

City of Everett
Other Postemployment Benefits Plan

GASB 74 & GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2018

As of the Measurement Date:
June 30, 2019

For the Reporting Date:
June 30, 2019

Delivered September 18, 2019



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September 18, 2019

Personal and Confidential

Mr. Ryan J. Smith, CPA
Assistant City Auditor
City of Everett
484 Broadway
Everett, MA 02149

Dear Mr. Smith:

We have performed an actuarial valuation of the City of Everett Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending June 30, 2019 with a Measurement Date of June 30, 2019 and a Valuation Date of July 1, 2018. The figures presented in this report reflect the adoption, by the City of Everett, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75") effective for the fiscal years 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 will be pleased to answer any questions that you may have regarding this actuarial valuation report.

Very truly yours,



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

September 18, 2019

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the City of Everett other postemployment benefit programs with a Valuation Date of July 1, 2018 with a Measurement Date of June 30, 2019 for the Reporting Date & fiscal year ending June 30, 2019 in accordance with Government Account Standards Board Statement No. 74 & 75 and Actuarial Standards of Practice as issued by the American Academy of Actuaries. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Numbers 74 & 75 for the determination of the liability for postemployment benefits other than pensions.

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

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

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



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

EXECUTIVE SUMMARY

What caused plan liabilities to change from FY 18 to FY 19?

For the year ending on the Measurement Date of June 30, 2019, the Plan saw an experience gain of \$21,935,653 or 8.42% of the beginning Total OPEB Liability ("TOL"). This was mainly due to a decrease in the number of retirees and benefit eligible employees. During the period there was an investment gain of \$96,350 above the expected return.

Assumption changes

Some key assumptions have changed since the prior valuation - their impact is detailed below.

- ✓ The expected long-term medical trend has been updated to 4.50% decreasing the disclosed liability by \$26 million.
- ✓ Based on recommendations by PERAC, the mortality table has been updated from the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 to RP-2014 Mortality Table projected generationally with scale MP-2016 for males and females increasing the disclosed liability by \$16 million.
- ✓ Retirement assumptions have been updated increasing the disclosed liability by \$2.3 million.
- ✓ The method for developing expected medical claims has been updated increasing the disclosed liability by \$35.0 million.
- ✓ Assumption changes caused Service Cost to increase by \$710 thousand.

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

Changes in Benefits Terms

- ✓ To the best of our knowledge there have been no material changes in benefit terms that would impact the figures shown in this report.

EXECUTIVE SUMMARY

Recognition Period

- ✓ Changes in assumptions & plan experience are amortized into the net OPEB expense over time until fully recognized
- ✓ Changes in benefit terms are to be recognized in full immediately

Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

Discount Rate Determinants

- ✓ Employer Current and Future Benefit Payments
- ✓ Municipal Bond Rate – The municipal bond rate was 2.79% as of June 30, 2019.
- ✓ Current Asset Level – The City had \$6,025,372 of assets as of June 30, 2019.
- ✓ Funding Policy - The City contributed \$899K in FY 2019 and is expected to contribute \$1 million per year in future years.
- ✓ Investment Policy - The City is expected to earn 5.95% on assets based on its investment policy.

EXECUTIVE SUMMARY

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare integrated) plans - represent 74.90% of the total plan liabilities
- ✓ Age at which plan participants retire
- ✓ Percentage of plan participants who elect coverage for themselves and/or a spouse
- ✓ Medical care cost inflation rate - We currently assume medical costs increase at 4.50% per year for non-Medicare integrated plans and 4.50% per year for Medicare integrated plans.
- ✓ Discount Rate (3.75%) – Higher discount rates yield lower liabilities and vice versa
- ✓ Cost Sharing - Under Massachusetts law you may charge retirees up to 50% of premiums for health insurance

Medicare Buy-In

Recently, some of our clients have seen substantial cost savings by “buying into” Medicare for retirees who would otherwise be ineligible. To buy into Medicare the City would need to pay the Medicare Part A premium and the Medicare Part A and B penalties. While the cost to buy into Medicare is significant, it is likely still far less than the cost of the claims that the associated retirees are expected to incur. Under Actuarial Standards of Practice for OPEB, we are required to reflect the projected higher healthcare costs that occur as retirees age. The City currently has various retirees or covered spouses who are over the age of 65 and are enrolled in Active medical plans rather than Medicare Supplement (Senior) plans. You may wish to review their Medicare eligibility to see if they are already eligible for Medicare or if a “buy-in” is appropriate as this could yield a reduction in your OPEB annual costs and disclosed liabilities.

EXECUTIVE SUMMARY

Key Plan Metrics

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

Representative Plan Statistics		
Valuation Date	July 1, 2018	July 1, 2016
Measurement Date & Period Ending	June 30, 2019	July 1, 2017
Reporting Date/Fiscal Year End	June 30, 2019	June 30, 2018
Total OPEB Liability	277,809,805	247,327,326
Per Eligible Active Plan Participant	94,444	85,292
Per Retiree/Spouse Plan Participant	136,030	99,686
Total Annual Service Cost (annual benefit accrual)	9,493,779	9,824,677
Per Eligible Active Plan Participant	6,205	6,013
Expected Employer Share of Retiree Costs	7,977,564	7,065,440
Per Retiree/Spouse Plan Participant	8,140	6,524
Net OPEB Liability as a % of Covered Payroll	288.40%	233.30%
Average Annual Medical Plan Premium (Single Coverage)	8,367	6,193
Average Annual Medical Plan Premium (Family Coverage)	23,488	24,016
<u>Projected 2022 Excise Tax Thresholds</u>		
Annual Medical Plan Premium (Single Coverage)	12,511	
Annual Medical Plan Premium (Family Coverage)	32,676	

PRINCIPAL RESULTS OF THE VALUATION

City of Everett

Assuming Funding - 3.75% discount rate

Comparison of Plan Liabilities to Prior Valuation

Valuation Date	July 1, 2018	July 1, 2016
For the Measurement Period ending on the Measurement Date of:	June 30, 2019	July 1, 2017
For the Reporting Period & Fiscal Year ending on:	June 30, 2019	June 30, 2018
I. Total OPEB Liability		
A. Actives	144,499,945	139,367,052
B. Retirees/Disabled	<u>133,309,860</u>	<u>107,960,274</u>
C. Total	277,809,805	247,327,326
II. Fiduciary Net Position [Plan Assets]	6,025,372	3,575,072
III. Net OPEB Liability (Asset) [I. - II.]	271,784,433	243,752,254
IV. Funded Ratio [II. / I.]	2.17%	1.45%
V. Number of Eligible Participants		
A. Actives	1,530	1,634
B. Retirees/Disabled & Dependents	<u>980</u>	<u>1,083</u>
C. Total	2,510	2,717
VI. Service Cost	9,493,779	9,824,677
VII. Financial Statement Expense	20,040,289	18,731,815
VIII. Employer Contribution to the OPEB Trust	(899,295)	(1,005,784)
IX. Deferred Inflow of Resources	(18,670,040)	(1,404)
X. Deferred Outflow of Resources	23,538,945	52,742
XI. Money Weighted Rate of Return	8.05%	3.77%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.79%	3.13%
XIII. Expected Long Term Rate of Return (Net of Expense)	5.95%	5.95%
XIV. Crossover Year	Immediate	Immediate
XV. Discount Rate	3.75%	3.75%

PRINCIPAL RESULTS OF THE VALUATION

City of Everett Plan Liabilities as of the June 30, 2019 Measurement Date Assuming Funding - 3.75% discount rate

	City Employees and Retirees	Teacher Employees and Retirees	Non-Teacher School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Water & Sewer Enterprise Employees and Retirees	Total
I. Total OPEB Liability							
A. Actives	21,348,677	57,230,691	19,582,024	26,639,663	18,993,388	705,502	144,499,945
B. Retirees/Disabled	<u>31,857,376</u>	<u>55,694,027</u>	<u>12,307,773</u>	<u>14,529,203</u>	<u>17,613,486</u>	<u>1,307,995</u>	<u>133,309,860</u>
C. Total	53,206,053	112,924,718	31,889,797	41,168,866	36,606,874	2,013,497	277,809,805
II. Fiduciary Net Position [Plan Assets]	1,151,699	2,443,633	691,198	900,480	794,895	43,467	6,025,372
III. Net OPEB Liability (Asset) [I. - II.]	52,054,354	110,481,085	31,198,599	40,268,386	35,811,979	1,970,030	271,784,433
IV. Number of Eligible Participants							
A. Actives	310	637	307	159	105	12	1,530
B. Retirees/Disabled	<u>244</u>	<u>362</u>	<u>106</u>	<u>109</u>	<u>144</u>	<u>15</u>	<u>980</u>
C. Total	554	999	413	268	249	27	2,510
For the Reporting Date and Fiscal Year Ending June 30, 2019							
V. Service Cost	1,860,012	3,724,951	1,757,991	1,241,231	834,416	75,178	9,493,779
VI. Financial Statement Expense	3,876,223	8,010,632	2,995,052	2,801,394	2,205,658	151,330	20,040,289
VII. Employer Share of Costs	(1,816,856)	(3,054,029)	(844,773)	(973,346)	(1,201,711)	(86,849)	(7,977,564)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(171,404)	(365,720)	(105,770)	(133,399)	(116,559)	(6,443)	(899,295)
IX. Total Employer Contribution [VII. + VIII.]	(1,988,260)	(3,419,749)	(950,543)	(1,106,745)	(1,318,270)	(93,292)	(8,876,859)

