



TOWN OF LITTLETON, MASSACHUSETTS

OTHER POSTEMPLOYMENT BENEFITS PROGRAM

FINANCIAL REPORTING AND DISCLOSURES
Governmental Accounting Standards Board
Statements 74 and 75

**Disclosures as of
June 30, 2024**

KMS Actuaries, LLC
52 Hunt Road
Kingston, NH 03848

October, 2024



October 25, 2024

Ms. Robin Healy
Treasurer/Collector/Assistant Finance Director
Town of Littleton
P.O. Box 1305
Littleton, MA 01460

Dear Robin:

We are pleased to present the enclosed report of the July 1, 2022 actuarial valuation of the retiree health care benefits for the Town of Littleton. The valuation was prepared in accordance with and for the purpose of financial reporting and disclosures as of June 30, 2024 under the following Governmental Accounting Standards Board (GASB) Statements:

- ◆ GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74)
- ◆ GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75)

Results are based on liabilities developed in an actuarial valuation performed as of July 1, 2022 and rolled forward to the plan's measurement date of June 30, 2024.

The Principal Valuation Results, including assets, liabilities and the development of future contributions, are provided in Section 1. The Notes to the Financial Statements and the Required Supplementary Information are provided in Sections 2 and 3, respectively. Employer Reporting Amounts under GASB 75 are provided in Section 4. The Summary of Plan Provisions and Actuarial Assumptions and Methods are shown in Sections 5 and 6, respectively. Section 7 summarizes the demographic profile of active members and retired members, covered spouses and survivors. Finally, a Glossary of Terms is provided in Section 8.

Our calculations are based on member census data and other information provided by the Town of Littleton as well as health plan rates provided by the Town. Although we did not audit the data used in the valuation and disclosure calculations, we believe that the information is complete and reliable.

Liabilities presented in this report are based on a discount rate of 6.25%, the rate that reflects the long-term expected rate of return on OPEB plan assets. The long-term expected rate of return is based on the target allocations provided in the investment policy statement and long-term expected rates of return by asset class provided by the Town's investment consultant, Bartholomew & Company.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions other than those explicitly applicable to the postemployment benefit plans are consistent with those used by the Middlesex County and Massachusetts Teachers Retirement Systems' actuaries for the Retirement System pension valuations.

Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques. The potential range of future measurements was not assessed as it was outside the scope of the project.

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

This valuation report is intended for the sole use of the Town of Littleton and may only be provided to other parties in its entirety, unless expressly authorized by KMS Actuaries. Further, it is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

KMS Actuaries is completely independent of the Town of Littleton and any of its officers or key personnel. None of the actuaries signing this report or anyone closely associated with them has a relationship with the Town of Littleton, other than as consulting actuary for this assignment, that would impair our independence.

The expected claims, cost trend rates, and analysis of regulatory changes have been developed based on the expertise of the undersigned health and welfare actuary, Christopher E. Bean, ASA, MAAA. All other assumptions and methods have been selected based on the expertise of the undersigned pension actuaries, Linda L. Bournival, FSA, EA and Amanda J. Makarevich, FSA.

The undersigned credentialed actuaries agree that the analysis, assumptions and results are overall reasonable. They are Members of the American Academy of Actuaries and together meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

