

City of Westfield Other Postemployment Benefits Plan

GASB 74 & GASB 75 Actuarial Valuation

With a Valuation Date of July 1, 2019

As of the Measurement Date:
June 30, 2020

For the Reporting Date:
June 30, 2020

Delivered April 12, 2021



TABLE OF CONTENTS

	<u>PAGE</u>
<u>EXECUTIVE SUMMARY</u>	I
<u>PRINCIPAL RESULTS OF THE VALUATION</u>	1
<u>EXHIBITS</u>	
A FINANCIAL STATEMENT DISCLOSURES	4
B REQUIRED SUPPLEMENTARY INFORMATION	16
<u>APPENDIX</u>	
I LIABILITIES, ASSETS, & CASH FLOWS	23
II PLAN PROVISIONS	31
III ACTUARIAL METHODS & ASSUMPTIONS	33
IV PLAN DEMOGRAPHICS	42
V OVERVIEW OF GASB 74 & 75	47
VI ASOP 41 DISCLOSURES	49
<u>GLOSSARY</u>	52



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April 12, 2021

Personal and Confidential

Mr. Robert Bishop
Personnel Director
City of Westfield
59 Court Street, Room 101
Westfield, MA 01085

Dear Mr. Bishop:

We have performed an actuarial valuation of the City of Westfield Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending June 30, 2020 with a Measurement Date of June 30, 2020 and a Valuation Date of July 1, 2019. The figures presented in this report reflect the adoption, by the City of Westfield, 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,

A handwritten signature in black ink, appearing to read 'P. Elmore', written over a light blue circular graphic element.

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

April 12, 2021

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the City of Westfield other postemployment benefit programs with a Valuation Date of July 1, 2019 with a Measurement Date of June 30, 2020 for the Reporting Date & fiscal year ending June 30, 2020 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



Sarah F. Rothenberg, ASA, MAAA
Consulting Actuary

EXECUTIVE SUMMARY

How did plan liabilities change from FY 19 to FY 20?

Plan Experience

For the year ending on the Measurement Date of June 30, 2020, the Plan saw an experience loss of \$21,506,089 or 8.00% of the beginning Total OPEB Liability ("TOL"). This was mainly due to the identification of nearly 200 retirees and spouses who were not previously valued as well as an increase in the number of retirees who are over the age of 65 and still enrolled in Active plans. This was somewhat offset by premiums for Non-GIC Medicare Supplement plans increasing 2% rather than the expected 16% increase over the 3-year period.

Assumption Changes

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

- ✓ Based on recommendations by PERAC, the mortality table has been updated from the RP-2000 Mortality Table projected generationally with scale BB and a base year 2009 for males and females to the RP-2014 Mortality Table projected generationally with scale MP-2016 for males and females increasing the disclosed liability by \$31.0 million.
- ✓ Based on recent actuarial research we have adopted the Getzen model for future healthcare cost increases decreasing the disclosed liability by \$27.0 million.
- ✓ We have updated the assumption for morbidity or age-related costs of medical care to reflect recent research by the Society of Actuaries that medical costs increase as people age at a faster rate than had previously been thought. This change in methodology is particularly impactful for the 59 retirees and spouses who are over the age of 65 and remain on Active plans. Due to updated guidance related to the implementation of ASOP 6, we have also updated our methodology for calculating expected claims for retirees who are enrolled in Medicare Supplement plans which further increased disclosed liability. These updates increased the disclosed liability by \$55.0 million.
- ✓ Assumption changes caused Service Cost to increase by \$320 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.

EXECUTIVE SUMMARY

Investment Experience

- ✓ During the period there was an investment loss of \$7,135 due to asset performance below the expected rate of return.

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.

Recognition Period

- ✓ Changes in assumptions & plan experience are amortized into the net OPEB expense over 5.00 years.
- ✓ Differences between projected & actual earnings on OPEB plan investments are amortized into the net OPEB expense over 5.00 years
- ✓ 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 2.66% as of June 30, 2020.
- ✓ Current Asset Level – The City had \$845,567 of OPEB assets as of June 30, 2020.
- ✓ Funding Policy - The City is expected to contribute \$20,000 per year.
- ✓ Investment Policy - The City is expected to earn 2.50% on assets based on its investment policy.

EXECUTIVE SUMMARY

Recommended Trust Contributions

We recommend a Fiscal 2021 contribution to an OPEB Trust of \$1,840,000 beyond pay-as-you-go costs which would increase by 3.00% per year thereafter. We have provided a projection of the Plan's funded status on page 24.

Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare supplement) plans - represent 76.06% 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 Active plans and 4.50% per year for Medicare supplement plans.
- ✓ Discount Rate (2.75%) – 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

EXECUTIVE SUMMARY

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 59 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. If you are in this situation, we encourage you to talk to your healthcare consultant to see if this might be viable.

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, 2019	July 1, 2017
Measurement Date & Period Ending	June 30, 2020	June 30, 2019
Reporting Date/Fiscal Year End	June 30, 2020	June 30, 2019
Total OPEB Liability	356,039,931	268,844,543
Per Eligible Active Plan Participant	127,282	94,626
Per Retiree/Spouse Plan Participant	129,249	105,585
Total Annual Service Cost (Annual Benefit Accrual)	8,366,289	8,630,395
Per Eligible Active Plan Participant	6,949	6,231
Expected Employer Share of Retiree Costs	8,885,903	6,658,592
Per Retiree/Spouse Plan Participant	5,663	5,102
Net OPEB Liability as a % of Covered Payroll	426.30%	292.20%

EXECUTIVE SUMMARY

Liabilities & Benefit Payments in Today's Dollars

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

For the Period Ending on the Measurement Date of:	Number of Retirees, Spouses, & Surviving Spouses	Total OPEB Liability	Present Value at 3.00% of Total OPEB Liability	Employer Share of Premiums/Claims Including "Implicit Cost"	Present Value at 3.00% of Employer Share of Premiums / Claims Including "Implicit Cost"
June 30, 2020	1,569	356,039,931	356,039,931	8,885,903	8,885,903
June 30, 2025	1,688	406,672,007	350,798,846	11,250,093	9,704,429
June 30, 2030	1,728	455,442,036	338,891,648	14,168,628	10,542,790
June 30, 2035	1,672	497,555,718	319,362,082	17,106,728	10,980,158
June 30, 2040	1,547	539,886,343	298,921,978	18,938,465	10,485,769
June 30, 2045	1,402	590,952,308	282,242,113	20,915,718	9,989,463
June 30, 2050	1,282	654,853,907	269,791,139	22,475,124	9,259,454

PRINCIPAL RESULTS OF THE VALUATION

City of Westfield

Assuming Funding - 2.75% discount rate

Comparison of Plan Liabilities to Prior Valuation

Valuation Date	July 1, 2019	July 1, 2017
For the Measurement Period ending on the Measurement Date of:	June 30, 2020	June 30, 2019
For the Reporting Period & Fiscal Year ending on:	June 30, 2020	June 30, 2019
I. Total OPEB Liability		
A. Actives	153,248,104	131,056,488
B. Retirees/Disabled	<u>202,791,827</u>	<u>137,788,055</u>
C. Total	356,039,931	268,844,543
II. Fiduciary Net Position [Plan Assets]	845,567	812,150
III. Net OPEB Liability (Asset) [I. - II.]	355,194,364	268,032,393
IV. Funded Ratio [II. / I.]	0.24%	0.30%
V. Number of Eligible Participants		
A. Actives	1,204	1,385
B. Retirees/Disabled & Dependents	<u>1,569</u>	<u>1,305</u>
C. Total	2,773	2,690
VI. Service Cost	8,366,289	8,630,395
VII. Financial Statement Expense	35,467,120	20,478,714
VIII. Employer Contribution to the OPEB Trust	(20,000)	(20,000)
IX. Deferred Inflow of Resources	(3,624,935)	(5,437,403)
X. Deferred Outflow of Resources	80,337,446	21,549,160
XI. Money Weighted Rate of Return	1.62%	1.43%
XII. 20-year Municipal Bond Rate (SAPIHG)	2.66%	2.79%
XIII. Expected Long Term Rate of Return (Net of Expense)	2.50%	2.75%
XIV. Crossover Year	Immediate	Immediate
XV. Discount Rate	2.75%	2.75%

PRINCIPAL RESULTS OF THE VALUATION

City of Westfield Plan Liabilities as of the June 30, 2020 Measurement Date

	City Employees and Retirees	School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Airport Employees and Retirees	SWWT Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Total OPEB Liability									
A. Actives	21,226,309	102,254,205	13,498,916	12,037,507	551,513	991,707	241,791	2,446,156	153,248,104
B. Retirees/Disabled	<u>32,163,406</u>	<u>139,568,979</u>	<u>11,825,524</u>	<u>14,688,858</u>	<u>380,006</u>	0	<u>825,881</u>	<u>3,339,173</u>	<u>202,791,827</u>
C. Total	53,389,715	241,823,184	25,324,440	26,726,365	931,519	991,707	1,067,672	5,785,329	356,039,931
II. Fiduciary Net Position [Plan Assets]	126,796	574,311	60,144	63,473	2,212	2,355	2,536	13,740	845,567
III. Net OPEB Liability (Asset) [I. - II.]	53,262,919	241,248,873	25,264,296	26,662,892	929,307	989,352	1,065,136	5,771,589	355,194,364
IV. Number of Eligible Participants									
A. Actives	267	710	94	83	7	10	6	27	1,204
B. Retirees/Disabled	<u>316</u>	<u>1,015</u>	<u>86</u>	<u>114</u>	<u>5</u>	0	2	<u>24</u>	<u>1,569</u>
C. Total	583	1,725	180	197	12	10	15	51	2,773
For the Reporting Date and Fiscal Year Ending June 30, 2020									
V. Service Cost	1,430,287	5,132,379	777,207	720,022	38,628	55,835	56,035	155,896	8,366,289
VI. Financial Statement Expense	5,496,354	23,526,863	2,710,228	2,756,847	109,995	132,217	137,849	596,767	35,467,120
VII. Employer Share of Costs	(1,479,756)	(6,099,439)	(493,185)	(619,170)	(13,586)	(6,304)	(37,544)	(136,919)	(8,885,903)
VIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(2,999)	(13,549)	(1,441)	(1,510)	(54)	(59)	(61)	(327)	(20,000)
IX. Total Employer Contribution [VII. + VIII.]	(1,482,755)	(6,112,988)	(494,626)	(620,680)	(13,640)	(6,363)	(37,605)	(137,246)	(8,905,903)

PRINCIPAL RESULTS OF THE VALUATION

City of Westfield

Assuming Funding - 2.75% discount rate

For the Period Ending on the June 30, 2020 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	57,304,241	90,773,602	148,077,843	14,825,586	122,503,684	137,329,270	285,407,113
B. Spouses	<u>38,637,126</u>	<u>65,292,346</u>	<u>103,929,472</u>	<u>11,564,655</u>	<u>53,897,902</u>	<u>65,462,557</u>	<u>169,392,029</u>
C. Total	95,941,367	156,065,948	252,007,315	26,390,241	176,401,586	202,791,827	454,799,142
Total OPEB Liability							
A. Participants	35,299,997	54,910,815	90,210,812	14,825,586	122,503,684	137,329,270	227,540,082
B. Spouses	<u>23,535,084</u>	<u>39,502,208</u>	<u>63,037,292</u>	<u>11,564,655</u>	<u>53,897,902</u>	<u>65,462,557</u>	<u>128,499,849</u>
C. Total	58,835,081	94,413,023	153,248,104	26,390,241	176,401,586	202,791,827	356,039,931
Service Cost							
A. Participants	1,747,283	3,146,987	4,894,270	0	0	0	4,894,270
B. Spouses	<u>1,203,675</u>	<u>2,268,344</u>	<u>3,472,019</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3,472,019</u>
C. Total	2,950,958	5,415,331	8,366,289	0	0	0	8,366,289