PRINCIPAL RESULTS OF THE VALUATION

City of Everett

Assuming Funding - 3.75% discount rate

For the Period ending on the June 30, 2019 Measurement Date

	Actives			Retirees/Disabled			Grand Total
	Under Age 65	Age 65+	Actives Total	Under Age 65	Age 65 +	Retirees Total	
Present Value of Future Benefits							
A. Participants	54,502,665	86,735,107	141,237,772	6,706,111	92,481,600	99,187,711	240,425,483
B. Spouses	<u>41,452,612</u>	<u>64,865,243</u>	<u>106,317,855</u>	<u>5,932,488</u>	<u>28,189,661</u>	<u>34,122,149</u>	<u>140,440,004</u>
C. Total	95,955,277	151,600,350	247,555,627	12,638,599	120,671,261	133,309,860	380,865,487
Total OPEB Liability							
A. Participants	32,315,544	49,983,348	82,298,892	6,706,111	92,481,600	99,187,711	181,486,603
B. Spouses	<u>24,773,326</u>	<u>37,427,727</u>	<u>62,201,053</u>	<u>5,932,488</u>	<u>28,189,661</u>	<u>34,122,149</u>	<u>96,323,202</u>
C. Total	57,088,870	87,411,075	144,499,945	12,638,599	120,671,261	133,309,860	277,809,805
Service Cost							
A. Participants	1,881,923	3,537,933	5,419,856	0	0	0	5,419,856
B. Spouses	<u>1,430,769</u>	<u>2,643,154</u>	<u>4,073,923</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>4,073,923</u>
C. Total	3,312,692	6,181,087	9,493,779	0	0	0	9,493,779

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require the following disclosures in the financial statements:

1. OPEB Expense Development

Components of the City's OPEB Expenses for the Fiscal Year Ending June 30, 2019	
Description	Amount
I. Service Cost	9,493,779
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	9,977,532
III. Deferred (Inflows)/Outflows from Plan Design Changes*	0
IV. Deferred (Inflows)/Outflows from Plan Experience**	(3,344,097)
V. Deferred (Inflows)/Outflows from Changes of Assumptions**	4,226,508
VI. Projected earnings on OPEB plan investments	(307,349)
VII. Deferred (Inflows)/Outflows from Earnings on Plan Investments***	(6,084)
VIII. Financial statement expense [I. + II.+ III. + IV. + V. + VI. + VII.]	20,040,289

* Recognized Immediately

** Amortized over 6.56 years

*** Amortized over 5.00 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

2. Changes in Net OPEB Liability

Changes in Net OPEB Liability			
	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
I. Balances for June 30, 2018	247,327,326	3,575,072	243,752,254
II. Prior Period Adjustment	<u>13,198,488</u>	<u>1,147,306</u>	<u>12,051,182</u>
III. Balances for June 30, 2018 with Adjustment [I. + II.]	260,525,814	4,722,378	255,803,436
Changes for the year:			
IV. Service Cost	9,493,779	0	9,493,779
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	9,977,532	0	9,977,532
VI. Changes in Benefit terms *	0	0	0
VII. Change in assumptions **	27,725,897	0	27,725,897
VIII. Differences between actual and expected experience **	(21,935,653)	0	(21,935,653)
IX. Net investment income	0	403,699	(403,699)
X. Employer contributions to Trust	0	8,876,859	(8,876,859)
XI. Benefit payments withdrawn from Trust	0	(7,977,564)	7,977,564
XII. Benefit payments excluding Implicit Cost	(6,174,356)	0	(6,174,356)
XIII. Implicit Cost amount	(1,803,208)	0	(1,803,208)
XIV. Total Benefit payments including Implicit Cost [XII. + XIII.]	(7,977,564)	0	(7,977,564)
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.]	<u>17,283,991</u>	<u>1,302,994</u>	<u>15,980,997</u>
XVIII. Balances at June 30, 2019 [III.+XVII.]	277,809,805	6,025,372	271,784,433

* Recognized Immediately

** Amortized over 6.56 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

3. Changes in Net OPEB Expense

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of differences between expected & actual experience									
Fiscal	Differences between actual & expected experience	Recognition Period (years)	Remaining Balance	2019	2020	2021	2022	2023	2024
2017									
2018	(1,651)	6.67	(1,156)	(248)	(248)	(248)	(248)	(248)	(164)
2019	(21,935,653)	6.56	(18,591,804)	(3,343,849)	(3,343,849)	(3,343,849)	(3,343,849)	(3,343,849)	(3,343,849)
2020									
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			(18,592,960)						
Net increase (decrease) in OPEB expense				(3,344,097)	(3,344,097)	(3,344,097)	(3,344,097)	(3,344,097)	(3,344,013)

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of changes in assumptions									
Fiscal	Differences from changes in Actuarial Assumptions	Recognition Period (years)	Remaining Balance	2019	2020	2021	2022	2023	2024
2017									
2018		6.67							
2019	27,725,897	6.56	23,499,389	4,226,508	4,226,508	4,226,508	4,226,508	4,226,508	4,226,508
2020									
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			23,499,389						
Net increase (decrease) in OPEB expense				4,226,508	4,226,508	4,226,508	4,226,508	4,226,508	4,226,508

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

3. Changes in 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	Differences between actual & expected earnings	Recognition Period (years)	Remaining Balance	2019	2020	2021	2022	2023	2024
2017									
2018	65,928	5.00	39,556	13,186	13,186	13,186	13,184		
2019	(96,350)	5.00	(77,080)	(19,270)	(19,270)	(19,270)	(19,270)	(19,270)	
2020									
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			(37,524)						
Net increase (decrease) in OPEB expense				(6,084)	(6,084)	(6,084)	(6,086)	(19,270)	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

3. Changes in Net OPEB Expense (Continued)

Statement of Outflows & Inflows Arising from Current & Prior Reporting Periods for the Measurement Period ending on June 30, 2019 to be reported for the fiscal year ending June 30, 2019		
	Deferred Outflows of Resources	Deferred Inflows of Resources
I. Differences between actual & expected experience	0	(18,592,960)
II. Changes of assumptions	23,499,389	0
III. Net difference between projected & actual earnings on OPEB plan investments	<u>39,556</u>	<u>(77,080)</u>
IV. Total [I.+II.+III.]	23,538,945	(18,670,040)
Annual Amortization of Deferred (Inflows)/Outflows		
The balance of deferred (inflows)/outflows as of June 30, 2019 will be recognized in future years as shown below.		
	Year ending June 30:	
	2020	876,327
	2021	876,327
	2022	876,325
	2023	863,141
	2024	882,495
	Thereafter	494,290

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES (As of the June 30, 2019 Measurement Date)

4. Funding Policy

The contribution requirements of plan members and the City are established and may be amended through City ordinances. For the period ending on the June 30, 2019 Measurement Date, total City premiums plus implicit costs for the retiree medical program were \$7,977,564. The City also made a contribution to an OPEB Trust of \$899,295 for a total contribution during the measurement period of \$8,876,859 to be reported on the financial statement for the fiscal year ending June 30, 2019.

5. Investment Policy

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

Investment Target Allocation & Expected Long-Term Real Rate of Return			
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return
Domestic Equity - Large Cap	38.00%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	6.00%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	5.00%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	3.00%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	37.00%	Domestic Fixed Income	2.00%
International Fixed Income	7.00%	International Fixed Income	3.00%
Alternatives	0.00%	Alternatives	6.50%
Real Estate	3.00%	Real Estate	6.25%
Cash & Cash Equivalents	1.00%	Cash & Cash Equivalents	0.00%
Total	<u>100.00%</u>		
		I. Real Rate of Return*	<u>3.45%</u>
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	6.20%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	<u>5.95%</u>

*Geometric Mean

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

6. Schedule of The City's Contributions

Year	Actuarial Determined Contribution	Contributions in relation to the actuarially determined contribution	Contribution deficiency (excess)	Covered employee payroll	Contributions as a percentage of covered employee payroll
June 30, 2019	24,186,543	(8,876,859)	15,309,684	94,247,676	9.42%
June 30, 2018	24,225,398	(8,387,641)	15,837,757	104,457,946	8.03%
June 30, 2017	22,422,832	(8,071,224)	14,351,608	101,415,481	7.96%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

7. Effect of 1% Change in Healthcare Trend

<u>Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2019 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Trend Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	235,017,948	277,809,805	333,378,647
II. Fiduciary Net Position	<u>6,025,372</u>	<u>6,025,372</u>	<u>6,025,372</u>
III. Net OPEB Liability (Asset) [I.-II.]	228,992,576	271,784,433	327,353,275
IV. Service Cost	7,236,404	9,493,779	12,683,106

8. Effect of 1% Change in Discount Rates

<u>Impact of a 1% Change in the Discount Rate as of the June 30, 2019 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	326,959,723	277,809,805	239,275,197
II. Fiduciary Net Position	<u>6,025,372</u>	<u>6,025,372</u>	<u>6,025,372</u>
III. Net OPEB Liability (Asset) [I.-II.]	320,934,351	271,784,433	233,249,825
IV. Service Cost	12,591,548	9,493,779	7,260,337

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

9. Money Weighted Rate of Return

	Plan Investments / Net External Cash Flows	Periods Invested	Period Weight
I. Beginning value - June 30, 2018	4,722,378	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	899,295	4	0.3333
March	0	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
<u>June</u>	<u>0</u>	0	0.0000
II. Total net external cash flow	899,295		
III. Earnings and increase in fair value	403,699		
IV. Ending value - June 30, 2019 [I.+II.+III.]	6,025,372		
Money Weighted Rate of Return	8.05%		
Asset Value - June 30, 2019	6,025,372		

EXHIBIT A
FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2019 Measurement Date)

