,611	45,121,651	195,217,763	96,425,464
June 30, 2044	251,337,875	11,339,738	8,082,406	3,257,332	11,339,738	3,885,360	1,565,859	5,451,219	49,721,209	201,616,666	96,920,803
June 30, 2045	262,928,321	11,947,771	8,303,649	3,644,122	11,947,771	3,884,881	1,704,911	5,589,792	54,718,783	208,209,538	97,411,306
June 30, 2046	275,292,458	12,577,924	8,558,624	4,019,300	12,577,924	3,897,004	1,830,111	5,727,115	60,278,062	215,014,396	97,902,651
June 30, 2047	288,500,020	13,239,544	8,901,774	4,337,770	13,239,544	3,944,770	1,922,258	5,867,028	66,407,094	222,092,926	98,419,195

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

Total Medical & Life Insurance - Partial funding

Measurement Date	Number of Retirees, Spouses & Surviving Spouses	Total OPEB Liability	Present Value at 2.75% of Total OPEB Liability	Employer Share of Premiums / Claims including "implicit cost"	Present Value at 2.75% of Employer Share of Premiums / Claims including "implicit cost"
June 30, 2017	489	84,082,487	84,082,487	2,656,780	2,656,780
June 30, 2018	516	87,555,746	85,212,405	2,820,356	2,744,872
June 30, 2019	525	91,128,518	86,315,869	2,920,045	2,765,833
June 30, 2020	531	94,893,107	87,476,052	3,076,934	2,836,434
June 30, 2021	538	98,786,399	88,627,772	3,211,923	2,881,627
June 30, 2022	544	102,833,825	89,789,766	3,299,619	2,881,076
June 30, 2023	547	107,134,295	91,041,108	3,459,101	2,939,492
June 30, 2024	552	111,601,385	92,298,952	3,584,462	2,964,498
June 30, 2025	554	116,263,995	93,581,628	3,739,625	3,010,048
June 30, 2026	558	121,140,348	94,896,969	3,945,724	3,090,938
June 30, 2027	564	126,158,777	96,183,187	4,106,465	3,130,760
June 30, 2028	568	131,342,827	97,455,471	4,306,856	3,195,657
June 30, 2029	571	136,525,048	98,589,434	4,513,994	3,259,710
June 30, 2030	572	141,915,569	99,739,284	4,751,181	3,339,164
June 30, 2031	573	147,662,994	101,001,086	4,984,914	3,409,668
June 30, 2032	572	153,345,950	102,080,985	5,191,667	3,456,045
June 30, 2033	572	159,493,415	103,331,675	5,410,616	3,505,399
June 30, 2034	571	165,646,623	104,445,917	5,651,351	3,563,372
June 30, 2035	570	172,129,300	105,628,680	5,767,520	3,539,290
June 30, 2036	567	179,095,885	106,962,323	5,971,342	3,566,294
June 30, 2037	564	186,544,252	108,428,952	6,223,835	3,617,608
June 30, 2038	562	194,309,394	109,919,655	6,464,228	3,656,775
June 30, 2039	560	202,525,269	111,501,047	6,732,462	3,706,582
June 30, 2040	560	211,062,477	113,091,230	7,035,175	3,769,579
June 30, 2041	559	220,285,565	114,874,096	7,356,267	3,836,132
June 30, 2042	557	229,903,459	116,680,892	7,525,936	3,819,572
June 30, 2043	557	240,339,414	118,712,760	7,757,593	3,831,770
June 30, 2044	555	251,337,875	120,822,694	8,082,406	3,885,360
June 30, 2045	554	262,928,321	123,011,613	8,303,649	3,884,881
June 30, 2046	553	275,292,458	125,349,102	8,558,624	3,897,004
June 30, 2047	551	288,500,020	127,847,115	8,901,774	3,944,770
June 30, 2048	550	302,715,121	130,556,160	9,292,726	4,007,803
June 30, 2049	550	317,790,160	133,389,569	9,680,416	4,063,268
June 30, 2050	550	333,659,977	136,302,464	10,091,808	4,122,575
June 30, 2051	549	350,615,800	139,395,657	10,563,543	4,199,788
June 30, 2052	549	368,449,920	142,565,485	10,981,054	4,248,934
June 30, 2053	549	387,650,067	145,980,203	11,431,451	4,304,825
June 30, 2054	548	407,868,972	149,483,390	12,001,442	4,398,511
June 30, 2055	548	429,521,558	153,205,870	12,531,672	4,469,917
June 30, 2056	548	452,013,951	156,913,550	13,103,331	4,548,732

EXHIBIT F**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.

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 present value of a series of future cash flows. Under GASB 45, the rate should be "long term expected yield on the investments that are expected to be used to pay benefits as they come due. These would be plan investments for a funded plan, the employer's investments for a pay as you go plan [e.g. short term county investment pool], or a weighted average of expected plan and employer investments for a plan that is partially funded".

FASB - Financial Accounting Standards Board. "Since 1973, the Financial Accounting Standards Board (FASB) has been the designated organization in the private sector for establishing standards of financial accounting and reporting".

EXHIBIT F**GLOSSARY***(continued)*

Fiduciary Net Position - The value of cash, investments, other assets and property belonging to an OPEB trust, pension fund or similar entity, as used by the actuary to perform an actuarial valuation.

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."

GFOA – Government Finance Officers Association. "GFOA is the professional association of state/provincial and local finance officers in the United States and Canada, and has served the public finance profession since 1906. Approximately 16,000 GFOA members are dedicated to the sound management of government financial resources."

Implicit Subsidy - "The difference between a premium rate charged to retirees for a particular benefit and the estimated rate that would have been applicable to those retirees if that benefit was acquired for them as a separate group."

Irrevocable Contribution - "Irrevocably transferred assets to a qualifying trust, or equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator. The preceding criteria preclude counting as [irrevocable] contributions (a) designations of net assets of a governmental or proprietary fund to be used for OPEB or (b) internal transfers of assets to a separate governmental or proprietary fund for the same purpose. Rather, such actions should be regarded as earmarking of employer assets."

Level Dollar Amortization - Funding a shortfall in OPEB assets with equal dollar payments over a designated number of years (no more than 30 years). The present value of the level payments equals the present value of unfunded liabilities, the NOL.

EXHIBIT F**GLOSSARY***(continued)*

Level Percent of Payroll Amortization - Funding a shortfall in OPEB assets as a level percent of payroll over a designated number of years (no more than 30 years). The present value of the payments equals the present value of unfunded liabilities, the NOL. Level percent of payroll typically has lower payments in the early years than level dollar amortization. When using level payroll amortization, employee count is assumed to be constant, and the payroll differences arise from overall wage trends.

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

OPEB - Other Post Employment Benefits

OPEB Trust - An entity other than a pension or retirement system which manages OPEB assets. In many respects it is similar to a pension fund for OPEB. For reasons detailed in GASB 45, contributions to an OPEB trust should be irrevocable in order to obtain the most favorable accounting treatment.

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.

Pension Obligation Bond (POB) - Generally yielding taxable interest, POBs are issued to help fund a previously unfunded or underfunded pension liability.

Service Cost (Formerly Normal 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 pension plan benefits and expenses which is not provided for by future Service Costs.