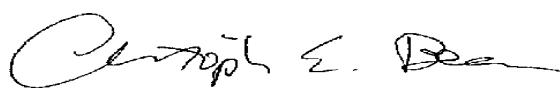
Respectfully submitted,



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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
SECTION 1 PRINCIPAL VALUATION RESULTS	5
Exhibit 1.1 - OPEB Trust Assets	
Exhibit 1.2 - Total OPEB Liability	
Exhibit 1.3 - Development of Actuarially Determined Employer Contributions	
SECTION 2 NOTES TO THE FINANCIAL STATEMENTS	8
Exhibit 2.1 - Plan Description	
Exhibit 2.2 - Net OPEB Liability	
SECTION 3 SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION	12
Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios	
Exhibit 3.2 - Investment Returns	
Exhibit 3.3 - Schedule of Employer Contributions	
SECTION 4 EMPLOYER REPORTING AMOUNTS UNDER GASB 75	19
Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources	
Exhibit 4.2 - OPEB Expense	
SECTION 5 SUMMARY OF PLAN PROVISIONS	22
SECTION 6 ACTUARIAL ASSUMPTIONS AND METHODS	23
SECTION 7 PLAN MEMBER INFORMATION	31
Exhibit 7.1 - Active Members by Age and Years of Service	
Exhibit 7.2 - Retired Members, Covered Spouses and Survivors	
SECTION 8 GLOSSARY OF TERMS	33
SECTION 9 BREAKOUT OF RESULTS BY DEPARTMENT	36
Appendix A CALCULATION OF SINGLE DISCOUNT RATE	
Appendix B SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES and DEFERRED INFLOWS OF RESOURCES	

EXECUTIVE SUMMARY

Purpose of Report

This report presents the results of the actuarial valuation of the Town of Littleton's retiree health care benefits as of July 1, 2022. The valuation was prepared in accordance with and for the purpose of financial reporting and disclosures as of June 30, 2024 under the following Governmental Accounting Standards Board (GASB) Statements:

- ◆ GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74)
- ◆ GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75)

The results as of the measurement date are based on a roll forward of the liabilities developed in the most recent actuarial valuation.

GASB Accounting Standards

In June 2015, the GASB approved two related Statements that significantly changed the way other postemployment benefits (OPEB) plans and governments account and report OPEB liabilities. GASB Statement No. 74 (GASB 74), *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, replaced the requirements of Statement No. 43 and GASB Statement No. 75 (GASB 75), *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, replaced the requirements of Statement No. 45.

The effective date for GASB 74 is for plan years beginning after June 15, 2016, which is the plan year ending June 30, 2017 for the Town of Littleton. The effective date for GASB 75 is for fiscal years beginning after June 15, 2017, which is the fiscal year ending June 30, 2018 for the Town of Littleton.

GASB 74 requires OPEB plans to present a statement of fiduciary net position (OPEB plan assets) and a statement of changes in fiduciary net position. Further, the statement requires that notes to financial statements include descriptive information such as the types of benefits provided, the classes of plan members covered and the authority under which benefit terms are established or may be amended. Finally, GASB 74 requires OPEB plans to present in required supplementary information the sources of the changes in the net OPEB liability and information about the actuarially determined contributions compared with the actual contributions made to the plan and related ratios.

GASB 74 and GASB 75 require projected benefit payments be discounted to their actuarial present value using the single rate that reflects (1) a long-term expected rate of return on OPEB plan investments to the extent that the OPEB plan's assets are sufficient to pay benefits and OPEB plan assets are expected to be invested using a strategy to achieve that return and (2) a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.

GASB 75 establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources and OPEB expense by state and local governments.

EXECUTIVE SUMMARY

Town of Littleton Other Postemployment Benefits Program

The Town of Littleton administers the retiree health care benefits program - a single-employer defined benefit plan that is used to provide postemployment benefits other than pensions (OPEB) for all permanent full-time employees. The Town provides health care benefits for retirees and their dependents. Benefits are provided through the Town, and the full cost of benefits is shared between the Town and retirees.

Summary of Principal Results

A summary of principal results from the current and prior measurement dates follows:

Measurement Date	June 30, 2024	June 30, 2023	% Change
Valuation Date	July 1, 2022	July 1, 2022	
Membership Data			
Active Plan Members	396	386	2.6%
Inactive Plan Members (excludes covered spouses)	190	176	8.0%
Total Plan Members	586	562	4.3%
Covered Spouses	100	89	12.4%
Covered Payroll	\$30,390,274	\$25,756,169	18.0%
Net OPEB Liability			
Discount Rate	6.25%	6.00%	
Total OPEB Liability (TOL)	\$37,106,839	\$35,946,001	3.2%
Fiduciary Net Position (FNP)	\$29,300,758	\$24,559,017	19.3%
Net OPEB Liability	\$7,806,081	\$11,386,984	(31.4%)
FNP as % of TOL	79.0%	68.3%	
OPEB Expense			
OPEB Expense	\$2,457,629	\$2,148,905	14.4%
Deferred Outflows	\$6,563,922	\$9,703,548	
Deferred Inflows	\$6,166,653	\$6,620,547	
Recognition Period (Years)	7.71	7.71	