10. OPEB Liability, OPEB Expense

	Fiscal Year Ending June 30, 2019						Total
	City Employees and Retirees	Teacher Employees and Retirees	Non-Teacher School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Water & Sewer Enterprise Employees and Retirees	
I. Total OPEB Liability as of June 30, 2019	53,206,053	112,924,718	31,889,797	41,168,866	36,606,874	2,013,497	277,809,805
II. Fiduciary Net Position as of June 30, 2019	1,151,699	2,443,633	691,198	900,480	794,895	43,467	6,025,372
III. Net OPEB Liability (Asset) as of June 30, 2019 [I. - II.]	52,054,354	110,481,085	31,198,599	40,268,386	35,811,979	1,970,030	271,784,433
IV. Service Cost	1,860,012	3,724,951	1,757,991	1,241,231	834,416	75,178	9,493,779
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,907,109	4,054,138	1,171,792	1,476,214	1,296,263	72,016	9,977,532
VI. Projected Earnings on OPEB Plan Investments	(58,734)	(124,674)	(35,325)	(45,907)	(40,493)	(2,216)	(307,349)
VII. Net Recognition of Deferred (Inflows)/Outflows	167,836	356,217	100,594	129,856	115,472	6,352	876,327
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VI. + VII. + VIII.]	3,876,223	8,010,632	2,995,052	2,801,394	2,205,658	151,330	20,040,289
X. Employer Share of Costs	(1,816,856)	(3,054,029)	(844,773)	(973,346)	(1,201,711)	(86,849)	(7,977,564)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(171,404)	(365,720)	(105,770)	(133,399)	(116,559)	(6,443)	(899,295)
XII. Total Employer Contribution [X. + XI.]	(1,988,260)	(3,419,749)	(950,543)	(1,106,745)	(1,318,270)	(93,292)	(8,876,859)
XIII. Net OPEB Expense [IX. + XII.]	1,887,963	4,590,883	2,044,509	1,694,649	887,388	58,038	11,163,430

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2019 Measurement Date)

11. OPEB Liability, OPEB Expense and Deferred Inflow/Outflow

Valuation Date	July 1, 2018
For the Measurement Period ending on the Measurement Date of:	June 30, 2019
For the Reporting Period & Fiscal Year ending on:	June 30, 2019
Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	(18,592,960)
II. Deferred (Inflow)/Outflow from Investment Experience	(37,524)
III. Deferred (Inflow)/Outflow from Changes in Assumptions	23,499,389
Change in Deferred Inflow/Outflow	
I. Deferred Outflow at the beginning of the period	52,742
II. Deferred Outflow created during the period	27,725,897
III. Deferred Outflow recognized during the period	4,239,694
IV. Change in Deferred Outflow (II. - III.)	23,486,203
V. Deferred Outflow at end of the period (I. + IV.)	23,538,945
VI. Deferred Inflow at the beginning of the period	(1,404)
VII. Deferred Inflow created during the period	(22,032,003)
VIII. Deferred Inflow recognized during the period	(3,363,367)
IX. Change in Deferred Inflow (VII. - VIII.)	(18,668,636)
X. Deferred Inflow at end of the period (VI. + IX.)	(18,670,040)
Net OPEB Liability	
I. Net OPEB Liability at beginning of period	255,803,436
II. Service Cost	9,493,779
III. Interest on Total OPEB Liability, Service Cost, and Payments	9,977,532
IV. Projected Investment Income	(307,349)
V. Total Employer Contributions	(8,876,859)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI.)	10,287,103
VIII. Deferred Outflow created during the period	27,725,897
IX. Deferred Inflow created during the period	(22,032,003)
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX.)	271,784,433
Net OPEB Expense	
I. Service Cost	9,493,779
II. Interest on Total OPEB Liability, Service Cost, and Payments	9,977,532
III. Projected Investment Income	(307,349)
IV. Recognition of Deferred (Inflow)/Outflow	876,327
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V.)	20,040,289
VII. Benefit Payments	(7,977,564)
VIII. Contributions to Trust	(899,295)
IX. Total Employer Payments (VII. + VIII.)	(8,876,859)
X. Total Net OPEB Expense under GASB 75 (VI. + IX.)	11,163,430

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 Measurement Date)

The City's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which is composed of the service cost and an amortization of the unfunded liability. We have used a 30 year flat dollar amortization of the City's unfunded liability for the purpose of calculating ADC. The following table shows the components of the City's annual ADC and the amount actually contributed to the plan:

	Actuarially Determined Contribution - Deficiency / (Excess)		
	<u>June 30, 2019</u>	For the Fiscal Year Ending:	
		<u>June 30, 2018</u>	<u>June 30, 2017</u>
I. Service Cost	9,493,779	11,048,063	9,824,677
II. 30 year level dollar amortization of NOL	<u>14,692,764</u>	<u>13,177,335</u>	<u>12,598,155</u>
III. Actuarial Determined Contribution [I. + II.]	24,186,543	24,225,398	22,422,832
IV. Contributions in relation to the actuarially determined contribution	<u>(8,876,859)</u>	<u>(8,387,641)</u>	<u>(8,071,224)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>15,309,684</u>	<u>15,837,757</u>	<u>14,351,608</u>
Covered employee payroll	94,247,676	104,457,946	101,415,481
Contributions as a % of covered employee payroll	9.42%	8.03%	7.96%
Discount Rate	3.75%	3.75%	3.75%
Money Weighted Rate of Return	8.05%	4.21%	3.77%

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION
(As of the June 30, 2019 Measurement Date)

Schedule of Changes in the City's Net OPEB Liability and Related Ratios			
Valuation Date	July 1, 2018	July 1, 2016	July 1, 2016
For the Reporting Period & Fiscal Year ending on:	June 30, 2019	June 30, 2018	June 30, 2017
Total OPEB Liability	277,809,805	260,525,814	247,327,326
I. Service Cost	9,493,779	11,048,063	9,824,677
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	9,977,532	9,551,582	9,068,465
III. Changes in Benefit terms	0	0	0
IV. Difference between Expected & Actual Plan Experience	(21,935,653)	0	(1,651)
V. Changes of assumptions	27,725,897	0	0
VI. Benefit Payments Excluding Implicit Cost	(6,174,356)	(6,922,692)	N/A
VII. Implicit Cost Amount	(1,803,208)	(478,465)	N/A
VIII. Total Benefit payments including Implicit Cost [VI.+VII.]	(7,977,564)	(7,401,157)	(7,065,440)
IX. Net Change in OPEB liability [I.+II.+III.+IV.+V.+VIII.]	17,283,991	13,198,488	11,826,051
X. Total OPEB liability - beginning of period	260,525,814	247,327,326	235,501,275
XI. Total OPEB liability - end of period [IX.+X.]	277,809,805	260,525,814	247,327,326
Plan Fiduciary Net Position	6,025,372	4,722,378	3,575,072
XII. Earning from Plan Investments	403,699	160,822	108,337
XIII. Employer Contribution to trust	8,876,859	8,387,641	8,071,224
XIV. Benefit payments from trust, including refunds of member contributions	(7,977,564)	(7,401,157)	(7,065,440)
XV. Administrative expense	0	0	0
XVI. Other	0	0	0
XVII. Net change in plan fiduciary net position [XII.+XIII.+XIV.+XV.+XVI.]	1,302,994	1,147,306	1,114,121
XVIII. Plan fiduciary net position - beginning of period	4,722,378	3,575,072	2,460,951
XIX. Plan fiduciary net position - end of period [XVII.+XVIII.]	6,025,372	4,722,378	3,575,072
XX. Net OPEB Liability [XI.-XIX.]	271,784,433	255,803,436	243,752,254
XXI. Plan fiduciary net position as % of total OPEB liability [XIX. / XI.]	2.17%	1.81%	1.45%
XXII. Covered employee payroll	94,247,676	104,457,946	101,415,481
XXIII. Plan NOL as % of covered employee payroll [XX. / XXII.]	288.37%	244.89%	240.35%
Single Discount Rate to calculate Plan Liabilities	3.75%	3.75%	3.75%

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of July 1, 2018.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, June 30, 2019.

Actuarial Assumptions:

Investment Rate of Return:	5.95%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	2.79% as of June 30, 2019 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Single Equivalent Discount Rate:	3.75%, net of OPEB plan investment expense, including inflation.
Inflation:	2.75% as of June 30, 2019 and for future periods
Salary Increases:	3.00% annually as of June 30, 2019 and for future periods
Cost of Living Adjustment:	Not Applicable

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 Measurement Date)

Pre-Retirement Mortality:	General: RP-2014 Mortality Table for Blue Collar Employees projected generationally with scale MP-2016 for males and females Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally with scale MP-2016 for males and females
Post-Retirement Mortality:	General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females
Disabled Mortality:	General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2019 Measurement Date)

Plan Membership

At July 1, 2018, OPEB plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits:	980
Active Employees:	<u>1,530</u>
Total:	2,510

Events Subsequent to the Measurement Date

To the best of our knowledge there were no material events subsequent to the Measurement Date that would impact the figures shown in this report.

Changes in Assumptions: From June 30, 2018 to June 30, 2019

- ✓ The expected long-term medical trend has been updated to 4.50%
- ✓ Based on recommendations by PERAC, the mortality table has been updated from the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 to RP-2014 Mortality Table projected generationally with scale MP-2016 for males and females
- ✓ Retirement assumptions have been updated
- ✓ The method for developing expected medical claims has been updated

Contributions:

The contribution requirements of plan members and the City are established and may be amended through City ordinances. The City contributed \$899,295 beyond the pay-as-you-go cost for the period ending on the June 30, 2019 Measurement Date. For the year ending on the June 30, 2019 Measurement Date total City premiums plus implicit costs for the retiree medical program were \$7,977,564. \$1,803,208 of the \$7,977,564 represents implicit cost.