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 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, 2020	
Description	Amount
I. Service Cost	8,366,289
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	7,501,945
III. Deferred (Inflows)/Outflows from Plan Experience*	4,290,489
IV. Deferred (Inflows)/Outflows from Changes of Assumptions*	15,323,120
V. Projected Earnings on OPEB Plan Investments	(20,552)
VI. Deferred (Inflows)/Outflows from Earnings on Plan Investments**	5,829
VII. Financial Statement Expense Prior to Plan Design Changes [I. + II.+ III. + IV. + V. + VI.]	35,467,120
VIII. Expense Related to Change in Benefit Terms***	0
IX. Financial Statement Expense [VII. + VIII.]	35,467,120

* Amortized over 5.00 years

** Amortized over 5.00 years

*** Recognized Immediately

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 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 the June 30, 2019 Reporting Date	268,844,543	812,150	268,032,393
II. Prior Period Adjustment	0	0	0
III. Balances for the June 30, 2019 Reporting Date with Adjustment [I. + II.]	268,844,543	812,150	268,032,393
Changes for the year:			
IV. Service Cost	8,366,289	0	8,366,289
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	7,501,945	0	7,501,945
VI. Changes in Benefit Terms *	0	0	0
VII. Change in Assumptions **	58,706,968	0	58,706,968
VIII. Differences Between Actual and Expected Experience **	21,506,089	0	21,506,089
IX. Net Investment Income	0	13,417	(13,417)
X. Employer Contributions to Trust	0	8,905,903	(8,905,903)
XI. Benefit Payments Withdrawn from Trust	0	(8,885,903)	8,885,903
XII. Benefit Payments Excluding Implicit Cost	(7,042,212)	0	(7,042,212)
XIII. Implicit Cost Amount	(1,843,691)	0	(1,843,691)
XIV. Total Benefit Payments Including Implicit Cost [XII. + XIII.]	(8,885,903)	0	(8,885,903)
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.]	87,195,388	33,417	87,161,971
XVIII. Balances for the June 30, 2020 Reporting Date [III.+XVII.]	356,039,931	845,567	355,194,364

* Recognized Immediately

** Amortized over 5.00 years

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 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 Year	Differences Between			2020	2021	2022	2023	2024	2025
	Actual & Expected Experience	Recognition Period (Years)	Remaining Balance						
2017									
2018	(53,647)	5.00	(21,459)	(10,729)	(10,729)	(10,730)			
2019	0	5.00	0	0	0	0	0		
2020	21,506,089	5.00	17,204,871	4,301,218	4,301,218	4,301,218	4,301,218	4,301,217	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			17,183,412						
Net increase (decrease) in OPEB Expense				4,290,489	4,290,489	4,290,488	4,301,218	4,301,217	0

Deferred (Inflows)/Outflows in OPEB Expense Arising from the Recognition of the Effects of Changes in Assumptions									
Fiscal Year	Differences from			2020	2021	2022	2023	2024	2025
	Changes in Actuarial Assumptions	Recognition Period (years)	Remaining Balance						
2017									
2018	(9,008,693)	5.00	(3,603,476)	(1,801,739)	(1,801,739)	(1,801,737)			
2019	26,917,327	5.00	16,150,397	5,383,465	5,383,465	5,383,465	5,383,467		
2020	58,706,968	5.00	46,965,574	11,741,394	11,741,394	11,741,394	11,741,394	11,741,392	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			59,512,495						
Net increase (decrease) in OPEB Expense				15,323,120	15,323,120	15,323,122	17,124,861	11,741,392	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 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 Year	Differences Between			2020	2021	2022	2023	2024	2025
	Actual & Expected Earnings	Recognition Period (years)	Remaining Balance						
2017									
2018	11,550	5.00	4,620	2,310	2,310	2,310			
2019	10,460	5.00	6,276	2,092	2,092	2,092	2,092		
2020	7,135	5.00	5,708	1,427	1,427	1,427	1,427	1,427	
2021									
2022									
2023									
2024									
2025									
2026									
Total Remaining Balance			16,604						
Net increase (decrease) in OPEB Expense				5,829	5,829	5,829	3,519	1,427	0

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 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, 2020 to be Reported for the Fiscal Year Ending June 30, 2020			
	Deferred Outflows of Resources	Deferred Inflows of Resources	Total
I. Contributions made subsequent to the Measurement Date	0	0	0
II. Differences Between Actual & Expected Experience	17,204,871	(21,459)	17,183,412
III. Changes of Assumptions	63,115,971	(3,603,476)	59,512,495
IV. Net Difference Between Projected & Actual Earnings on OPEB Plan Investments	<u>16,604</u>	<u>0</u>	<u>16,604</u>
V. Total [I.+II.+III.+IV.]	80,337,446	(3,624,935)	76,712,511

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
 (As of the June 30, 2020 Measurement Date)

3. Changes in Net OPEB Expense (Continued)

Annual Amortization of Deferred (Inflows)/Outflows

The balance of deferred (inflows)/outflows as of June 30, 2020 will be recognized in future years as shown below.

Year ending June 30:	
2021	19,619,438
2022	19,619,439
2023	21,429,598
2024	16,044,036
2025	0
Thereafter	0

4. Discount Rate

The discount rate used to measure the Total OPEB liability was 2.75% as of June 30, 2020 and 2.75% as of June 30, 2019. The projection of cash flows used to determine the discount rate assumed that contributions will be made in accordance with the City's funding policy. Based on these assumptions, the OPEB Plan's Fiduciary Net Position is projected to be insufficient to make all projected benefit payments to current plan members. Therefore, the long-term expected rate of return on the OPEB Plan assets is applied to the projected benefits payments which the Fiduciary Net Position is expected to be sufficient to cover and the Municipal Bond Rate is applied thereafter. The Municipal Bond Rate is based on the S&P Municipal Bond 20 - Year High Grade Index ("SAPIHG"), which was 2.66% as of June 30, 2020. The S&P Municipal Bond 20 - Year High Grade Index is the index rate for 20 year, tax exempt general obligation municipal bonds with an average rate of AA/Aa or higher.

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

5. Funding Policy

The contribution requirements of plan members and the City are established and may be amended through City ordinances. For the period ending on the June 30, 2020 Measurement Date, total City premiums plus implicit costs for the retiree medical program were \$8,885,903. The City also contributed \$20,000 to an OPEB Trust for a total contribution during the measurement period of \$8,905,903 to be reported on the financial statement for the fiscal year ending June 30, 2020.

6. Investment Policy

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

Investment Target Allocation & Expected Long-Term Real Rate of Return			
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return*
Domestic Equity - Large Cap	0.00%	Domestic Equity - Large Cap	4.90%
Domestic Equity - Small/Mid Cap	0.00%	Domestic Equity - Small/Mid Cap	5.40%
International Equity - Developed Market	0.00%	International Equity - Developed Market	5.32%
International Equity-Emerging Market	0.00%	International Equity-Emerging Market	6.26%
Domestic Fixed Income	0.00%	Domestic Fixed Income	1.40%
International Fixed Income	0.00%	International Fixed Income	1.30%
Alternatives	0.00%	Alternatives	6.32%
Real Estate	0.00%	Real Estate	6.25%
Cash & Cash Equivalents	100.00%	Cash & Cash Equivalents	0.00%
Total	100.00%		
		I. Real Rate of Return**	0.00%
		II. Inflation Assumption	2.50%
		III. Total Nominal Return [I. + II.]	2.50%
		IV. Investment Expense	0.00%
		V. Net Investment Return [III.-IV.]	2.50%

* Based on 2020 Horizon Survey of Capital Market Assumptions

** Geometric Mean

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 Measurement Date)

7. Schedule of The City's Contributions

For the Fiscal Year Ending	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, 2020	19,793,639	(8,905,903)	10,887,736	83,326,182	10.69%
June 30, 2019	21,512,754	(6,678,592)	14,834,162	91,725,160	7.28%
June 30, 2018	18,782,421	(7,012,856)	11,769,565	89,053,554	7.87%
June 30, 2017	18,969,296	(6,983,660)	11,985,636	89,053,554	7.84%

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES

(As of the June 30, 2020 Measurement Date)

8. Effect of 1% Change in Healthcare Trend

<u>Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2020 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Trend Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	297,437,807	356,039,931	432,888,919
II. Fiduciary Net Position	<u>845,567</u>	<u>845,567</u>	<u>845,567</u>
III. Net OPEB Liability (Asset) [I.-II.]	296,592,240	355,194,364	432,043,352
IV. Service Cost	6,218,635	8,366,289	11,486,129

9. Effect of 1% Change in Discount Rates

<u>Impact of a 1% Change in the Discount Rate as of the June 30, 2020 Measurement Date</u>			
	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
I. Total OPEB Liability	426,527,243	356,039,931	301,354,798
II. Fiduciary Net Position	<u>845,567</u>	<u>845,567</u>	<u>845,567</u>
III. Net OPEB Liability (Asset) [I.-II.]	425,681,676	355,194,364	300,509,231
IV. Service Cost	11,501,721	8,366,289	6,159,104

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 Measurement Date)

10. Money Weighted Rate of Return

	Plan Investments / Net External Cash Flows	Periods Invested	Period Weight
I. Beginning value - June 30, 2019	812,150	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	10	0.8333
September	20,000	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	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	20,000		
III. Earnings and increase in fair value	13,417		
IV. Ending value - June 30, 2020 [I.+II.+III.]	845,567		
Money Weighted Rate of Return	1.62%		
Asset Value - June 30, 2020	845,567		

EXHIBIT A
FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 Measurement Date)