APPENDIX I - LIABILITIES, ASSETS, & CASH FLOWS

CURRENT FUNDING POLICY (OPEN GROUP)

Funding - 3.75% discount rate

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with an expected 5.95% 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.]
2019	June 30, 2019	277,809,805	6,025,372	271,784,433	2.17%	9,493,779	7,977,564	899,295	8,876,859
2020	June 30, 2020	290,125,422	7,413,202	282,712,220	2.56%	10,164,630	8,490,326	1,000,000	9,490,326
2021	June 30, 2021	302,754,754	8,883,608	293,871,146	2.93%	10,674,521	9,052,608	1,000,000	10,052,608
2022	June 30, 2022	315,924,140	10,441,503	305,482,637	3.31%	11,238,337	9,546,160	1,000,000	10,546,160
2023	June 30, 2023	329,706,043	12,092,093	317,613,950	3.67%	11,843,470	9,995,262	1,000,000	10,995,262
2024	June 30, 2024	344,014,652	13,840,893	330,173,759	4.02%	12,381,863	10,505,719	1,000,000	11,505,719
2025	June 30, 2025	358,822,950	15,693,746	343,129,204	4.37%	12,954,495	11,104,329	1,000,000	12,104,329
2026	June 30, 2026	373,935,702	17,656,844	356,278,858	4.72%	13,519,098	11,822,697	1,000,000	12,822,697
2027	June 30, 2027	389,493,698	19,736,746	369,756,952	5.07%	14,177,285	12,501,760	1,000,000	13,501,760
2028	June 30, 2028	405,450,282	21,940,403	383,509,879	5.41%	14,777,617	13,170,704	1,000,000	14,170,704
2029	June 30, 2029	421,868,358	24,275,177	397,593,181	5.75%	15,464,488	13,861,032	1,000,000	14,861,032
2030	June 30, 2030	438,482,141	26,748,870	411,733,271	6.10%	16,044,267	14,785,918	1,000,000	15,785,918
2031	June 30, 2031	455,065,601	29,369,748	425,695,853	6.45%	16,737,530	15,686,166	1,000,000	16,686,166
2032	June 30, 2032	472,088,508	32,146,568	439,941,940	6.81%	17,468,270	16,387,017	1,000,000	17,387,017
2033	June 30, 2033	489,572,944	35,088,609	454,484,335	7.17%	18,221,378	17,178,491	1,000,000	18,178,491
2034	June 30, 2034	508,169,751	38,205,701	469,964,050	7.52%	19,009,053	17,928,346	1,000,000	18,928,346
2035	June 30, 2035	527,049,986	41,508,260	485,541,726	7.88%	19,857,194	18,410,939	1,000,000	19,410,939
2036	June 30, 2036	547,107,665	45,007,322	502,100,343	8.23%	20,714,949	18,849,471	1,000,000	19,849,471
2037	June 30, 2037	568,426,835	48,714,578	519,712,257	8.57%	21,626,918	19,407,511	1,000,000	20,407,511
2038	June 30, 2038	590,978,001	52,642,416	538,335,585	8.91%	22,593,960	19,747,184	1,000,000	20,747,184
2039	June 30, 2039	614,436,853	56,803,960	557,632,893	9.24%	23,595,999	20,279,456	1,000,000	21,279,456
2040	June 30, 2040	639,282,172	61,213,116	578,069,056	9.58%	24,585,455	20,990,916	1,000,000	21,990,916
2041	June 30, 2041	665,744,430	65,884,617	599,859,813	9.90%	25,717,014	21,737,589	1,000,000	22,737,589
2042	June 30, 2042	692,807,178	70,834,072	621,973,106	10.22%	26,902,140	22,745,118	1,000,000	23,745,118
2043	June 30, 2043	721,483,387	76,078,019	645,405,368	10.54%	28,138,992	23,974,495	1,000,000	24,974,495
2044	June 30, 2044	750,890,792	81,633,981	669,256,811	10.87%	29,481,334	25,170,564	1,000,000	26,170,564
2045	June 30, 2045	782,193,739	87,520,523	694,673,216	11.19%	30,888,063	26,224,416	1,000,000	27,224,416
2046	June 30, 2046	814,853,437	93,757,314	721,096,123	11.51%	32,373,098	27,459,609	1,000,000	28,459,609
2047	June 30, 2047	849,584,995	100,365,194	749,219,801	11.81%	33,930,257	28,493,112	1,000,000	29,493,112
2048	June 30, 2048	885,992,700	107,366,243	778,626,457	12.12%	35,574,128	29,308,842	1,000,000	30,308,842
2049	June 30, 2049	924,646,786	114,783,855	809,862,931	12.41%	37,302,321	30,342,856	1,000,000	31,342,856
2050	June 30, 2050	965,889,087	122,642,815	843,246,272	12.70%	39,079,363	31,305,103	1,000,000	32,305,103

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

ALTERNATIVE FUNDING SCENARIO (OPEN GROUP)

6.00% discount rate and funding increasing at 3.00% per year

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 5.95% 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
2019	June 30, 2019	192,700,553	6,025,372	186,675,181	3.13%	5,238,535	7,977,564	899,295	8,876,859
2020	June 30, 2020	201,528,154	13,290,136	188,238,018	6.59%	5,635,584	8,490,326	6,709,530	15,199,856
2021	June 30, 2021	210,731,707	21,194,341	189,537,366	10.06%	5,931,914	9,052,608	6,910,816	15,963,424
2022	June 30, 2022	220,183,191	29,568,847	190,614,344	13.43%	6,257,776	9,546,160	7,118,140	16,664,300
2023	June 30, 2023	230,008,850	38,655,038	191,353,812	16.81%	6,608,595	9,995,262	7,331,684	17,326,946
2024	June 30, 2024	240,297,977	48,501,663	191,796,314	20.18%	6,915,575	10,505,719	7,551,635	18,057,354
2025	June 30, 2025	250,981,240	59,160,562	191,820,678	23.57%	7,240,797	11,104,329	7,778,184	18,882,513
2026	June 30, 2026	262,019,123	70,686,857	191,332,266	26.98%	7,556,496	11,822,697	8,011,530	19,834,227
2027	June 30, 2027	273,234,746	83,139,154	190,095,592	30.43%	7,929,885	12,501,760	8,251,876	20,753,636
2028	June 30, 2028	284,739,629	96,579,756	188,159,873	33.92%	8,266,126	13,170,704	8,499,432	21,670,136
2029	June 30, 2029	296,506,280	111,074,888	185,431,392	37.46%	8,655,843	13,861,032	8,754,415	22,615,447
2030	June 30, 2030	308,575,048	126,694,940	181,880,108	41.06%	8,975,274	14,785,918	9,017,047	23,802,965
2031	June 30, 2031	320,691,919	143,514,717	177,177,202	44.75%	9,361,534	15,686,166	9,287,558	24,973,724
2032	June 30, 2032	332,683,399	161,613,713	171,069,686	48.58%	9,769,351	16,387,017	9,566,185	25,953,202
2033	June 30, 2033	344,931,996	181,076,396	163,855,600	52.50%	10,189,238	17,178,491	9,853,171	27,031,662
2034	June 30, 2034	357,463,491	201,992,509	155,470,982	56.51%	10,628,484	17,928,346	10,148,766	28,077,112
2035	June 30, 2035	370,729,715	224,457,393	146,272,322	60.54%	11,102,352	18,410,939	10,453,229	28,864,168
2036	June 30, 2036	384,200,856	248,572,327	135,628,529	64.70%	11,579,471	18,849,471	10,766,826	29,616,297
2037	June 30, 2037	398,585,109	274,444,892	124,140,217	68.85%	12,087,880	19,407,511	11,089,831	30,497,342
2038	June 30, 2038	413,889,599	302,189,350	111,700,249	73.01%	12,626,566	19,747,184	11,422,526	31,169,710
2039	June 30, 2039	430,159,987	331,927,053	98,232,934	77.16%	13,184,507	20,279,456	11,765,202	32,044,658
2040	June 30, 2040	447,169,863	363,786,872	83,382,991	81.35%	13,731,347	20,990,916	12,118,158	33,109,074
2041	June 30, 2041	465,224,259	397,905,655	67,318,604	85.53%	14,359,246	21,737,589	12,481,703	34,219,292
2042	June 30, 2042	484,422,777	434,428,710	49,994,067	89.68%	15,016,654	22,745,118	12,856,154	35,601,272
2043	June 30, 2043	504,035,373	473,510,317	30,525,056	93.94%	15,703,869	23,974,495	13,241,839	37,216,334
2044	June 30, 2044	524,666,106	515,314,273	9,351,833	98.22%	16,450,194	25,170,564	13,639,094	38,809,658
2045	June 30, 2045	545,755,052	560,014,467	(14,259,415)	102.61%	17,232,967	26,224,416	9,351,833	35,576,249
2046	June 30, 2046	568,103,133	602,961,358	(34,858,225)	106.14%	18,058,488	27,459,609	0	27,459,609
2047	June 30, 2047	591,323,655	638,837,559	(47,513,904)	108.04%	18,923,845	28,493,112	0	28,493,112
2048	June 30, 2048	615,975,541	676,848,394	(60,872,853)	109.88%	19,837,334	29,308,842	0	29,308,842
2049	June 30, 2049	641,927,234	717,120,873	(75,193,639)	111.71%	20,798,045	30,342,856	0	30,342,856
2050	June 30, 2050	669,494,907	759,789,565	(90,294,658)	113.49%	21,785,988	31,305,103	0	31,305,103
2051	June 30, 2051	698,979,262	804,997,044	(106,017,782)	115.17%	22,876,215	32,348,867	0	32,348,867
2052	June 30, 2052	730,311,476	852,894,368	(122,582,892)	116.79%	24,008,513	33,638,702	0	33,638,702
2053	June 30, 2053	763,295,506	903,641,583	(140,346,077)	118.39%	25,203,886	34,916,561	0	34,916,561
2054	June 30, 2054	798,285,757	957,408,257	(159,122,500)	119.93%	26,463,663	36,346,658	0	36,346,658
2055	June 30, 2055	835,658,603	1,014,374,048	(178,715,445)	121.39%	27,764,111	37,917,124	0	37,917,124
2056	June 30, 2056	874,579,069	1,074,729,304	(200,150,235)	122.89%	29,130,600	39,438,675	0	39,438,675
2057	June 30, 2057	915,856,198	1,138,675,698	(222,819,500)	124.33%	30,563,226	41,035,021	0	41,035,021
2058	June 30, 2058	960,191,867	1,206,426,902	(246,235,035)	125.64%	32,039,526	42,876,915	0	42,876,915

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES

Projection of Contributions using a July 1, 2018 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
June 30, 2019	94,247,676	0	94,247,676	0	7,977,564	0	7,977,564
June 30, 2020	90,344,933	6,730,173	97,075,106	0	8,490,326	0	8,490,326
June 30, 2021	87,189,230	12,798,129	99,987,359	0	9,052,608	0	9,052,608
June 30, 2022	84,792,881	18,194,099	102,986,980	0	9,546,160	0	9,546,160
June 30, 2023	83,302,785	22,773,804	106,076,589	0	9,995,262	0	9,995,262
June 30, 2024	81,840,969	27,417,918	109,258,887	0	10,505,719	0	10,505,719
June 30, 2025	80,547,837	31,988,817	112,536,654	0	11,104,329	0	11,104,329
June 30, 2026	79,162,851	36,749,903	115,912,754	0	11,822,697	0	11,822,697
June 30, 2027	78,168,949	41,221,188	119,390,137	0	12,501,760	0	12,501,760
June 30, 2028	77,006,317	45,965,524	122,971,841	0	13,170,704	0	13,170,704
June 30, 2029	76,045,560	50,615,436	126,660,996	0	13,861,032	0	13,861,032
June 30, 2030	74,834,118	55,626,708	130,460,826	0	14,684,895	101,023	14,785,918
June 30, 2031	73,542,102	60,832,549	134,374,651	0	15,451,624	234,542	15,686,166
June 30, 2032	72,270,068	66,135,823	138,405,891	0	15,970,322	416,695	16,387,017
June 30, 2033	70,854,016	71,704,052	142,558,068	0	16,516,983	661,508	17,178,491
June 30, 2034	69,285,006	77,549,804	146,834,810	0	16,969,329	959,017	17,928,346
June 30, 2035	67,782,674	83,457,180	151,239,854	0	17,200,449	1,210,490	18,410,939
June 30, 2036	66,056,818	89,720,232	155,777,050	0	17,339,898	1,509,573	18,849,471
June 30, 2037	64,211,669	96,238,693	160,450,362	0	17,559,253	1,848,258	19,407,511
June 30, 2038	62,415,987	102,847,886	165,263,873	0	17,594,028	2,153,156	19,747,184
June 30, 2039	60,488,613	109,733,176	170,221,789	0	17,781,246	2,498,210	20,279,456
June 30, 2040	58,265,491	117,062,952	175,328,443	0	18,024,077	2,966,839	20,990,916
June 30, 2041	56,164,642	124,423,654	180,588,296	0	18,196,613	3,540,976	21,737,589
June 30, 2042	54,150,514	131,855,431	186,005,945	0	18,523,919	4,221,199	22,745,118
June 30, 2043	51,839,202	139,746,921	191,586,123	0	18,931,632	5,042,863	23,974,495
June 30, 2044	49,686,093	147,647,614	197,333,707	0	19,183,449	5,987,115	25,170,564
June 30, 2045	47,472,306	155,781,412	203,253,718	0	19,362,473	6,861,943	26,224,416
June 30, 2046	45,225,584	164,125,746	209,351,330	0	19,613,751	7,845,858	27,459,609
June 30, 2047	42,937,685	172,694,185	215,631,870	0	19,570,035	8,923,077	28,493,112
June 30, 2048	40,468,825	181,632,001	222,100,826	0	19,353,914	9,954,928	29,308,842
June 30, 2049	37,670,268	191,093,583	228,763,851	0	19,264,430	11,078,426	30,342,856
June 30, 2050	34,701,756	200,925,011	235,626,767	0	18,948,344	12,356,759	31,305,103
June 30, 2051	31,784,610	210,910,960	242,695,570	0	18,609,591	13,739,276	32,348,867
June 30, 2052	28,663,632	221,312,805	249,976,437	0	18,412,187	15,226,515	33,638,702
June 30, 2053	25,395,878	232,079,852	257,475,730	0	18,078,656	16,837,905	34,916,561
June 30, 2054	22,445,625	242,754,377	265,200,002	0	17,776,163	18,570,495	36,346,658
June 30, 2055	19,367,378	253,788,624	273,156,002	0	17,568,696	20,348,428	37,917,124
June 30, 2056	16,304,338	265,046,344	281,350,682	0	17,196,985	22,241,690	39,438,675
June 30, 2057	13,738,127	276,053,075	289,791,202	0	16,781,568	24,253,453	41,035,021
June 30, 2058	11,013,201	287,471,737	298,484,938	0	16,526,598	26,350,317	42,876,915

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

Projection of Contributions using a July 1, 2018 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for		III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
	current employees	II. Payroll for future employees			Payments for current plan members		
June 30, 2059	8,672,391	298,767,095	307,439,486	0	16,190,311	28,557,974	44,748,285
June 30, 2060	6,828,979	309,833,692	316,662,671	0	15,919,750	30,914,117	46,833,867
June 30, 2061	5,023,489	321,139,062	326,162,551	0	15,674,084	33,411,814	49,085,898
June 30, 2062	3,635,899	332,311,529	335,947,428	0	15,416,978	36,046,594	51,463,572
June 30, 2063	2,692,901	343,332,950	346,025,851	0	15,144,248	38,832,580	53,976,828
June 30, 2064	1,922,058	354,484,569	356,406,627	0	14,830,851	41,775,375	56,606,226
June 30, 2065	1,199,409	365,899,417	367,098,826	0	14,550,233	44,836,381	59,386,614
June 30, 2066	794,789	377,317,002	378,111,791	0	14,228,291	48,039,820	62,268,111
June 30, 2067	528,498	388,926,647	389,455,145	0	13,856,107	51,403,984	65,260,091
June 30, 2068	381,656	400,757,143	401,138,799	0	13,481,259	54,895,919	68,377,178
June 30, 2069	110,509	413,062,454	413,172,963	0	13,094,752	58,534,381	71,629,133
June 30, 2070	64,869	425,503,283	425,568,152	0	12,678,535	62,343,989	75,022,524
June 30, 2071	0	438,335,197	438,335,197	0	12,244,186	66,324,436	78,568,622
June 30, 2072	0	451,485,253	451,485,253	0	11,790,218	70,475,619	82,265,837
June 30, 2073	0	465,029,811	465,029,811	0	11,320,921	74,808,618	86,129,539
June 30, 2074	0	478,980,705	478,980,705	0	10,838,201	79,328,368	90,166,569
June 30, 2075	0	493,350,126	493,350,126	0	10,355,811	84,040,931	94,396,742
June 30, 2076	0	508,150,630	508,150,630	0	9,883,010	88,938,577	98,821,587
June 30, 2077	0	523,395,149	523,395,149	0	9,400,658	94,042,607	103,443,265
June 30, 2078	0	539,097,003	539,097,003	0	8,907,927	99,359,904	108,267,831
June 30, 2079	0	555,269,913	555,269,913	0	8,406,318	104,884,026	113,290,344
June 30, 2080	0	571,928,010	571,928,010	0	7,897,704	110,640,452	118,538,156
June 30, 2081	0	589,085,850	589,085,850	0	7,384,134	116,639,736	124,023,870
June 30, 2082	0	606,758,426	606,758,426	0	6,867,697	122,887,406	129,755,103
June 30, 2083	0	624,961,179	624,961,179	0	6,351,097	129,404,621	135,755,718
June 30, 2084	0	643,710,014	643,710,014	0	5,837,401	136,197,558	142,034,959
June 30, 2085	0	663,021,314	663,021,314	0	5,329,824	143,280,643	148,610,467
June 30, 2086	0	682,911,953	682,911,953	0	4,832,048	150,665,993	155,498,041
June 30, 2087	0	703,399,312	703,399,312	0	4,347,853	158,370,128	162,717,981
June 30, 2088	0	724,501,291	724,501,291	0	3,880,950	166,412,671	170,293,621
June 30, 2089	0	746,236,330	746,236,330	0	3,434,965	174,806,466	178,241,431
June 30, 2090	0	768,623,420	768,623,420	0	3,013,120	183,571,807	186,584,927
June 30, 2091	0	791,682,123	791,682,123	0	2,618,183	192,731,072	195,349,255
June 30, 2092	0	815,432,587	815,432,587	0	2,252,544	202,303,471	204,556,015
June 30, 2093	0	839,895,565	839,895,565	0	1,920,440	212,309,645	214,230,085

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY NET POSITION PROJECTION DISCLOSURES