11. OPEB Liability, OPEB Expense

	Fiscal Year Ending June 30, 2020								
	City Employees and Retirees	School Employees and Retirees	Police Employees and Retirees	Fire Employees and Retirees	Airport Employees and Retirees	SWWT Enterprise Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Total
I. Total OPEB Liability as of June 30, 2020	53,389,715	241,823,184	25,324,440	26,726,365	931,519	991,707	1,067,672	5,785,329	356,039,931
II. Fiduciary Net Position as of June 30, 2020	126,796	574,311	60,144	63,473	2,212	2,355	2,536	13,740	845,567
III. Net OPEB Liability (Asset) as of June 30, 2020 [I. - II.]	53,262,919	241,248,873	25,264,296	26,662,892	929,307	989,352	1,065,136	5,771,589	355,194,364
IV. Service Cost	1,430,287	5,132,379	777,207	720,022	38,628	55,835	56,035	155,896	8,366,289
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,127,131	5,082,872	538,990	565,622	20,090	21,791	23,042	122,407	7,501,945
VI. Projected Earnings on OPEB Plan Investments	(3,082)	(13,958)	(1,462)	(1,543)	(54)	(57)	(62)	(334)	(20,552)
VII. Net Recognition of Deferred (Inflows)/Outflows	2,942,018	13,325,570	1,395,493	1,472,746	51,331	54,648	58,834	318,798	19,619,438
VIII. Expense Related to Change in Benefit Terms	0	0	0	0	0	0	0	0	0
IX. Financial Statement Expense [IV. + V. + VII. + VIII.]	5,496,354	23,526,863	2,710,228	2,756,847	109,995	132,217	137,849	596,767	35,467,120
X. Employer Share of Costs	(1,479,756)	(6,099,439)	(493,185)	(619,170)	(13,586)	(6,304)	(37,544)	(136,919)	(8,885,903)
XI. Employer (Payments) Withdrawals to/from OPEB Trust	(2,999)	(13,549)	(1,441)	(1,510)	(54)	(59)	(61)	(327)	(20,000)
XII. Total Employer Contribution [X. + XI.]	(1,482,755)	(6,112,988)	(494,626)	(620,680)	(13,640)	(6,363)	(37,605)	(137,246)	(8,905,903)
XIII. Net OPEB Expense [IX. + XII.]	4,013,599	17,413,875	2,215,602	2,136,167	96,355	125,854	100,244	459,521	26,561,217

EXHIBIT A

FINANCIAL STATEMENT DISCLOSURES
(As of the June 30, 2020 Measurement Date)

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

Valuation Date	July 1, 2019
For the Measurement Period ending on the Measurement Date of:	June 30, 2020
For the Reporting Period & Fiscal Year ending on:	June 30, 2020
Source of Deferred Inflow/Outflow	
I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience	17,183,412
II. Deferred (Inflow)/Outflow from Investment Experience	16,604
III. Deferred (Inflow)/Outflow from Changes in Assumptions	59,512,495
Change in Deferred Inflow/Outflow	
I. Deferred Outflow at the beginning of the period	21,549,160
II. Deferred Outflow created during the period	80,220,192
III. Deferred Outflow recognized during the period	21,431,906
IV. Change in Deferred Outflow (II. - III.)	58,788,286
V. Deferred Outflow at end of the period (I. + IV.)	80,337,446
VI. Deferred Inflow at the beginning of the period	(5,437,403)
VII. Deferred Inflow created during the period	0
VIII. Deferred Inflow recognized during the period	(1,812,468)
IX. Change in Deferred Inflow (VII. - VIII.)	1,812,468
X. Deferred Inflow at end of the period (VI. + IX.)	(3,624,935)
Net OPEB Liability	
I. Net OPEB Liability at beginning of period	268,032,393
II. Service Cost	8,366,289
III. Interest on Total OPEB Liability, Service Cost, and Payments	7,501,945
IV. Projected Investment Income	(20,552)
V. Total Employer Contributions	(8,905,903)
VI. Expense Related to Change in Benefit Terms	0
VII. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III. + IV. + V. + VI.)	6,941,779
VIII. Deferred Outflow created during the period	80,220,192
IX. Deferred Inflow created during the period	0
X. Net OPEB Liability at end of period (I. + VII. + VIII. + IX.)	355,194,364
Net OPEB Expense	
I. Service Cost	8,366,289
II. Interest on Total OPEB Liability, Service Cost, and Payments	7,501,945
III. Projected Investment Income	(20,552)
IV. Recognition of Deferred (Inflow)/Outflow	19,619,438
V. Expense Related to Change in Benefit Terms	0
VI. Financial Statement Expense (I. + II. + III. + IV. + V.)	35,467,120
VII. Benefit Payments	(8,885,903)
VIII. Contributions to Trust	(20,000)
IX. Total Employer Payments (VII. + VIII.)	(8,905,903)
X. Total Net OPEB Expense under GASB 75 (VI. + IX.)	26,561,217

EXHIBIT A
REQUIRED SUPPLEMENTARY INFORMATION
(As of the June 30, 2020 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. For FY 2020 and future years we have used a 30 year amortization increasing by 3.00% per year 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:

	<u>Actuarially Determined Contribution - Deficiency / (Excess)</u>			
	<u>June 30, 2020</u>	<u>June 30, 2019</u>	<u>For the Fiscal Year Ending:</u>	
			<u>June 30, 2018</u>	<u>June 30, 2017</u>
I. Service Cost	8,366,289	8,630,395	6,653,680	12,113,539
II. Amortization of NOL	<u>11,427,350</u>	<u>12,882,359</u>	<u>12,128,741</u>	<u>6,855,757</u>
III. Actuarial Determined Contribution [I. + II.]	19,793,639	21,512,754	18,782,421	18,969,296
IV. Contributions in Relation to the Actuarially Determined Contribution	<u>(8,905,903)</u>	<u>(6,678,592)</u>	<u>(7,012,856)</u>	<u>(6,983,660)</u>
V. Contribution Deficiency / (Excess) [III. + IV.]	<u>10,887,736</u>	<u>14,834,162</u>	11,769,565	11,985,636
Covered Employee Payroll	83,326,182	91,725,160	89,053,554	89,053,554
Contributions as a % of Covered Employee Payroll	10.69%	7.28%	7.87%	7.84%
Discount Rate	2.75%	2.75%	3.50%	3.25%
Money Weighted Rate of Return	1.62%	1.43%	<u>(0.04%)</u>	1.35%

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Schedule of Changes in the City's Net OPEB Liability and Related Ratios				
Valuation Date	July 1, 2019	July 1, 2017	July 1, 2017	July 1, 2017
GASB 75 Measurement Date	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
For the Reporting Period & Fiscal Year Ending on:	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
Total OPEB Liability	356,039,931	268,844,543	231,660,746	232,105,512
I. Service Cost	8,366,289	8,630,395	6,653,680	12,113,539
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	7,501,945	8,294,667	8,247,554	10,155,366
III. Changes in Benefit Terms	0	0	0	0
IV. Difference Between Expected & Actual Plan Experience	21,506,089	0	(9,008,693)	27,283,821
V. Changes of Assumptions	58,706,968	26,917,327	(53,647)	(86,833,882)
VI. Benefit Payments Excluding Implicit Cost	(7,042,212)	(6,323,078)	N/A	N/A
VII. Implicit Cost Amount	(1,843,691)	(335,514)	N/A	N/A
VIII. Total Benefit Payments Including Implicit Cost [VI.+VII.]	(8,885,903)	(6,658,592)	(6,283,660)	(7,319,046)
IX. Net Change in OPEB Liability [I.+II.+III.+IV.+V.+VIII.]	87,195,388	37,183,797	(444,766)	(44,600,202)
X. Total OPEB Liability - Beginning of Period	268,844,543	231,660,746	232,105,512	276,705,714
XI. Prior Period Adjustment	0	0	0	0
XII. Total OPEB Liability - Beginning of Period with Adjustment	268,844,543	231,660,746	232,105,512	276,705,714
XIII. Total OPEB Liability - End of Period [IX.+XII.]	356,039,931	268,844,543	231,660,746	232,105,512
Plan Fiduciary Net Position	845,567	812,150	780,863	51,833
XIV. Earning from Plan Investments	13,417	11,287	(166)	91
XV. Employer Contribution to Trust	8,905,903	6,678,592	7,012,856	7,319,046
XVI. Benefit Payments from Trust, Including Refunds of Member Contributions	(8,885,903)	(6,658,592)	(6,283,660)	(7,319,046)
XVII. Administrative Expense	0	0	0	0
XVIII. Other	0	0	0	0
XIX. Net Change in Plan Fiduciary Net Position [XIV.+XV.+XVI.+XVII.+XVIII.]	33,417	31,287	729,030	91
XX. Plan Fiduciary Net Position - Beginning of Period	812,150	780,863	51,833	51,742
XXI. Prior Period Adjustment	0	0	0	0
XXII. Plan Fiduciary Net Position - Beginning of Period with Adjustment	812,150	780,863	51,833	51,742
XXIII. Plan Fiduciary Net Position - End of Period [XIX.+XXII.]	845,567	812,150	780,863	51,833
XXIV. Net OPEB Liability [XIII.-XXIII.]	355,194,364	268,032,393	230,879,883	232,053,679
XXV. Plan Fiduciary Net Position as % of Total OPEB Liability [XXIII. / XIII.]	0.24%	0.30%	0.34%	0.02%
XXVI. Covered Employee Payroll	83,326,182	91,725,160	89,053,554	89,053,554
XXVII. Plan NOL as % of Covered Employee Payroll [XXIV. / XXVI.]	426.27%	292.21%	259.26%	260.58%
Single Discount Rate to calculate Plan Liabilities	2.75%	2.75%	3.50%	3.25%

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of July 1, 2019.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, June 30, 2020.

Actuarial Assumptions:

Investment Rate of Return:	2.50%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	2.66% as of June 30, 2020 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Single Equivalent Discount Rate:	2.75%, net of OPEB plan investment expense, including inflation.
Inflation:	2.50% as of June 30, 2020 and for future periods
Salary Increases:	3.00% annually as of June 30, 2020 and for future periods
Cost of Living Adjustment:	Not Applicable

EXHIBIT B

REQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Pre-Retirement Mortality:	General: RP-2014 Mortality Table for Blue Collar Employees projected generationally with scale MP-2016 for males and females, set forward 1 year for 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, set forward 1 year for 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, 2020 Measurement Date)

Plan Membership

At July 1, 2019, OPEB plan membership consisted of the following:

Inactive employees or beneficiaries currently receiving benefits:	1,569
Active Employees:	<u>1,204</u>
Total:	2,773

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, 2019 to June 30, 2020

- ✓ Based on recommendations by PERAC, the mortality table has been updated from the RP-2000 Mortality Table projected generationally with scale BB and a base year 2009 for males and females to the RP-2014 Mortality Table projected generationally with scale MP-2016 for males and females
- ✓ Based on recent actuarial research we have adopted the Getzen model for future healthcare cost increases
- ✓ We have updated the assumption for morbidity or age-related costs of medical care to reflect recent research by the Society of Actuaries that medical costs increase as people age at a faster rate than had previously been thought. This change in methodology is particularly impactful for the 59 retirees and spouses who are over the age of 65 and remain on Active plans. Due to updated guidance related to the implementation of ASOP 6, we have also updated our methodology for calculating expected claims for retirees who are enrolled in Medicare Supplement plans which further increased disclosed liability. These updates

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Contributions/Withdrawals:

The contribution requirements of plan members and the City are established and may be amended through City ordinances. The City contributed beyond the pay-as-you-go cost \$20,000 for the period ending on the June 30, 2020 Measurement Date. For the year ending on the June 30, 2020 Measurement Date total City premiums plus implicit costs for the retiree medical program were \$8,885,903. \$1,843,691 of the \$8,885,903 represents implicit cost.