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2018 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Portion of Employer Contributions for Current Plan Members	III. Total Benefit Payments	IV. Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Investment Earnings	VIII. Ending Fiduciary Net Position for Current Plan Members
June 30, 2019	4,722,378	7,977,564	7,977,564	0	899,295	899,295	403,699	6,025,372
June 30, 2020	6,025,372	8,490,326	8,490,326	0	1,000,000	930,670	360,942	7,316,984
June 30, 2021	7,316,984	9,052,608	9,052,608	0	1,000,000	872,003	460,928	8,649,915
June 30, 2022	8,649,915	9,546,160	9,546,160	0	1,000,000	823,336	538,810	10,012,061
June 30, 2023	10,012,061	9,995,262	9,995,262	0	1,000,000	785,308	618,743	11,416,112
June 30, 2024	11,416,112	10,505,719	10,505,719	0	1,000,000	749,055	701,221	12,866,388
June 30, 2025	12,866,388	11,104,329	11,104,329	0	1,000,000	715,748	786,536	14,368,672
June 30, 2026	14,368,672	11,822,697	11,822,697	0	1,000,000	682,952	874,960	15,926,584
June 30, 2027	15,926,584	12,501,760	12,501,760	0	1,000,000	654,735	966,829	17,548,148
June 30, 2028	17,548,148	13,170,704	13,170,704	0	1,000,000	626,211	1,062,475	19,236,834
June 30, 2029	19,236,834	13,861,032	13,861,032	0	1,000,000	600,387	1,162,195	20,999,416
June 30, 2030	20,999,416	14,684,895	14,785,918	0	1,000,000	573,614	1,266,284	22,738,291
June 30, 2031	22,738,291	15,451,624	15,686,166	0	1,000,000	547,291	1,368,975	24,420,015
June 30, 2032	24,420,015	15,970,322	16,387,017	0	1,000,000	522,160	1,468,301	25,993,781
June 30, 2033	25,993,781	16,516,983	17,178,491	0	1,000,000	497,019	1,561,203	27,390,495
June 30, 2034	27,390,495	16,969,329	17,928,346	0	1,000,000	471,857	1,643,569	28,546,904
June 30, 2035	28,546,904	17,200,449	18,410,939	0	1,000,000	448,180	1,711,681	29,496,275
June 30, 2036	29,496,275	17,339,898	18,849,471	0	1,000,000	424,047	1,767,461	30,178,210
June 30, 2037	30,178,210	17,559,253	19,407,511	0	1,000,000	400,196	1,807,337	30,537,485
June 30, 2038	30,537,485	17,594,028	19,747,184	0	1,000,000	377,675	1,828,054	30,590,058
June 30, 2039	30,590,058	17,781,246	20,279,456	0	1,000,000	355,352	1,830,527	30,277,727
June 30, 2040	30,277,727	18,024,077	20,990,916	0	1,000,000	332,322	1,811,268	29,454,478
June 30, 2041	29,454,478	18,196,613	21,737,589	0	1,000,000	311,009	1,761,660	27,986,171
June 30, 2042	27,986,171	18,523,919	22,745,118	0	1,000,000	291,122	1,673,713	25,729,807
June 30, 2043	25,729,807	18,931,632	23,974,495	0	1,000,000	270,579	1,538,857	22,496,380
June 30, 2044	22,496,380	19,183,449	25,170,564	0	1,000,000	251,787	1,345,917	18,106,969
June 30, 2045	18,106,969	19,362,473	26,224,416	0	1,000,000	233,562	1,084,213	12,562,801
June 30, 2046	12,562,801	19,613,751	27,459,609	0	1,000,000	216,027	753,821	5,686,791
June 30, 2047	5,686,791	19,570,035	28,493,112	0	1,000,000	199,125	344,202	543,327
June 30, 2048	543,327	19,353,914	29,308,842	0	1,000,000	182,209	37,670	219,879
June 30, 2049	219,879	19,264,430	30,342,856	0	1,000,000	164,669	17,911	182,580
June 30, 2050	182,580	18,948,344	31,305,103	0	1,000,000	147,274	15,182	162,456
June 30, 2051	162,456	18,609,591	32,348,867	0	1,000,000	130,965	13,506	144,471
June 30, 2052	144,471	18,412,187	33,638,702	0	1,000,000	114,665	11,958	126,623
June 30, 2053	126,623	18,078,656	34,916,561	0	1,000,000	98,634	10,426	109,060
June 30, 2054	109,060	17,776,163	36,346,658	0	1,000,000	84,637	8,971	93,608
June 30, 2055	93,608	17,568,696	37,917,124	0	1,000,000	70,902	7,649	78,551
June 30, 2056	78,551	17,196,985	39,438,675	0	1,000,000	57,950	6,373	64,323
June 30, 2057	64,323	16,781,568	41,035,021	0	1,000,000	47,407	5,217	52,624
June 30, 2058	52,624	16,526,598	42,876,915	0	1,000,000	36,897	4,213	41,110

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY POSITION PROJECTION DISCLOSURES (CONTINUED)

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2018 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Portion of Employer Contributions for Current Plan Members	III. Total Benefit Payments	IV. Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Investment Earnings	VIII. Ending Fiduciary Net Position for Current Plan Members
June 30, 2059	41,110	16,190,311	44,748,285	0	1,000,000	28,208	3,273	31,481
June 30, 2060	31,481	15,919,750	46,833,867	0	1,000,000	21,565	2,505	24,070
June 30, 2061	24,070	15,674,084	49,085,898	0	1,000,000	15,402	1,884	17,286
June 30, 2062	17,286	15,416,978	51,463,572	0	1,000,000	10,823	1,346	12,169
June 30, 2063	12,169	15,144,248	53,976,828	0	1,000,000	7,782	952	8,734
June 30, 2064	8,734	14,830,851	56,606,226	0	1,000,000	5,393	678	6,071
June 30, 2065	6,071	14,550,233	59,386,614	0	1,000,000	3,267	457	3,724
June 30, 2066	3,724	14,228,291	62,268,111	0	1,000,000	2,102	283	2,385
June 30, 2067	2,385	13,856,107	65,260,091	0	1,000,000	1,357	182	1,539
June 30, 2068	1,539	13,481,259	68,377,178	0	1,000,000	951	119	1,070
June 30, 2069	1,070	13,094,752	71,629,133	0	1,000,000	267	71	338
June 30, 2070	338	12,678,535	75,022,524	0	1,000,000	152	25	177
June 30, 2071	177	12,244,186	78,568,622	0	1,000,000	0	11	11
June 30, 2072	11	11,790,218	82,265,837	0	1,000,000	0	1	1
June 30, 2073	1	11,320,921	86,129,539	0	1,000,000	0	0	0
June 30, 2074	0	10,838,201	90,166,569	0	1,000,000	0	0	0
June 30, 2075	0	10,355,811	94,396,742	0	1,000,000	0	0	0
June 30, 2076	0	9,883,010	98,821,587	0	1,000,000	0	0	0
June 30, 2077	0	9,400,658	103,443,265	0	1,000,000	0	0	0
June 30, 2078	0	8,907,927	108,267,831	0	1,000,000	0	0	0
June 30, 2079	0	8,406,318	113,290,344	0	1,000,000	0	0	0
June 30, 2080	0	7,897,704	118,538,156	0	1,000,000	0	0	0
June 30, 2081	0	7,384,134	124,023,870	0	1,000,000	0	0	0
June 30, 2082	0	6,867,697	129,755,103	0	1,000,000	0	0	0
June 30, 2083	0	6,351,097	135,755,718	0	1,000,000	0	0	0
June 30, 2084	0	5,837,401	142,034,959	0	1,000,000	0	0	0
June 30, 2085	0	5,329,824	148,610,467	0	1,000,000	0	0	0
June 30, 2086	0	4,832,048	155,498,041	0	1,000,000	0	0	0
June 30, 2087	0	4,347,853	162,717,981	0	1,000,000	0	0	0
June 30, 2088	0	3,880,950	170,293,621	0	1,000,000	0	0	0
June 30, 2089	0	3,434,965	178,241,431	0	1,000,000	0	0	0
June 30, 2090	0	3,013,120	186,584,927	0	1,000,000	0	0	0
June 30, 2091	0	2,618,183	195,349,255	0	1,000,000	0	0	0
June 30, 2092	0	2,252,544	204,556,015	0	1,000,000	0	0	0
June 30, 2093	0	1,920,440	214,230,085	0	1,000,000	0	0	0

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES

Actuarial Present Values of Projected Benefit Payments using a July 1, 2018 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments	V. Present Value of Funded Benefit Payments	VI. Present Value of Unfunded Benefit Payments	VII. Present Value of Benefit Payments using Single Equivalent Discount Rate
	June 30, 2019	4,722,378	7,977,564	4,722,378	3,255,186	4,722,378	3,255,186
June 30, 2020	6,025,372	8,490,326	6,025,372	2,464,954	5,686,996	2,397,961	8,180,262
June 30, 2021	7,316,984	9,052,608	7,316,984	1,735,624	6,518,238	1,642,564	8,403,485
June 30, 2022	8,649,915	9,546,160	8,649,915	896,245	7,272,922	825,138	8,538,023
June 30, 2023	10,012,061	9,995,262	9,995,262	0	7,932,139	0	8,613,222
June 30, 2024	11,416,112	10,505,719	10,505,719	0	7,869,026	0	8,722,483
June 30, 2025	12,866,388	11,104,329	11,104,329	0	7,850,305	0	8,882,793
June 30, 2026	14,368,672	11,822,697	11,822,697	0	7,888,780	0	9,112,061
June 30, 2027	15,926,584	12,501,760	12,501,760	0	7,873,421	0	9,283,550
June 30, 2028	17,548,148	13,170,704	13,170,704	0	7,828,893	0	9,423,122
June 30, 2029	19,236,834	13,861,032	13,861,032	0	7,776,532	0	9,554,858
June 30, 2030	20,999,416	14,684,895	14,684,895	0	7,776,072	0	9,753,094
June 30, 2031	22,738,291	15,451,624	15,451,624	0	7,722,583	0	9,887,547
June 30, 2032	24,420,015	15,970,322	15,970,322	0	7,533,576	0	9,846,252
June 30, 2033	25,993,781	16,516,983	16,516,983	0	7,353,892	0	9,811,398
June 30, 2034	27,390,495	16,969,329	16,969,329	0	7,130,997	0	9,711,978
June 30, 2035	28,546,904	17,200,449	17,200,449	0	6,822,199	0	9,484,745
June 30, 2036	29,496,275	17,339,898	17,339,898	0	6,491,278	0	9,212,453
June 30, 2037	30,178,210	17,559,253	17,559,253	0	6,204,242	0	8,988,302
June 30, 2038	30,537,485	17,594,028	17,594,028	0	5,867,418	0	8,677,203
June 30, 2039	30,590,058	17,781,246	17,781,246	0	5,596,841	0	8,449,277
June 30, 2040	30,277,727	18,024,077	18,024,077	0	5,354,672	0	8,251,887
June 30, 2041	29,454,478	18,196,613	18,196,613	0	5,102,340	0	8,026,638
June 30, 2042	27,986,171	18,523,919	18,523,919	0	4,902,423	0	7,872,612
June 30, 2043	25,729,807	18,931,632	18,931,632	0	4,728,953	0	7,752,056
June 30, 2044	22,496,380	19,183,449	19,183,449	0	4,522,751	0	7,568,301
June 30, 2045	18,106,969	19,362,473	18,106,969	1,255,504	4,029,218	613,316	7,359,959
June 30, 2046	12,562,801	19,613,751	12,562,801	7,050,950	2,638,521	3,350,790	7,183,202
June 30, 2047	5,686,791	19,570,035	5,686,791	13,883,244	1,127,302	6,418,357	6,905,449
June 30, 2048	543,327	19,353,914	543,327	18,810,587	101,656	8,459,965	6,579,789
June 30, 2049	219,879	19,264,430	219,879	19,044,551	38,829	8,332,403	6,310,187
June 30, 2050	182,580	18,948,344	182,580	18,765,764	30,432	7,987,284	5,979,986
June 30, 2051	162,456	18,609,591	162,456	18,447,135	25,557	7,638,272	5,658,595
June 30, 2052	144,471	18,412,187	144,471	18,267,716	21,451	7,358,406	5,394,113
June 30, 2053	126,623	18,078,656	126,623	17,952,033	17,745	7,034,714	5,102,977
June 30, 2054	109,060	17,776,163	109,060	17,667,103	14,426	6,734,905	4,834,353
June 30, 2055	93,608	17,568,696	93,608	17,475,088	11,686	6,480,654	4,603,443
June 30, 2056	78,551	17,196,985	78,551	17,118,434	9,256	6,175,851	4,341,486
June 30, 2057	64,323	16,781,568	64,323	16,717,245	7,154	5,867,199	4,081,892
June 30, 2058	52,624	16,526,598	52,624	16,473,974	5,524	5,624,680	3,873,070