EXHIBIT BREQUIRED SUPPLEMENTARY INFORMATION

(As of the June 30, 2020 Measurement Date)

Census Data Manipulation:

In the absence of data, the following was assumed:

Spouse Sex:	Male participants had female spouses and vice versa.
Spouse Age:	Male spouses were three years older than female spouses and same sex spouses were the same age.
Hire Age:	Participants who were not on the previous valuation were hired halfway between last valuation and the current valuation. If we did not have census data related to the last valuation, the participants were assumed to have been hired at age forty.
Retiree Age:	Retirees had the same birth date as they had the prior valuation. If we did not have census data related to the last valuation, retirees who were enrolled in Active plans were assumed to be age sixty-two and retirees who were enrolled in Medicare Supplement plans were assumed to be age seventy-two. Those not enrolled in a medical plan were assumed to be sixty-seven.
School Demographics:	Two thirds of school participants were teachers.
Other Material Changes:	No other data changes were deemed to be material.

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CURRENT FUNDING POLICY (OPEN GROUP)

Funding - 2.75% 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		III. Net OPEB Liability (Asset) [I. - II.]	IV. Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Benefit Payments (With Implicit Cost)	VII. Trust Contributions Beyond Pay-as-you-go	VIII. Gross Trust Contributions [VI. + VII.]	IX. Benefit Payments Reimbursed from the Trust	X. Administrative & Investment Expenses Reimbursed from the Trust	XI. Total Employer Payments Less Reimbursements [VIII. - IX. - X.]
			with an expected 2.50% return	with an expected 2.50% return									
2020	June 30, 2020	356,039,931	845,567	355,194,364	0.24%	8,366,289	8,885,903	20,000	8,905,903	8,885,903	0	20,000	
2021	June 30, 2021	365,318,535	907,203	364,411,332	0.25%	8,599,289	9,222,317	40,000	9,262,317	9,222,317	0	40,000	
2022	June 30, 2022	376,284,470	950,132	375,334,338	0.25%	8,834,600	9,807,152	20,000	9,827,152	9,807,152	0	20,000	
2023	June 30, 2023	386,394,344	994,134	385,400,210	0.26%	9,117,576	10,248,169	20,000	10,268,169	10,248,169	0	20,000	
2024	June 30, 2024	396,582,326	1,039,236	395,543,090	0.26%	9,385,537	10,676,270	20,000	10,696,270	10,676,270	0	20,000	
2025	June 30, 2025	406,672,007	1,085,465	405,586,542	0.27%	9,692,925	11,250,093	20,000	11,270,093	11,250,093	0	20,000	
2026	June 30, 2026	416,765,027	1,132,850	415,632,177	0.27%	10,005,641	11,762,439	20,000	11,782,439	11,762,439	0	20,000	
2027	June 30, 2027	426,743,446	1,181,420	425,562,026	0.28%	10,331,039	12,356,115	20,000	12,376,115	12,356,115	0	20,000	
2028	June 30, 2028	436,447,081	1,231,204	435,215,877	0.28%	10,657,035	13,017,088	20,000	13,037,088	13,017,088	0	20,000	
2029	June 30, 2029	445,955,087	1,282,233	444,672,854	0.29%	10,964,366	13,664,738	20,000	13,684,738	13,664,738	0	20,000	
2030	June 30, 2030	455,442,036	1,334,537	454,107,499	0.29%	11,333,766	14,168,628	20,000	14,188,628	14,168,628	0	20,000	
2031	June 30, 2031	464,435,966	1,388,149	463,047,817	0.30%	11,678,731	14,878,509	20,000	14,898,509	14,878,509	0	20,000	
2032	June 30, 2032	472,997,386	1,443,101	471,554,285	0.31%	12,031,981	15,563,665	20,000	15,583,665	15,563,665	0	20,000	
2033	June 30, 2033	481,502,173	1,499,427	480,002,746	0.31%	12,407,872	15,998,038	20,000	16,018,038	15,998,038	0	20,000	
2034	June 30, 2034	489,391,983	1,557,161	487,834,822	0.32%	12,808,970	16,542,073	20,000	16,562,073	16,542,073	0	20,000	
2035	June 30, 2035	497,555,718	1,616,338	495,939,380	0.32%	13,184,146	17,106,728	20,000	17,126,728	17,106,728	0	20,000	
2036	June 30, 2036	506,104,759	1,676,995	504,427,764	0.33%	13,622,257	17,405,272	20,000	17,425,272	17,405,272	0	20,000	
2037	June 30, 2037	514,540,668	1,739,168	512,801,500	0.34%	14,059,375	17,698,340	20,000	17,718,340	17,698,340	0	20,000	
2038	June 30, 2038	522,892,584	1,802,896	521,089,688	0.34%	14,493,676	18,135,482	20,000	18,155,482	18,135,482	0	20,000	
2039	June 30, 2039	531,268,753	1,868,217	529,400,536	0.35%	14,971,732	18,640,701	20,000	18,660,701	18,640,701	0	20,000	
2040	June 30, 2040	539,886,343	1,935,171	537,951,172	0.36%	15,454,300	18,938,465	20,000	18,958,465	18,938,465	0	20,000	
2041	June 30, 2041	548,925,010	2,003,799	546,921,211	0.37%	15,942,573	19,285,993	20,000	19,305,993	19,285,993	0	20,000	
2042	June 30, 2042	558,745,091	2,074,142	556,670,949	0.37%	16,476,886	19,643,484	20,000	19,663,484	19,643,484	0	20,000	
2043	June 30, 2043	569,471,050	2,146,244	567,324,806	0.38%	17,047,818	20,050,318	20,000	20,070,318	20,050,318	0	20,000	
2044	June 30, 2044	580,008,608	2,220,149	577,788,459	0.38%	17,636,551	20,485,134	20,000	20,505,134	20,485,134	0	20,000	
2045	June 30, 2045	590,952,308	2,295,901	588,656,407	0.39%	18,219,593	20,915,718	20,000	20,935,718	20,915,718	0	20,000	
2046	June 30, 2046	602,043,812	2,373,547	599,670,265	0.39%	18,843,125	21,180,290	20,000	21,200,290	21,180,290	0	20,000	
2047	June 30, 2047	614,425,555	2,453,134	611,972,421	0.40%	19,482,577	21,555,565	20,000	21,575,565	21,555,565	0	20,000	
2048	June 30, 2048	627,234,761	2,534,711	624,700,050	0.40%	20,185,946	21,954,415	20,000	21,974,415	21,954,415	0	20,000	
2049	June 30, 2049	640,825,118	2,618,327	638,206,791	0.41%	20,894,967	22,261,680	20,000	22,281,680	22,261,680	0	20,000	
2050	June 30, 2050	654,853,907	2,704,034	652,149,873	0.41%	21,644,610	22,475,124	20,000	22,495,124	22,475,124	0	20,000	
2051	June 30, 2051	669,859,957	2,791,883	667,068,074	0.42%	22,402,064	22,767,823	20,000	22,787,823	22,767,823	0	20,000	

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

ALTERNATIVE FUNDING SCENARIO (OPEN GROUP)

Alternative Funding & Alternative Investment Scenario - 5.25% discount rate

For the Fiscal Year	Period Ending on the Measurement Date of:	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 6.50% return	III. Net OPEB Liability (Asset) [I. - II.]	IV. Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Benefit Payments (With Implicit Cost)	VII. Trust Contributions Beyond Pay-as-you-go	VIII. Gross Trust Contributions [VI. + VII.]	IX. Benefit Payments Reimbursed from the Trust	X. Administrative & Investment Expenses Reimbursed from the Trust	XI. Total Employer Payments Less Reimbursements [VII. - VIII. - IX.]
2020	June 30, 2020	235,006,561	845,567	234,160,994	0.36%	3,378,079	8,885,903	20,000	8,905,903	8,885,903	0	8,905,903
2021	June 30, 2021	236,155,748	2,799,387	233,356,361	1.19%	3,926,784	9,222,317	1,840,000	11,062,317	9,222,317	0	11,062,317
2022	June 30, 2022	236,854,123	4,937,172	231,916,951	2.08%	4,034,236	9,807,152	1,895,200	11,702,352	9,807,152	0	11,702,352
2023	June 30, 2023	255,041,808	7,272,587	247,769,221	2.85%	4,163,454	10,248,169	1,952,056	12,200,225	10,248,169	0	12,200,225
2024	June 30, 2024	261,766,306	9,820,240	251,946,066	3.75%	4,285,816	10,676,270	2,010,618	12,686,888	10,676,270	0	12,686,888
2025	June 30, 2025	268,425,912	12,595,739	255,830,173	4.69%	4,426,181	11,250,093	2,070,937	13,321,030	11,250,093	0	13,321,030
2026	June 30, 2026	275,087,711	15,615,760	259,471,951	5.68%	4,568,981	11,762,439	2,133,065	13,895,504	11,762,439	0	13,895,504
2027	June 30, 2027	281,673,858	18,898,122	262,775,736	6.71%	4,717,570	12,356,115	2,197,057	14,553,172	12,356,115	0	14,553,172
2028	June 30, 2028	288,078,625	22,461,858	265,616,767	7.80%	4,866,434	13,017,088	2,262,969	15,280,057	13,017,088	0	15,280,057
2029	June 30, 2029	294,354,257	26,327,297	268,026,960	8.94%	5,006,773	13,664,738	2,330,858	15,995,596	13,664,738	0	15,995,596
2030	June 30, 2030	300,615,977	30,516,152	270,099,825	10.15%	5,175,456	14,168,628	2,400,784	16,569,412	14,168,628	0	16,569,412
2031	June 30, 2031	306,552,271	35,051,611	271,500,660	11.43%	5,332,981	14,878,509	2,472,808	17,351,317	14,878,509	0	17,351,317
2032	June 30, 2032	312,203,077	39,958,432	272,244,645	12.80%	5,494,289	15,563,665	2,546,992	18,110,657	15,563,665	0	18,110,657
2033	June 30, 2033	317,816,487	45,263,050	272,553,437	14.24%	5,665,936	15,998,038	2,623,402	18,621,440	15,998,038	0	18,621,440
2034	June 30, 2034	323,023,970	50,993,688	272,030,282	15.79%	5,849,094	16,542,073	2,702,104	19,244,177	16,542,073	0	19,244,177
2035	June 30, 2035	328,412,241	57,180,474	271,231,767	17.41%	6,020,414	17,106,728	2,783,167	19,889,895	17,106,728	0	19,889,895
2036	June 30, 2036	334,054,812	63,855,567	270,199,245	19.12%	6,220,474	17,405,272	2,866,662	20,271,934	17,405,272	0	20,271,934
2037	June 30, 2037	339,622,693	71,053,292	268,569,401	20.92%	6,420,080	17,698,340	2,952,662	20,651,002	17,698,340	0	20,651,002
2038	June 30, 2038	345,135,120	78,810,282	266,324,838	22.83%	6,618,399	18,135,482	3,041,242	21,176,724	18,135,482	0	21,176,724
2039	June 30, 2039	350,663,542	87,165,632	263,497,910	24.86%	6,836,699	18,640,701	3,132,479	21,773,180	18,640,701	0	21,773,180
2040	June 30, 2040	356,351,297	96,161,060	260,190,237	26.98%	7,057,059	18,938,465	3,226,453	22,164,918	18,938,465	0	22,164,918
2041	June 30, 2041	362,316,967	105,841,081	256,475,886	29.21%	7,280,024	19,285,993	3,323,247	22,609,240	19,285,993	0	22,609,240
2042	June 30, 2042	368,798,390	116,253,190	252,545,200	31.52%	7,524,013	19,643,484	3,422,944	23,066,428	19,643,484	0	23,066,428
2043	June 30, 2043	375,877,719	127,448,059	248,429,660	33.91%	7,784,723	20,050,318	3,525,632	23,575,950	20,050,318	0	23,575,950
2044	June 30, 2044	382,832,689	139,479,746	243,352,943	36.43%	8,053,563	20,485,134	3,631,401	24,116,535	20,485,134	0	24,116,535
2045	June 30, 2045	390,055,722	152,405,920	237,649,802	39.07%	8,319,803	20,915,718	3,740,343	24,656,061	20,915,718	0	24,656,061
2046	June 30, 2046	397,376,308	166,288,095	231,088,213	41.85%	8,604,533	21,180,290	3,852,553	25,032,843	21,180,290	0	25,032,843
2047	June 30, 2047	405,548,497	181,191,885	224,356,612	44.68%	8,896,533	21,555,565	3,968,130	25,523,695	21,555,565	0	25,523,695
2048	June 30, 2048	414,002,827	197,187,274	216,815,553	47.63%	9,217,720	21,954,415	4,087,174	26,041,589	21,954,415	0	26,041,589
2049	June 30, 2049	422,972,745	214,348,900	208,623,845	50.68%	9,541,488	22,261,680	4,209,789	26,471,469	22,261,680	0	26,471,469
2050	June 30, 2050	432,232,046	232,756,366	199,475,680	53.85%	9,883,805	22,475,124	4,336,083	26,811,207	22,475,124	0	26,811,207
2051	June 30, 2051	442,136,376	252,494,560	189,641,816	57.11%	10,229,689	22,767,823	4,466,165	27,233,988	22,767,823	0	27,233,988
2052	June 30, 2052	452,850,730	273,654,008	179,196,722	60.43%	10,603,409	23,176,542	4,600,150	27,776,692	23,176,542	0	27,776,692
2053	June 30, 2053	464,151,238	296,331,239	167,819,999	63.84%	11,000,545	23,500,242	4,738,155	28,238,397	23,500,242	0	28,238,397
2054	June 30, 2054	476,237,934	320,629,182	155,608,752	67.33%	11,414,968	23,722,222	4,880,300	28,602,522	23,722,222	0	28,602,522
2055	June 30, 2055	489,280,982	346,657,584	142,623,398	70.85%	11,841,624	24,049,286	5,026,709	29,075,995	24,049,286	0	29,075,995
2056	June 30, 2056	503,224,932	374,533,457	128,691,475	74.43%	12,289,127	24,287,277	5,177,510	29,464,787	24,287,277	0	29,464,787