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

Actuarial Present Values of Projected Benefit Payments using a July 1, 2018 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments	V. Present Value of Funded Benefit Payments	VI. Present Value of Unfunded Benefit Payments	VII. Present Value of
							Benefit Payments using Single Equivalent Discount Rate
June 30, 2059	41,110	16,190,311	41,110	16,149,201	4,073	5,363,938	3,655,695
June 30, 2060	31,481	15,919,750	31,481	15,888,269	2,944	5,133,843	3,463,330
June 30, 2061	24,070	15,674,084	24,070	15,650,014	2,124	4,919,422	3,285,357
June 30, 2062	17,286	15,416,978	17,286	15,399,692	1,440	4,709,174	3,113,455
June 30, 2063	12,169	15,144,248	12,169	15,132,079	957	4,501,576	2,946,686
June 30, 2064	8,734	14,830,851	8,734	14,822,117	648	4,289,528	2,780,322
June 30, 2065	6,071	14,550,233	6,071	14,544,162	425	4,094,693	2,628,100
June 30, 2066	3,724	14,228,291	3,724	14,224,567	246	3,895,875	2,476,096
June 30, 2067	2,385	13,856,107	2,385	13,853,722	149	3,691,184	2,323,266
June 30, 2068	1,539	13,481,259	1,539	13,479,720	91	3,493,924	2,177,865
June 30, 2069	1,070	13,094,752	1,070	13,093,682	59	3,301,625	2,038,171
June 30, 2070	338	12,678,535	338	12,678,197	18	3,109,974	1,901,321
June 30, 2071	177	12,244,186	177	12,244,009	9	2,921,838	1,769,127
June 30, 2072	11	11,790,218	11	11,790,207	1	2,737,079	1,641,322
June 30, 2073	1	11,320,921	1	11,320,920	0	2,556,707	1,518,436
June 30, 2074	0	10,838,201	0	10,838,201	0	2,381,166	1,400,603
June 30, 2075	0	10,355,811	0	10,355,811	0	2,213,349	1,289,391
June 30, 2076	0	9,883,010	0	9,883,010	0	2,054,889	1,185,585
June 30, 2077	0	9,400,658	0	9,400,658	0	1,901,475	1,086,537
June 30, 2078	0	8,907,927	0	8,907,927	0	1,752,841	991,987
June 30, 2079	0	8,406,318	0	8,406,318	0	1,609,181	901,941
June 30, 2080	0	7,897,704	0	7,897,704	0	1,470,731	816,424
June 30, 2081	0	7,384,134	0	7,384,134	0	1,337,720	735,457
June 30, 2082	0	6,867,697	0	6,867,697	0	1,210,348	659,040
June 30, 2083	0	6,351,097	0	6,351,097	0	1,088,883	587,208
June 30, 2084	0	5,837,401	0	5,837,401	0	973,610	520,003
June 30, 2085	0	5,329,824	0	5,329,824	0	864,792	457,448
June 30, 2086	0	4,832,048	0	4,832,048	0	762,717	399,580
June 30, 2087	0	4,347,853	0	4,347,853	0	667,637	346,410
June 30, 2088	0	3,880,950	0	3,880,950	0	579,745	297,917
June 30, 2089	0	3,434,965	0	3,434,965	0	499,177	254,052
June 30, 2090	0	3,013,120	0	3,013,120	0	425,973	214,714
June 30, 2091	0	2,618,183	0	2,618,183	0	360,080	179,757
June 30, 2092	0	2,252,544	0	2,252,544	0	301,374	149,006
June 30, 2093	0	1,920,440	0	1,920,440	0	249,958	122,398

APPENDIX II – PLAN PROVISIONS

<u>Effective Date</u>	GASB 45 was adopted July 1, 2007 GASB 74 was adopted for the fiscal year ending June 30, 2017 GASB 75 was adopted for the fiscal year ending June 30, 2018
<u>Plan Year</u>	July 1 through June 30.
<u>Premium Effective Date</u>	Medicare Supplement Plans: effective January 1, 2019 Non-Medicare Plans: effective July 1, 2019 Dental Plans: effective July 1, 2019
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Benefits Offered</u>	Comprehensive Medical & Dental Insurance as well as \$5,000 Group Term Life Insurance. Retired Teachers shall receive Medical & Dental Insurance as well as \$5,000 Group Term Life Insurance via the GIC.
<u>Excise Tax</u>	Under the Patient Protection and Affordable Care Act (“PPACA”), a 40% tax will be imposed on the cost of medical benefits in excess of a specified threshold.
<u>Medicare Part B</u>	The City does not reimburse Medicare Part B. The City does not reimburse Medicare Part B Penalties.
<u>Surviving Spouse Coverage</u>	Spousal benefits do not change after the death of a plan participant.

APPENDIX II – PLAN PROVISIONS

Eligibility

Hire Date	Eligibility
Before April 2, 2012	<ul style="list-style-type: none"> • Age 55 with 10 years of creditable service • 20 years of service regardless of age
On or after April 2, 2012	<ul style="list-style-type: none"> • Age 60 with 10 years of creditable service

Participant Contributions

Group	Individual	Family
Medical	<ul style="list-style-type: none"> • 15% of underlying gross premiums for participants who retire on or after April 15, 2003 • Participants who retired prior to April 15, 2003 will keep the same percentage as the insurance as active employees at their time of retirement • Retired teachers shall pay 10% to 15% (teachers who retired prior to July 1, 1990 pay 10%) for Medical Insurance via the GIC 	<ul style="list-style-type: none"> • 15% of underlying gross premiums for participants who retire on or after April 15, 2003 • Participants who retired prior to April 15, 2003 will keep the same percentage as the insurance as active employees at their time of retirement • Retired teachers shall pay 10% to 15% (teachers who retired prior to July 1, 1990 pay 10%) for Medical Insurance via the GIC
Dental	100%	100%
Life	<ul style="list-style-type: none"> • 15% of Premiums • Retired teachers shall pay 10% to 15% (teachers who retired prior to July 1, 1990 pay 10%) via the GIC 	N/A

APPENDIX III - ACTUARIAL METHODS & ASSUMPTIONS

Pre-Retirement Mortality

General: RP-2014 Mortality Table for Blue Collar Employees projected generationally with scale MP-2016 for males and females
Teachers: RP-2014 Mortality Table for White Collar Employees projected generationally with scale MP-2016 for males and females

Post-Retirement Mortality

General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females
Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females

Disabled Mortality

General: RP-2014 Mortality Table for Blue Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females, set forward 1 year
Teachers: RP-2014 Mortality Table for White Collar Healthy Annuitants projected generationally with scale MP-2016 for males and females

Assumption Experience Study

The actuarial assumptions used to calculate the actuarial accrued liability and the normal cost primarily reflect the latest experience studies of the Massachusetts PERAC issued in 2014 and their most recent analysis of retiree mortality during 2015 and 2016.

Discount Rate

3.75% per annum (previously 3.75%)

Net Long Term Rate of Return

5.95% (based on investment policy)

Municipal Bond Rate

2.79% as of June 30, 2019 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)

Actuarial Cost Method

Individual Entry Age Normal

Asset-Valuation Method

Market Value of Assets as of the Measurement Date, June 30, 2019

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Excise Tax

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

Employee Termination

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

Non-Public Safety Employees

Age	0-4 Years of Service		5-9 Years of Service		10+ Years of Service	
	(Males)	(Females)	(Males)	(Females)	(Males)	(Females)
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

Service	Public Safety	
	Male	Female
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%

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Retirement Rates for Eligible Employees

Age	Standard Male	Standard Female	Male Teachers	Female Teachers	Public Safety
45 - 49	0.00%	0.00%	0.00%	0.00%	6.00%
50 - 51	3.00%	3.00%	2.00%	1.50%	6.00%
52	3.00%	3.00%	2.00%	1.50%	6.00%
53	3.00%	3.00%	2.00%	1.50%	7.50%
54	3.00%	3.50%	2.00%	2.00%	15.00%
55	3.50%	5.00%	6.00%	5.00%	25.00%
56	3.50%	5.00%	20.00%	15.00%	15.00%
57	4.00%	5.50%	40.00%	35.00%	15.00%
58	5.00%	6.00%	50.00%	35.00%	15.00%
59	6.00%	6.50%	50.00%	35.00%	15.00%
60	9.00%	7.50%	40.00%	35.00%	20.00%
61	11.00%	10.00%	40.00%	35.00%	20.00%
62	15.00%	15.00%	35.00%	35.00%	20.00%
63	15.00%	15.00%	35.00%	35.00%	20.00%
64	16.00%	15.00%	35.00%	35.00%	30.00%
65	20.00%	20.00%	35.00%	35.00%	50.00%
66	20.00%	20.00%	40.00%	35.00%	25.00%
67	20.00%	20.00%	40.00%	30.00%	25.00%
68	20.00%	20.00%	40.00%	30.00%	25.00%
69	20.00%	20.00%	40.00%	30.00%	25.00%
70	100.00%	100.00%	100.00%	100.00%	100.00%
71	100.00%	100.00%	100.00%	100.00%	100.00%
72	100.00%	100.00%	100.00%	100.00%	100.00%

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

Permanent Disability Rates

Age	Standard	Teachers	Public
20	0.01%	0.05%	0.20%
30	0.01%	0.07%	0.21%
40	0.07%	0.21%	0.71%
50	0.13%	0.42%	1.10%
60	0.12%	0.50%	0.80%

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONSTrend Rate

Medicare Supplement Plans: Initial Trend of 4.50% for 2019 grading down 0.00% per year for an ultimate trend rate of 4.50%.

Non-Medicare Plans: Initial Trend of 4.50% for 2019 grading down 0.00% per year for an ultimate trend rate of 4.50%.

Dental Plans: Initial Trend of 4.50% for 2019 grading down 0.00% per year for an ultimate trend rate of 4.50%.

Participation Rate

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

Spouse Participation Rate

It was assumed that 80% of male employees and 70% of female employees who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement.

Spouse Demographics

It was assumed that a male spouse is three years older than a female spouse and same sex spouses were assumed to be the same age. For current retirees, the actual census information was used, if available.

Compensation Increases

3.00% per year.

Inflation Rate

2.75% per year.

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Implicit Subsidy

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

Impact of Implicit Subsidy		
	As of the Measurement Date	
Impact on Liability	<u>June 30, 2019</u>	<u>July 1, 2017</u>
I. Actuarial Accrued Liability	277,809,805	247,327,326
II. Actuarial Accrued Liability (Excluding Implicit Subsidy)	<u>229,309,499</u>	<u>232,827,481</u>
III. Liability from Implicit Subsidy [I. - II.]	48,500,306	14,499,845

	For the Measurement Period Ending	
Impact on Payments	<u>June 30, 2019</u>	<u>July 1, 2017</u>
IV. Employer Payments (Including Implicit Subsidy)	7,977,564	7,065,440
V. Actual Employer Payments	<u>6,174,356</u>	<u>6,574,287</u>
VI. Implicit Subsidy [IV. - V.]	1,803,208	491,153

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Pre-65 and post-65 per capita costs were developed using fully insured premium rates.

ANNUAL PER CAPITA CLAIMS* (Non-GIC)

ACTIVE EMPLOYEES			RETIREE - NOT MEDICARE ELIGIBLE			RETIREE - MEDICARE ELIGIBLE		
Age Bracket	Female	Male	Age Bracket	Female	Male	Age Bracket	Female	Male
24 & Under	4,321	2,724	44 & Under	8,493	5,565	65 to 69	5,839	5,839
25 to 29	6,374	2,834	45 to 49	9,328	7,026	70 to 74	5,839	5,839
30 to 34	8,055	3,557	50 to 54	10,974	9,254	75 to 79	5,839	5,839
35 to 39	8,298	4,466	55 to 59	12,686	12,031	80 to 84	5,839	5,839
40 to 44	8,493	5,565	60 to 64	15,096	15,438	85 to 89	5,839	5,839
45 to 49	9,328	7,026	65 to 69	18,096	19,257	90 & Over	5,839	5,839
50 to 54	10,974	9,254	70 to 74	21,340	23,077			
55 to 59	12,686	12,031	75 to 79	24,783	27,255			
60 to 64	15,096	15,438	80 to 84	28,415	31,328			
65 to 69	18,096	19,257	85 to 89	32,435	35,860			
70 & Over	21,340	23,077	90 & Over	32,435	35,860			

*Based on SOA 'Health Care Costs--From Birth to Death' study published in 2013

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Pre-65 and post-65 per capita costs were developed using fully insured premium rates.

ANNUAL PER CAPITA CLAIMS* (GIC)

ACTIVE EMPLOYEES			RETIREE - NOT MEDICARE ELIGIBLE			RETIREE - MEDICARE ELIGIBLE		
Age Bracket	Female	Male	Age Bracket	Female	Male	Age Bracket	Female	Male
24 & Under	5,291	3,335	44 & Under	10,399	6,814	65 to 69	4,298	4,298
25 to 29	7,806	3,471	45 to 49	11,423	8,604	70 to 74	4,298	4,298
30 to 34	9,863	4,356	50 to 54	13,437	11,331	75 to 79	4,298	4,298
35 to 39	10,161	5,469	55 to 59	15,534	14,732	80 to 84	4,298	4,298
40 to 44	10,399	6,814	60 to 64	18,485	18,904	85 to 89	4,298	4,298
45 to 49	11,423	8,604	65 to 69	22,159	23,580	90 & Over	4,298	4,298
50 to 54	13,437	11,331	70 to 74	26,131	28,258			
55 to 59	15,534	14,732	75 to 79	30,347	33,374			
60 to 64	18,485	18,904	80 to 84	34,794	38,362			
65 to 69	22,159	23,580	85 to 89	39,717	43,910			
70 & Over	26,131	28,258	90 & Over	39,717	43,910			

*Based on SOA 'Health Care Costs--From Birth to Death' study published in 2013

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

Open Group Forecast

For the projection of plan liabilities in future years, it was assumed that the number of active employees will remain constant and those who terminate employment or retire will be replaced with new employees with the demographics below:

Open Group Forecast Population Demographics		
Age	Male	Female
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 liabilities being reported as of the Measurement Date of June 30, 2019 reflect a closed group and do not reflect any new entrants after the valuation date.

To the best of our knowledge all employees who are eligible on the valuation date are included in the actuarial valuation.

APPENDIX IV - PLAN DEMOGRAPHICS

Active Employees

Valuation Date	July 1, 2018	July 1, 2016
A. Average Age at Hire	34.30	33.48
B. Average Service	<u>10.15</u>	<u>8.88</u>
C. Average Current Age	44.45	42.36

Retired Employees & Spouses

Valuation Date	July 1, 2018	July 1, 2016
A. Under Age 65	138	193
B. Age 65 & Over	<u>842</u>	<u>890</u>
C. Total	980	1,083

Average Service Age

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-24	63	6								69
25-29	145	19	5							169
30-34	114	70	25	4						213
35-39	76	41	52	11	4					184
40-44	59	19	30	43	10					161
45-49	51	54	21	32	52	3				213
50-54	34	30	22	16	35	11	9	1		158
55-59	28	26	26	23	26	12	10			151
60-64	17	11	31	26	16	6	6	4	1	118
65-69	12	7	4	14	14	3	1		1	56
70+	7	6	9	7	3	2	3	1		38
Total	606	289	225	176	160	37	29	6	2	1530

APPENDIX IV - PLAN DEMOGRAPHICS (Non-GIC)

<u>Plan Offerings</u>	Number of Contracts			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
Network Blue	43		109	152
Blue Care Elect	176		147	323
Harvard Pilgrim	284		396	680
Tufts Med Preferred	17	7		24
Managed Blue	8	11		19
Medex	196	78		274
Total	724	96	652	1,472

	Per Contract Costs (monthly)		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Network Blue	687.47		1,835.47
Blue Care Elect	1,005.60		2,227.73
Harvard Pilgrim	750.93		2,035.47
Tufts Med Preferred	317.00	634.00	
Managed Blue	473.53	947.07	
Medex	502.67	1,005.33	
Dental Plan	53.00		134.00

APPENDIX IV - PLAN DEMOGRAPHICS (GIC)

<u>Plan Offerings</u>	<u>Number of Contracts</u>			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
Fallon Direct	1			1
Harvard Primary Choice	2		1	3
Unicare Basic w/ CIC	43		14	57
Unicare Basic w/o CIC				0
Unicare Comm Choice	1			1
Unicare OME w/ CIC	84	93		177
Unicare OME w/o CIC				0
Tufts Medicare Complement	2			2
Tufts Medicare Preferred	3			3
Harvard Senior	14	8		22
Total	150	101	15	266

	<u>Per Contract Costs (monthly)</u>		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Fallon Direct	809.00		1,965.00
Harvard Primary Choice	643.60		1,640.70
Unicare Basic w/ CIC	1,072.28		2,378.19
Unicare Basic w/o CIC	1,020.90		2,261.20
Unicare Comm Choice	515.70		1,272.50
Unicare OME w/ CIC	365.26	730.52	
Unicare OME w/o CIC	355.00	710.00	
Tufts Medicare Complement	370.20	740.40	
Tufts Medicare Preferred	321.30	642.60	
Harvard Senior	389.80	779.60	
Dental Plan	N/A		N/A

APPENDIX V - OVERVIEW OF GASB 74 & 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 postemployment 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 postemployment benefits.

APPENDIX V – OVERVIEW OF GASB 74 & 75

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 postemployment benefits and when will they start?

Medical inflation and claims cost assumptions – When an employee starts receiving postemployment 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.

GLOSSARY

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

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

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

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

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

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

Entry Age Normal – Under this method, the annual service 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 service cost for each active member is a level percent of payroll. The total OPEB liability is the actuarial present value of the projected benefit times the ratio of past service to expected total service at retirement/termination.

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

GLOSSARY

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

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

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

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

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

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

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

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

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