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES

Table 1: Projection of Contributions using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total 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, 2020	83,326,182	0	83,326,182	0	8,885,903	0	8,885,903
June 30, 2021	79,245,108	6,580,859	85,825,967	0	9,222,317	0	9,222,317
June 30, 2022	75,506,186	12,894,560	88,400,746	0	9,807,152	0	9,807,152
June 30, 2023	72,405,445	18,647,323	91,052,768	0	10,248,169	0	10,248,169
June 30, 2024	69,305,683	24,478,668	93,784,351	0	10,676,270	0	10,676,270
June 30, 2025	66,377,685	30,220,197	96,597,882	0	11,250,093	0	11,250,093
June 30, 2026	63,591,445	35,904,373	99,495,818	0	11,762,439	0	11,762,439
June 30, 2027	60,805,080	41,675,613	102,480,693	0	12,356,115	0	12,356,115
June 30, 2028	58,115,686	47,439,428	105,555,114	0	13,017,088	0	13,017,088
June 30, 2029	55,071,940	53,649,827	108,721,767	0	13,664,738	0	13,664,738
June 30, 2030	52,329,106	59,654,314	111,983,420	0	14,168,628	0	14,168,628
June 30, 2031	49,640,906	65,702,017	115,342,923	0	14,852,024	26,485	14,878,509
June 30, 2032	46,979,218	71,823,993	118,803,211	0	15,495,702	67,963	15,563,665
June 30, 2033	44,424,166	77,943,141	122,367,307	0	15,870,374	127,664	15,998,038
June 30, 2034	42,073,132	83,965,194	126,038,326	0	16,330,388	211,685	16,542,073
June 30, 2035	39,605,990	90,213,486	129,819,476	0	16,787,332	319,396	17,106,728
June 30, 2036	37,440,578	96,273,482	133,714,060	0	17,002,059	403,213	17,405,272
June 30, 2037	35,373,040	102,352,442	137,725,482	0	17,196,336	502,004	17,698,340
June 30, 2038	33,232,925	108,624,321	141,857,246	0	17,518,088	617,394	18,135,482
June 30, 2039	31,295,668	114,817,295	146,112,963	0	17,924,410	716,291	18,640,701
June 30, 2040	29,381,999	121,114,353	150,496,352	0	18,112,846	825,619	18,938,465
June 30, 2041	27,525,762	127,485,481	155,011,243	0	18,299,407	986,586	19,285,993
June 30, 2042	25,783,773	133,877,807	159,661,580	0	18,450,973	1,192,511	19,643,484
June 30, 2043	24,300,893	140,150,534	164,451,427	0	18,606,251	1,444,067	20,050,318
June 30, 2044	22,996,519	146,388,451	169,384,970	0	18,727,091	1,758,043	20,485,134
June 30, 2045	21,600,389	152,866,130	174,466,519	0	18,790,493	2,125,225	20,915,718
June 30, 2046	20,248,255	159,452,260	179,700,515	0	18,725,233	2,455,057	21,180,290
June 30, 2047	18,767,688	166,323,842	185,091,530	0	18,734,196	2,821,369	21,555,565
June 30, 2048	17,471,667	173,172,609	190,644,276	0	18,727,090	3,227,325	21,954,415
June 30, 2049	16,126,991	180,236,613	196,363,604	0	18,655,985	3,605,695	22,261,680
June 30, 2050	14,737,145	187,517,367	202,254,512	0	18,464,950	4,010,174	22,475,124
June 30, 2051	13,338,543	194,983,604	208,322,147	0	18,272,003	4,495,820	22,767,823
June 30, 2052	11,942,294	202,629,517	214,571,811	0	18,143,159	5,033,383	23,176,542
June 30, 2053	10,642,281	210,366,684	221,008,965	0	17,876,752	5,623,490	23,500,242
June 30, 2054	9,422,580	218,216,654	227,639,234	0	17,444,378	6,277,844	23,722,222
June 30, 2055	8,148,502	226,319,909	234,468,411	0	17,066,613	6,982,673	24,049,286
June 30, 2056	6,950,514	234,551,949	241,502,463	0	16,593,463	7,693,814	24,287,277
June 30, 2057	5,853,102	242,894,435	248,747,537	0	16,064,802	8,438,790	24,503,592
June 30, 2058	4,815,198	251,394,765	256,209,963	0	15,626,931	9,226,452	24,853,383
June 30, 2059	3,864,363	260,031,899	263,896,262	0	15,200,574	10,031,351	25,231,925

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

CONTRIBUTION PROJECTION DISCLOSURES (CONTINUED)

Table 1: Projection of Contributions using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Payroll for current employees	II. Payroll for future employees	III. Total 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, 2060	3,092,818	268,720,332	271,813,150	0	14,783,426	10,866,554	25,649,980
June 30, 2061	2,354,138	277,613,407	279,967,545	0	14,347,055	11,782,176	26,129,231
June 30, 2062	1,779,000	286,587,571	288,366,571	0	13,856,810	12,758,026	26,614,836
June 30, 2063	1,313,651	295,703,917	297,017,568	0	13,447,093	13,806,189	27,253,282
June 30, 2064	961,570	304,966,525	305,928,095	0	13,020,679	14,928,793	27,949,472
June 30, 2065	711,106	314,394,832	315,105,938	0	12,627,129	16,115,103	28,742,232
June 30, 2066	447,350	324,111,766	324,559,116	0	12,271,482	17,340,881	29,612,363
June 30, 2067	177,818	334,118,071	334,295,889	0	11,924,058	18,613,933	30,537,991
June 30, 2068	67,057	344,257,709	344,324,766	0	11,538,653	19,947,635	31,486,288
June 30, 2069	25,914	354,628,595	354,654,509	0	11,149,872	21,301,938	32,451,810
June 30, 2070	21,088	365,273,056	365,294,144	0	10,761,989	22,703,865	33,465,854
June 30, 2071	0	376,252,968	376,252,968	0	10,373,361	24,177,320	34,550,681
June 30, 2072	0	387,540,557	387,540,557	0	9,980,304	25,703,930	35,684,234
June 30, 2073	0	399,166,774	399,166,774	0	9,563,875	27,289,821	36,853,696
June 30, 2074	0	411,141,777	411,141,777	0	9,158,884	28,931,026	38,089,910
June 30, 2075	0	423,476,030	423,476,030	0	8,729,297	30,620,547	39,349,844
June 30, 2076	0	436,180,311	436,180,311	0	8,308,677	32,391,534	40,700,211
June 30, 2077	0	449,265,720	449,265,720	0	7,894,993	34,208,267	42,103,260
June 30, 2078	0	462,743,692	462,743,692	0	7,448,220	36,080,678	43,528,898
June 30, 2079	0	476,626,003	476,626,003	0	7,008,273	38,019,761	45,028,034
June 30, 2080	0	490,924,783	490,924,783	0	6,559,751	40,013,766	46,573,517
June 30, 2081	0	505,652,526	505,652,526	0	6,116,627	42,073,187	48,189,814
June 30, 2082	0	520,822,102	520,822,102	0	5,681,480	44,195,351	49,876,831
June 30, 2083	0	536,446,765	536,446,765	0	5,236,075	46,385,545	51,621,620
June 30, 2084	0	552,540,168	552,540,168	0	4,805,797	48,643,794	53,449,591
June 30, 2085	0	569,116,373	569,116,373	0	4,380,009	50,971,410	55,351,419
June 30, 2086	0	586,189,864	586,189,864	0	3,965,094	53,387,134	57,352,228
June 30, 2087	0	603,775,560	603,775,560	0	3,563,388	55,870,532	59,433,920
June 30, 2088	0	621,888,827	621,888,827	0	3,179,645	58,435,661	61,615,306
June 30, 2089	0	640,545,492	640,545,492	0	2,817,735	61,092,379	63,910,114
June 30, 2090	0	659,761,857	659,761,857	0	2,475,093	63,831,788	66,306,881
June 30, 2091	0	679,554,713	679,554,713	0	2,155,028	66,659,310	68,814,338
June 30, 2092	0	699,941,354	699,941,354	0	1,858,871	69,581,538	71,440,409
June 30, 2093	0	720,939,595	720,939,595	0	1,587,437	72,600,983	74,188,420
June 30, 2094	0	742,567,783	742,567,783	0	1,341,237	75,722,700	77,063,937

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY NET POSITION PROJECTION DISCLOSURES

Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Employer Share of Benefit Payments for Current Plan Members	III. Contributions to Trust for Current Plan Members beyond Pay-as-you-go	IV. Gross Contributions to Trust for Current Plan Members [II. + III.]	V. Administrative Expenses Withdrawn from the Trust for Current Plan Members	VI. Benefit Payments Withdrawn from the Trust for Current Plan Members	VII. Trust Current Plan Members [V. + VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2020	812,150	8,885,903	20,000	8,905,903	0	8,885,903	8,885,903	13,417	845,567
June 30, 2021	845,567	9,222,317	36,933	9,259,250	0	9,222,317	9,222,317	19,977	902,477
June 30, 2022	902,477	9,807,152	17,083	9,824,235	0	9,807,152	9,807,152	22,774	942,334
June 30, 2023	942,334	10,248,169	15,904	10,264,073	0	10,248,169	10,248,169	23,756	981,994
June 30, 2024	981,994	10,676,270	14,780	10,691,050	0	10,676,270	10,676,270	24,733	1,021,507
June 30, 2025	1,021,507	11,250,093	13,743	11,263,836	0	11,250,093	11,250,093	25,708	1,060,958
June 30, 2026	1,060,958	11,762,439	12,783	11,775,222	0	11,762,439	11,762,439	26,683	1,100,424
June 30, 2027	1,100,424	12,356,115	11,867	12,367,982	0	12,356,115	12,356,115	27,658	1,139,949
June 30, 2028	1,139,949	13,017,088	11,011	13,028,099	0	13,017,088	13,017,088	28,636	1,179,596
June 30, 2029	1,179,596	13,664,738	10,131	13,674,869	0	13,664,738	13,664,738	29,616	1,219,343
June 30, 2030	1,219,343	14,168,628	9,346	14,177,974	0	14,168,628	14,168,628	30,600	1,259,289
June 30, 2031	1,259,289	14,852,024	8,608	14,860,632	0	14,852,024	14,852,024	31,589	1,273,001
June 30, 2032	1,273,001	15,495,702	7,909	15,503,611	0	15,495,702	15,495,702	31,923	1,244,870
June 30, 2033	1,244,870	15,870,374	7,261	15,877,635	0	15,870,374	15,870,374	31,212	1,155,679
June 30, 2034	1,155,679	16,330,388	6,676	16,337,064	0	16,330,388	16,330,388	28,975	979,645
June 30, 2035	979,645	16,787,332	6,102	16,793,434	0	16,787,332	16,787,332	24,567	690,918
June 30, 2036	690,918	17,002,059	5,600	17,007,659	0	17,002,059	17,002,059	17,343	310,648
June 30, 2037	310,648	17,196,336	5,137	17,201,473	0	17,196,336	17,196,336	7,830	12,967
June 30, 2038	12,967	17,518,088	4,685	17,522,773	0	17,518,088	17,518,088	382	5,067
June 30, 2039	5,067	17,924,410	4,284	17,928,694	0	17,924,410	17,924,410	180	4,464
June 30, 2040	4,464	18,112,846	3,905	18,116,751	0	18,112,846	18,112,846	160	4,065
June 30, 2041	4,065	18,299,407	3,551	18,302,958	0	18,299,407	18,299,407	146	3,697
June 30, 2042	3,697	18,450,973	3,230	18,454,203	0	18,450,973	18,450,973	133	3,363
June 30, 2043	3,363	18,606,251	2,955	18,609,206	0	18,606,251	18,606,251	121	3,076
June 30, 2044	3,076	18,727,091	2,715	18,729,806	0	18,727,091	18,727,091	111	2,826
June 30, 2045	2,826	18,790,493	2,476	18,792,969	0	18,790,493	18,790,493	101	2,577
June 30, 2046	2,577	18,725,233	2,254	18,727,487	0	18,725,233	18,725,233	92	2,346
June 30, 2047	2,346	18,734,196	2,028	18,736,224	0	18,734,196	18,734,196	84	2,112
June 30, 2048	2,112	18,727,090	1,833	18,728,923	0	18,727,090	18,727,090	76	1,909
June 30, 2049	1,909	18,655,985	1,643	18,657,628	0	18,655,985	18,655,985	68	1,711
June 30, 2050	1,711	18,464,950	1,457	18,466,407	0	18,464,950	18,464,950	61	1,518
June 30, 2051	1,518	18,272,003	1,281	18,273,284	0	18,272,003	18,272,003	54	1,335
June 30, 2052	1,335	18,143,159	1,113	18,144,272	0	18,143,159	18,143,159	47	1,160
June 30, 2053	1,160	17,876,752	963	17,877,715	0	17,876,752	17,876,752	41	1,004
June 30, 2054	1,004	17,444,378	828	17,445,206	0	17,444,378	17,444,378	35	863
June 30, 2055	863	17,066,613	695	17,067,308	0	17,066,613	17,066,613	30	725
June 30, 2056	725	16,593,463	576	16,594,039	0	16,593,463	16,593,463	25	601
June 30, 2057	601	16,064,802	471	16,065,273	0	16,064,802	16,064,802	21	492
June 30, 2058	492	15,626,931	376	15,627,307	0	15,626,931	15,626,931	17	393
June 30, 2059	393	15,200,574	293	15,200,867	0	15,200,574	15,200,574	13	306

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

FIDUCIARY POSITION PROJECTION DISCLOSURES (CONTINUED)

Table 2: Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Employer Share of Benefit Payments for Current Plan Members	III. Contributions to Trust for Current Plan Members beyond Pay-as-you-go	IV. Gross Contributions to Trust for Current Plan Members [II. + III.]	V. Administrative Expenses Withdrawn from the Trust for Current Plan Members	VI. Benefit Payments Withdrawn from the Trust for Current Plan Members	VII. Trust Withdrawals for Current Plan Members [V. +VI.]	VIII. Investment Earnings	IX. Ending Fiduciary Net Position for Current Plan Members
June 30, 2060	306	14,783,426	228	14,783,654	0	14,783,426	14,783,426	10	238
June 30, 2061	238	14,347,055	168	14,347,223	0	14,347,055	14,347,055	8	176
June 30, 2062	176	13,856,810	123	13,856,933	0	13,856,810	13,856,810	6	129
June 30, 2063	129	13,447,093	88	13,447,181	0	13,447,093	13,447,093	4	92
June 30, 2064	92	13,020,679	63	13,020,742	0	13,020,679	13,020,679	3	66
June 30, 2065	66	12,627,129	45	12,627,174	0	12,627,129	12,627,129	2	47
June 30, 2066	47	12,271,482	28	12,271,510	0	12,271,482	12,271,482	2	30
June 30, 2067	30	11,924,058	11	11,924,069	0	11,924,058	11,924,058	1	12
June 30, 2068	12	11,538,653	4	11,538,657	0	11,538,653	11,538,653	0	4
June 30, 2069	4	11,149,872	1	11,149,873	0	11,149,872	11,149,872	0	1
June 30, 2070	1	10,761,989	1	10,761,990	0	10,761,989	10,761,989	0	1
June 30, 2071	1	10,373,361	0	10,373,361	0	10,373,361	10,373,361	0	0
June 30, 2072	0	9,980,304	0	9,980,304	0	9,980,304	9,980,304	0	0
June 30, 2073	0	9,563,875	0	9,563,875	0	9,563,875	9,563,875	0	0
June 30, 2074	0	9,158,884	0	9,158,884	0	9,158,884	9,158,884	0	0
June 30, 2075	0	8,729,297	0	8,729,297	0	8,729,297	8,729,297	0	0
June 30, 2076	0	8,308,677	0	8,308,677	0	8,308,677	8,308,677	0	0
June 30, 2077	0	7,894,993	0	7,894,993	0	7,894,993	7,894,993	0	0
June 30, 2078	0	7,448,220	0	7,448,220	0	7,448,220	7,448,220	0	0
June 30, 2079	0	7,008,273	0	7,008,273	0	7,008,273	7,008,273	0	0
June 30, 2080	0	6,559,751	0	6,559,751	0	6,559,751	6,559,751	0	0
June 30, 2081	0	6,116,627	0	6,116,627	0	6,116,627	6,116,627	0	0
June 30, 2082	0	5,681,480	0	5,681,480	0	5,681,480	5,681,480	0	0
June 30, 2083	0	5,236,075	0	5,236,075	0	5,236,075	5,236,075	0	0
June 30, 2084	0	4,805,797	0	4,805,797	0	4,805,797	4,805,797	0	0
June 30, 2085	0	4,380,009	0	4,380,009	0	4,380,009	4,380,009	0	0
June 30, 2086	0	3,965,094	0	3,965,094	0	3,965,094	3,965,094	0	0
June 30, 2087	0	3,563,388	0	3,563,388	0	3,563,388	3,563,388	0	0
June 30, 2088	0	3,179,645	0	3,179,645	0	3,179,645	3,179,645	0	0
June 30, 2089	0	2,817,735	0	2,817,735	0	2,817,735	2,817,735	0	0
June 30, 2090	0	2,475,093	0	2,475,093	0	2,475,093	2,475,093	0	0
June 30, 2091	0	2,155,028	0	2,155,028	0	2,155,028	2,155,028	0	0
June 30, 2092	0	1,858,871	0	1,858,871	0	1,858,871	1,858,871	0	0
June 30, 2093	0	1,587,437	0	1,587,437	0	1,587,437	1,587,437	0	0
June 30, 2094	0	1,341,237	0	1,341,237	0	1,341,237	1,341,237	0	0

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments for Current Plan Members	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments [II. - III.]	V. Present Value of Funded Benefit Payments using the Long-Term Rate of Return [2.50%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [2.66%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [2.66%]	
June 30, 2020	812,150	8,885,903	812,150	8,073,753	812,150	8,073,753	8,885,903	Sum of Column V.
June 30, 2021	845,567	9,222,317	845,567	8,376,750	824,943	8,159,683	8,983,495	14,843,361
June 30, 2022	902,477	9,807,152	902,477	8,904,675	858,991	8,449,160	9,305,795	
June 30, 2023	942,334	10,248,169	942,334	9,305,835	875,051	8,600,992	9,472,446	Sum of Column VI.
June 30, 2024	981,994	10,676,270	981,994	9,694,276	889,638	8,727,830	9,612,597	434,535,017
June 30, 2025	1,021,507	11,250,093	1,021,507	10,228,586	902,863	8,970,244	9,866,942	
June 30, 2026	1,060,958	11,762,439	1,060,958	10,701,481	914,861	9,141,770	10,049,146	Sum of Column VII.
June 30, 2027	1,100,424	12,356,115	1,100,424	11,255,691	925,748	9,366,046	10,282,980	[V. + VI.]
June 30, 2028	1,139,949	13,017,088	1,139,949	11,877,139	935,609	9,627,060	10,552,520	449,378,378
June 30, 2029	1,179,596	13,664,738	1,179,596	12,485,142	944,536	9,857,642	10,790,683	
June 30, 2030	1,219,343	14,168,628	1,219,343	12,949,285	952,549	9,959,169	10,898,851	
June 30, 2031	1,259,289	14,852,024	1,259,289	13,592,735	959,761	10,183,144	11,128,685	
June 30, 2032	1,273,001	15,495,702	1,273,001	14,222,701	946,547	10,378,984	11,310,317	
June 30, 2033	1,244,870	15,870,374	1,244,870	14,625,504	903,054	10,396,361	11,283,815	
June 30, 2034	1,155,679	16,330,388	1,155,679	15,174,709	817,950	10,507,239	11,310,208	
June 30, 2035	979,645	16,787,332	979,645	15,807,687	676,411	10,661,892	11,325,596	
June 30, 2036	690,918	17,002,059	690,918	16,311,141	465,420	10,716,378	11,173,422	
June 30, 2037	310,648	17,196,336	310,648	16,885,688	204,156	10,806,379	11,008,443	
June 30, 2038	12,967	17,518,088	12,967	17,505,121	8,314	10,912,500	10,924,007	
June 30, 2039	5,067	17,924,410	5,067	17,919,343	3,170	10,881,254	10,887,933	
June 30, 2040	4,464	18,112,846	4,464	18,108,382	2,724	10,711,104	10,717,477	
June 30, 2041	4,065	18,299,407	4,065	18,295,342	2,420	10,541,268	10,547,467	
June 30, 2042	3,697	18,450,973	3,697	18,447,276	2,147	10,353,384	10,359,427	
June 30, 2043	3,363	18,606,251	3,363	18,602,888	1,906	10,170,169	10,176,082	
June 30, 2044	3,076	18,727,091	3,076	18,724,015	1,701	9,971,133	9,976,940	
June 30, 2045	2,826	18,790,493	2,826	18,787,667	1,524	9,745,769	9,751,479	
June 30, 2046	2,577	18,725,233	2,577	18,722,656	1,356	9,460,377	9,465,964	
June 30, 2047	2,346	18,734,196	2,346	18,731,850	1,204	9,219,755	9,225,246	
June 30, 2048	2,112	18,727,090	2,112	18,724,978	1,058	8,977,549	8,982,940	
June 30, 2049	1,909	18,655,985	1,909	18,654,076	933	8,711,801	8,717,093	
June 30, 2050	1,711	18,464,950	1,711	18,463,239	816	8,399,236	8,404,404	
June 30, 2051	1,518	18,272,003	1,518	18,270,485	706	8,096,172	8,101,216	
June 30, 2052	1,335	18,143,159	1,335	18,141,824	606	7,830,840	7,835,781	
June 30, 2053	1,160	17,876,752	1,160	17,875,592	514	7,515,979	7,520,787	
June 30, 2054	1,004	17,444,378	1,004	17,443,374	434	7,144,195	7,148,838	
June 30, 2055	863	17,066,613	863	17,065,750	364	6,808,414	6,812,909	
June 30, 2056	725	16,593,463	725	16,592,738	298	6,448,168	6,452,494	
June 30, 2057	601	16,064,802	601	16,064,201	241	6,081,002	6,085,149	
June 30, 2058	492	15,626,931	492	15,626,439	193	5,762,007	5,766,002	
June 30, 2059	393	15,200,574	393	15,200,181	150	5,459,593	5,463,443	

APPENDIX I – LIABILITIES, ASSETS, & CASH FLOWS

BENEFIT PAYMENT PROJECTION DISCLOSURES (CONTINUED)

Table 3: Actuarial Present Values of Projected Benefit Payments using a July 1, 2019 Valuation Date

For the Period Ending on the Measurement Date	I. Beginning Fiduciary Net Position for Current Plan Members	II. Benefit Payments for Current Plan Members	III. Funded Portion of Benefit Payments	IV. Unfunded Portion of Benefit Payments [II. - III.]	V. Present Value of Funded Benefit Payments using the Long-Term Rate of Return [2.50%]	VI. Present Value of Unfunded Benefit Payments using the Municipal Bond Rate [2.66%]	VII. Present Value of Benefit Payments using the Single Equivalent Discount Rate [2.66%]
June 30, 2060	306	14,783,426	306	14,783,120	114	5,172,200	5,175,911
June 30, 2061	238	14,347,055	238	14,346,817	86	4,889,478	4,893,051
June 30, 2062	176	13,856,810	176	13,856,634	62	4,600,049	4,603,473
June 30, 2063	129	13,447,093	129	13,446,964	45	4,348,372	4,351,670
June 30, 2064	92	13,020,679	92	13,020,587	31	4,101,387	4,104,559
June 30, 2065	66	12,627,129	66	12,627,063	22	3,874,362	3,877,420
June 30, 2066	47	12,271,482	47	12,271,435	15	3,667,676	3,670,629
June 30, 2067	30	11,924,058	30	11,924,028	9	3,471,493	3,474,344
June 30, 2068	12	11,538,653	12	11,538,641	4	3,272,244	3,274,984
June 30, 2069	4	11,149,872	4	11,149,868	1	3,080,055	3,082,686
June 30, 2070	1	10,761,989	1	10,761,988	0	2,895,870	2,898,392
June 30, 2071	1	10,373,361	1	10,373,360	0	2,718,966	2,721,382
June 30, 2072	0	9,980,304	0	9,980,304	0	2,548,154	2,550,463
June 30, 2073	0	9,563,875	0	9,563,875	0	2,378,557	2,380,753
June 30, 2074	0	9,158,884	0	9,158,884	0	2,218,809	2,220,897
June 30, 2075	0	8,729,297	0	8,729,297	0	2,059,939	2,061,913
June 30, 2076	0	8,308,677	0	8,308,677	0	1,909,874	1,911,738
June 30, 2077	0	7,894,993	0	7,894,993	0	1,767,756	1,769,512
June 30, 2078	0	7,448,220	0	7,448,220	0	1,624,504	1,626,146
June 30, 2079	0	7,008,273	0	7,008,273	0	1,488,940	1,490,470
June 30, 2080	0	6,559,751	0	6,559,751	0	1,357,535	1,358,955
June 30, 2081	0	6,116,627	0	6,116,627	0	1,233,030	1,234,340
June 30, 2082	0	5,681,480	0	5,681,480	0	1,115,632	1,116,837
June 30, 2083	0	5,236,075	0	5,236,075	0	1,001,527	1,002,627
June 30, 2084	0	4,805,797	0	4,805,797	0	895,406	896,405
June 30, 2085	0	4,380,009	0	4,380,009	0	794,927	795,828
June 30, 2086	0	3,965,094	0	3,965,094	0	700,977	701,783
June 30, 2087	0	3,563,388	0	3,563,388	0	613,636	614,353
June 30, 2088	0	3,179,645	0	3,179,645	0	533,365	533,997
June 30, 2089	0	2,817,735	0	2,817,735	0	460,409	460,962
June 30, 2090	0	2,475,093	0	2,475,093	0	393,942	394,423
June 30, 2091	0	2,155,028	0	2,155,028	0	334,112	334,525
June 30, 2092	0	1,858,871	0	1,858,871	0	280,728	281,080
June 30, 2093	0	1,587,437	0	1,587,437	0	233,524	233,821
June 30, 2094	0	1,341,237	0	1,341,237	0	192,193	192,441

APPENDIX II – PLAN PROVISIONS

<u>Plan Year</u>	July 1 through June 30.
<u>Premium Effective Date</u>	Medicare Supplement Plans: effective January 1, 2021 (effective July 1, 2020 for retired teachers) Non-Medicare Plans: effective July 1, 2020 Dental Plans: N/A
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Benefits Offered</u>	Comprehensive Medical Insurance and \$5,000 of Life Insurance.
<u>Medicare Part A</u>	To the best of our knowledge the City does not pay any Medicare Part A premiums or penalties.
<u>Medicare Part B</u>	Medicare Part B Premium reimbursements by the City were not reflected in this valuation. Medicare Part B Penalty reimbursements by the City were not reflected in this valuation.
<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	Non-GIC	GIC
Medical	<ul style="list-style-type: none"> • Retirees pay 23% of premiums for HMO plans • Retirees pay 35% of premiums for all other plans 	<ul style="list-style-type: none"> • Teachers who retired on or before July 1, 1990 pay 10% of premiums • All other retired teachers pay 15% of premiums
Dental	100%	100%
Life	<ul style="list-style-type: none"> • Retirees will pay 50% of premiums 	<ul style="list-style-type: none"> • Teachers who retired on or before July 1, 1990 pay 10% of premiums • All other retired teachers pay 15% of premiums

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, set forward 1 year for 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, set forward 1 year for 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 service 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

2.75% per annum (previously 2.75%, used in the calculation of the Interest Cost)

Net Long Term Rate of Return

2.50% (based on investment policy)

Municipal Bond Rate

2.66% as of June 30, 2020 (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, 2020

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

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

Service	Male	Female
0	15.00%	15.00%
5	7.60%	7.60%
10	5.40%	5.40%
15	3.30%	3.30%
20	2.00%	2.00%

Public Safety Employees

Service	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%

Permanent Disability Rates

Age	Standard	Teachers	Public Safety
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 & ASSUMPTIONS

Trend Rate

Dental Plans: N/A

Medicare Part A & B Premiums & Penalties: N/A

Medical Plans: Rates were developed using the SOA Getzen Model of Long-Run Medical Cost Trends with the following model input variables:

Inflation (CPI):	2.50%
Real GDP (per capita):	1.10%
Excess Medical Cost Growth:	1.10%
Expected Health Share of GDP in 2029:	20%
Health Share of GDP Resistance Point:	22.5%
Year for Limiting Cost Growth to GDP Growth:	2060

See below for a table of trend rates for select years:

Year	Rate
2020 - 2023	4.50%
2024	4.54%
2025	4.59%
2026	4.63%
2027	4.68%
2028	4.72%
2029 - 2040	4.77%
2045	4.53%
2050	4.43%
2055	4.00%
2060	3.63%
2061+	3.60%

APPENDIX III – ACTUARIAL METHODS & ASSUMPTIONS

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.

Medicare Eligibility

It was assumed that retirees who were over age 66 on the valuation date and were enrolled in an Active plan were ineligible for Medicare and all other participants would be eligible for Medicare at age 65, absent any information to the contrary.

Compensation Increases

3.00% per year.

Inflation Rate

2.50% per year.

COVID-19

We recognize that COVID-19 may impact plan experience. We have reviewed the assumptions used in this report. Based on the data that is currently available, we have not made any adjustments to these assumptions to reflect the impact of COVID-19. We will continue to monitor the impact of COVID-19 to determine if adjustments to valuation assumptions are warranted.

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, 2020</u>	<u>June 30, 2019</u>
I. Total OPEB Liability	356,039,931	268,844,543
II. Total OPEB Liability (Excluding Implicit Subsidy)	<u>273,004,347</u>	<u>260,017,081</u>
III. Liability from Implicit Subsidy [I. - II.]	83,035,584	8,827,462

	For the Measurement Period Ending	
Impact on Payments	<u>June 30, 2020</u>	<u>June 30, 2019</u>
IV. Employer Payments (Including Implicit Subsidy)	8,885,903	6,658,592
V. Actual Employer Payments	<u>7,042,212</u>	<u>6,323,078</u>
VI. Implicit Subsidy [IV. - V.]	1,843,691	335,514

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	3,409	2,148	44 & Under	7,001	4,588	65 to 69	3,196	3,282
25 to 29	5,029	2,236	45 to 49	7,690	5,792	70 to 74	3,771	3,934
30 to 34	6,354	2,807	50 to 54	9,047	7,629	75 to 79	4,374	4,645
35 to 39	6,546	3,523	55 to 59	10,458	9,918	80 to 84	5,017	5,338
40 to 44	6,700	4,390	60 to 64	12,445	12,727	85 to 89	5,609	5,947
45 to 49	7,359	5,543	65 to 69	14,918	15,875	90 & Over	5,609	5,947
50 to 54	8,657	7,300	70 to 74	17,592	19,024			
55 to 59	10,008	9,491	75 to 79	20,431	22,469			
60 to 64	11,909	12,179	80 to 84	23,425	25,827			
65 to 69	14,276	15,191	85 to 89	26,739	29,562			
70 & Over	16,834	18,205	90 & Over	26,739	29,562			

*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	4,305	2,714	44 & Under	8,844	5,795	65 to 69	3,327	3,416
25 to 29	6,352	2,825	45 to 49	9,714	7,317	70 to 74	3,925	4,095
30 to 34	8,027	3,545	50 to 54	11,428	9,637	75 to 79	4,554	4,835
35 to 39	8,269	4,451	55 to 59	13,211	12,528	80 to 84	5,223	5,558
40 to 44	8,463	5,545	60 to 64	15,720	16,077	85 to 89	5,838	6,190
45 to 49	9,296	7,002	65 to 69	18,845	20,054	90 & Over	5,838	6,190
50 to 54	10,936	9,222	70 to 74	22,223	24,032			
55 to 59	12,642	11,989	75 to 79	25,808	28,383			
60 to 64	15,043	15,385	80 to 84	29,591	32,624			
65 to 69	18,033	19,190	85 to 89	33,777	37,343			
70 & Over	21,266	22,997	90 & Over	33,777	37,343			

*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, 2020 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, 2019	July 1, 2017
A. Average Age at Hire	33.47	34.26
B. Average Service	<u>12.19</u>	<u>12.09</u>
C. Average Current Age	45.66	46.35

Retired Employees & Spouses

Valuation Date	July 1, 2019	July 1, 2017
A. Under Age 65	367	250
B. Age 65 & Over	<u>1,202</u>	<u>1,055</u>
C. Total	1,569	1,305

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	39	5								44
25-29	60	20	2							82
30-34	71	48	18	2						139
35-39	43	24	34	22	2					125
40-44	50	16	19	52	10					147
45-49	31	28	22	45	50	9	1			186
50-54	30	21	34	44	36	21	10	2		198
55-59	22	16	25	36	38	10	12	5		164
60-64	8	12	12	27	21	10	4	2		96
65-69	3	3	1	3	4	4			1	19
70+				2		1	1			4
Total	357	193	167	233	161	55	28	9	1	1204

APPENDIX IV – PLAN DEMOGRAPHICS

Plan Offerings - Non-GIC

Number of Contracts

	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
HMO Blue	380		705	1,085
HMO HNE	3		7	10
HMO Wise Max HNE	5		1	6
PPO Blue	12		4	16
PPO HNE	1			1
HNE Medicare Secure	2	3		5
Managed Blue	37	35		72
Medex II	199	166		365
Total	639	204	717	1,560

Per Contract Costs (monthly)

	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
HMO Blue	637.61		1,667.64
HMO HNE	637.61		1,667.64
HMO Wise Max HNE	493.03		1,263.78
PPO Blue	992.96		2,651.55
PPO HNE	992.96		2,651.55
HNE Medicare Secure	334.00	668.00	
Managed Blue	383.97	767.94	
Medex II	385.46	770.92	
Dental Plan	N/A		N/A

APPENDIX IV – PLAN DEMOGRAPHICS

Plan Offerings - GIC

	Number of Contracts			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
Fallon Select	1		1	2
Health New England	13		16	29
Tufts Navigator	2		1	3
Unicare Basic w/ CIC	22		13	35
Unicare Basic w/o CIC				0
Unicare Comm Choice	2		3	5
Unicare Plus	4		9	13
Unicare OME w/ CIC	145	142		287
Unicare OME w/o CIC				0
Tufts Medicare Complement	1	7		8
Tufts Medicare Preferred	3	1		4
HNE MedPlus HMO	33	44		77
Harvard Senior	<u>1</u>	<u>2</u>		<u>3</u>
Total	227	196	43	466

Per Contract Costs (monthly)

	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Fallon Select	836.19		2,033.04
Health New England	594.29		1,414.80
Tufts Navigator	799.04		1,951.46
Unicare Basic w/ CIC	1,163.76		2,582.71
Unicare Basic w/o CIC	1,107.42		2,454.41
Unicare Comm Choice	552.57		1,368.05
Unicare Plus	723.74		1,722.50
Unicare OME w/ CIC	399.86	799.72	
Unicare OME w/o CIC	388.80	777.60	
Tufts Medicare Complement	383.88	767.76	
Tufts Medicare Preferred	325.13	650.26	
HNE MedPlus HMO	404.80	809.60	
Harvard Senior	404.04	808.08	
Dental Plan	N/A		N/A

APPENDIX IV – PLAN DEMOGRAPHICS

	Active Plan Average Premium Calculation (Non-GIC)					
	Single	Two-Person	Family	Number of Participants	Total Premiums Paid	Claims Without Children
HMO Blue	380		705	1,790	17,015,736.00	13,695,862.80
HMO HNE	3		7	17	163,035.72	130,072.44
HMO Wise Max HNE	5		1	7	44,747.16	41,414.52
PPO Blue	12		4	20	270,260.64	238,310.40
PPO HNE	1			1	11,915.52	11,915.52
Total	401	0	717	1,835	17,505,695.04	14,117,575.68
Blended Average Monthly Rate:						\$ 641.13

	Medicare Supplement Plan Average Premium Calculation (Non-GIC)					
	Single	Two-Person	Family	Number of Participants	Total Premiums Paid	Claims Without Children
HNE Medicare Secure	2	3		8	32,064.00	32,064.00
Managed Blue	37	35		107	493,017.48	493,017.48
Medex II	199	166		531	2,456,151.12	2,456,151.12
Total	238	204	0	646	2,981,232.60	2,981,232.60
Blended Average Monthly Rate:						\$ 384.58

APPENDIX IV – PLAN DEMOGRAPHICS

	Active Plan Average Premium Calculation (GIC)					
	Single	Two-Person	Family	Number of Participants	Total Premiums Paid	Claims Without Children
Fallon Select	1		1	3	34,430.76	30,102.84
Health New England	13		16	45	364,350.84	320,916.60
Tufts Navigator	2		1	4	42,594.48	38,353.92
Unicare Basic w/ CIC	22		13	48	675,246.84	637,873.92
Unicare Basic w/o CIC				0	0.00	0.00
Unicare Comm Choice	2		3	8	62,511.48	53,046.72
Unicare Plus	4		9	22	220,769.52	191,067.36
Total	44	0	43	130	1,399,903.92	1,271,361.36
Blended Average Monthly Rate:						\$ 814.98

	Medicare Supplement Plan Average Premium Calculation (GIC)					
	Single	Two-Person	Family	Number of Participants	Total Premiums Paid	Claims Without Children
Unicare OME w/ CIC	145	142		429	2,001,542.40	2,001,542.40
Unicare OME w/o CIC				0	0.00	0.00
Tufts Medicare Complement	1	7		15	69,098.40	69,098.40
Tufts Medicare Preferred	3	1		5	19,507.80	19,507.80
HNE MedPlus HMO	33	44		121	587,769.60	587,769.60
Harvard Senior	1	2		5	24,242.40	24,242.40
Total	183	196	0	575	2,702,160.60	2,702,160.60
Blended Average Monthly Rate:						\$ 391.58

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.

APPENDIX VI – ASOP 41 DISCLOSURES

The Actuarial Standards Board (the “ASB”), vested by the U.S.-based actuarial organizations¹, promulgates actuarial standards of practice (“ASOPs”) for use by actuaries when providing professional services in the United States. Each of these organizations requires its members, through its Code of Professional Conduct², to observe the ASOPs of the ASB when practicing in the United States.

The ASOPs are not narrowly prescriptive and neither dictate a single approach nor mandate a particular outcome. ASOPs are intended to provide actuaries with a framework for performing professional assignments and to offer guidance on relevant issues, recommended practices, documentation, and disclosure. Each ASOP articulates a process of analysis, documentation, and disclosure that, in the ASB’s judgment, constitutes appropriate practice within the scope and purpose of the ASOP.

ASOP 41 provides guidance to actuaries with respect to actuarial communications and requires certain disclosures which are contained in this Appendix.

Identification of the Responsible Actuary

The responsible actuary is Parker Elmore, ASA, EA, FCA, MAAA of Odyssey Advisors. This actuary is available to provide supplementary information and explanation.

Identification of Actuarial Documents

The date of this document is April 12, 2021 and its subject is the City of Westfield’s GASB 75 OPEB liabilities.

¹The American Academy of Actuaries (the “Academy”), the American Society of Pension Professionals and Actuaries, the Casualty Actuarial Society, the Conference of Consulting Actuaries, and the Society of Actuaries.

² These organizations adopted identical *Codes of Professional Conduct* effective January 1, 2001

APPENDIX VI – ASOP 41 DISCLOSURES

Disclosures in Actuarial Reports

- ✓ The contents of this report are intended for the use of the officers, employees, and elected officials of the City and the City's appointed auditor. The City may distribute this report to those parties that have a legal right to require the City to provide it, in which case it will be provided in its entirety including all assumptions, caveats, and limitations. In addition, we request that the City notify Odyssey Advisors to whom it was distributed.
- ✓ The purpose of this engagement was to provide the City with analysis of the GASB 75 OPEB liabilities.
- ✓ The responsible actuary identified above is qualified as specified in the *Qualification Standards* of the American Academy of Actuaries.
- ✓ Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.
- ✓ Actuarial computations under GASB 75 are for purposes of fulfilling financial accounting requirements of the City. Determinations for purposes other than meeting these financial accounting requirements may be significantly different from the results contained in this report. These communications should not be relied upon for any other purpose.
- ✓ The City of Westfield has agreed to pay Odyssey Advisors a fee for preparing this report. Other than with regard to that contract, we are financially and organizationally independent from the City and any entity or individual related to the City. There is nothing in our relationship with the City that would impair or seem to impair the objectivity of our work.
- ✓ The City provided the employee/retiree data, premium rates and other information used to prepare our report. We have reviewed the data for reasonableness but have not audited it. To the extent that there are material inaccuracies in the data, our results may be accordingly affected.
- ✓ The date through which data or other information has been considered in developing the findings included in this report is June 30, 2020.
- ✓ The various documents comprising the actuarial report are contained within the document to which these disclosures are attached.

APPENDIX VI – ASOP 41 DISCLOSURES

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.

Actuarial Findings

The actuarial findings of the report can be found in the report to which these disclosures are attached.

Methods, Procedures, Assumptions, and Data

The methods, procedures, assumptions and data used by the actuary can be found in the report to which these disclosures are attached.

Assumptions or Methods Prescribed by Law

While not legally binding, our determinations were made in accordance with our understanding of Statement No. 75 of the Governmental Accounting Standards Board. Actuarial computations under GASB 75 are for purposes of fulfilling employer accounting requirements. Determinations for purposes other than meeting such requirements may be significantly different from these results. Accordingly, additional determinations may be needed for other purposes.

Responsibility for Assumptions and Methods

The actuary does not disclaim responsibility for any material assumption(s) or method(s).

Deviation from the Guidance of an ASOP

The actuary has not deviated materially from the guidance set forth in an applicable ASOP.

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.