EXECUTIVE SUMMARY

Demographic Experience Gain and Loss

In developing the Total OPEB Liability, various assumptions are made regarding future premium rates, mortality, retirement, disability and turnover rates. A comparison of the results of the current and prior measurements is made to determine how closely actual experience relates to expected. For the current measurement period, there is no experience gain or loss as the Total OPEB liability was developed from a roll forward of results of the most recent valuation.

OPEB Plan Investments Gain and Loss

Projected Earnings during the measurement period, shown in Exhibit 1.1, are developed on the OPEB Plan Investments using the prior long-term rate of return assumption and are compared to actual earnings. As shown in Exhibit 1.1, the gain of \$1,337,953 is the difference in the projected earnings of \$1,483,788 and actual earnings of \$2,821,741.

Changes of Assumptions

The discount rate changed from 6% as of June 30, 2023 to 6.25% as of June 30, 2024. All other assumptions are the same as those used in the prior measurement.

◆ Decrease due to change in Discount Rate	(1,247,000)
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All of the assumptions used in this valuation are shown in Section 6, Actuarial Assumptions and Methods.

Changes of Benefit Terms

All benefit terms are the same as those used in the prior measurement. A Summary of the Principal Plan Provisions is provided in Section 5.

Total OPEB Liability

The Total OPEB Liability as of the current measurement date, June 30, 2024, is \$37,106,839. The Total OPEB Liability as of the prior measurement date, June 30, 2023, was \$35,946,001. During the current measurement period ending June 30, 2024, the Total OPEB Liability increased by \$1,160,838, or 3.2%. The development of the Total OPEB Liability for the current measurement period is shown in Section 1, Exhibit 1.2.

Fiduciary Net Position

The Fiduciary Net Position is equal to the market value of assets and as of the current measurement date, June 30, 2024, is \$29,300,758. The Fiduciary Net Position as of the prior measurement date, June 30, 2023, was \$24,559,017. During the plan years ended June 30, 2024 and June 30, 2023, the actual rates of return were 11.41% and 8.51%, respectively. The expected long-term rate of return is 6.25%. The Fiduciary Net Position is shown in Section 1, Exhibit 1.1.

EXECUTIVE SUMMARY

Employer Future Period Contributions

Contributions will be made based on the actuarially determined contributions developed in the most recent actuarial valuation.

Discount Rate

As of the June 30, 2024 measurement date, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 6.25%.

OPEB Expense

The OPEB Expense for the current measurement period ending June 30, 2024, is \$2,457,629. Benefit changes are recognized immediately and experience gains and losses and assumption changes developed in this valuation are recognized over 7.71 years. Investment gains and losses are recognized over 5 years. The OPEB Expense for the prior measurement period was \$2,148,905. The development of the OPEB expense for the current measurement period is shown in Section 4, Exhibit 4.2.

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.1 - OPEB Trust Assets

The Town has established an irrevocable trust pursuant to Section 20 of Chapter 32B of the Massachusetts General Laws for the purpose of accumulating assets to prefund the OPEB liabilities. Plan assets segregated and restricted in an OPEB trust must be dedicated to providing plan benefits to retirees and beneficiaries in accordance with the terms of the plan and must be legally protected from creditors of the employer. Further, contributions from employers to the OPEB trust and earnings on those contributions must be irrevocable. Asset information for the current and prior fiscal years was provided by the Town and is presented below:

Fiscal Year Ended June 30	2024	2023
Trust Fund Composition at Fiscal Year-End		
Domestic Equity	\$11,163,589	\$9,848,166
International Equity	5,789,830	5,267,909
Domestic Bond	7,978,596	5,921,179
Alternative	2,833,383	2,171,017
International Bond	1,388,856	1,227,951
Cash & Equivalents	146,504	122,795
Total Market Value of Assets	<hr/> \$29,300,758	<hr/> \$24,559,017
Asset Activity		
Market value, beginning of year	\$24,559,017	\$20,124,047
Employer Premiums	1,432,800	1,310,029
OPEB Trust Contributions	1,920,000	2,625,985
Benefit Payments	(1,432,800)	(1,310,029)
Administrative Expenses	-	-
Investment Return	<hr/> 2,821,741	<hr/> 1,808,985
Market value, end of year	<hr/> \$29,300,758	<hr/> \$24,559,017
Money-Weighted Rate of Return	11.41%	8.51%
(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$1,483,788	\$1,382,480
Actual earnings	2,821,741	1,808,985
(Gain) / Loss on OPEB plan investments	<hr/> (\$1,337,953)	<hr/> (\$426,505)

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.2 - Total OPEB Liability

The Total OPEB Liability, developed using the Entry Age Normal funding method, is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service. The total OPEB liability as of the June 30, 2024 measurement date was developed from an actuarial valuation as of July 1, 2022 and rolled forward to the OPEB plan's fiscal year-end.

The Service Cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year. Only active employees who have not reached the age at which the probability of retirement is 100% incur a service cost.

Actuarial experience gains and losses arise from the difference between expected and actual experience, excluding amounts related to benefit changes and changes in assumptions or other inputs.

The development of the Total OPEB Liability from the beginning of the measurement period, June 30, 2023 to the end of the measurement period, June 30, 2024 is shown below:

Measurement Date	June 30, 2024
1. Total OPEB Liability, beginning of year:	
a. Actives	\$18,500,813
b. Retirees, Covered Spouses and Survivors	17,445,188
c. Total OPEB Liability at 6% (a. + b.)	\$35,946,001
2. Service Cost	\$1,629,547
3. Expected Benefit Payments	
a. Current retirees	(\$1,263,249)
b. Future retirees	(169,551)
c. Total (a. + b.)	(\$1,432,800)
4. Interest [6% x (1.c. + 2. + .5 x 3.c)]	\$2,211,549
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	\$0
7. Changes of assumptions or other inputs	(\$1,247,458)
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$20,330,624
b. Retirees, Covered Spouses and Survivors	16,776,215
c. Total OPEB Liability at 6.25% (a. + b.)	\$37,106,839

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

FYE June 30	(1) Normal Cost	(2) Actuarial Accrued Liability	(3) Expected Benefit Payments	(4) Actuarial Value of Assets	(5) Unfunded Actuarial Accrued Liability (2) - (4)	(6) Amortization Amount	(7) Interest	(8) ADEC (1) + (6) + (7)	(9) OPEB Trust Contributions	(10) Total Employer Contributions
2024	1,629,547	35,946,001	1,432,799	24,559,017	11,386,984	873,235	150,167	2,652,949	1,920,000	3,352,799
2025	1,593,622	37,106,839	1,549,311	29,300,758	7,806,081	623,489	138,569	2,355,680	806,369	2,355,680
2026	1,649,399	39,522,246	1,691,095	31,890,742	7,631,504	623,489	142,056	2,414,944	723,849	2,414,944
2027	1,707,128	42,001,732	1,769,938	34,555,717	7,446,015	623,619	145,672	2,476,419	706,481	2,476,419
2028	1,766,877	44,616,253	1,948,329	37,367,457	7,248,796	623,284	149,385	2,539,546	591,217	2,539,546
2029	1,828,718	47,273,784	2,157,013	40,234,178	7,039,606	623,526	153,265	2,605,509	448,496	2,605,509
2030	1,892,723	49,948,010	2,246,885	43,130,925	6,817,085	623,704	157,277	2,673,704	426,819	2,673,704
2031	1,958,968	52,764,742	2,273,246	46,184,275	6,580,467	623,150	161,382	2,743,500	470,254	2,743,500
2032	2,027,532	55,800,734	2,500,539	49,471,084	6,329,650	623,611	165,696	2,816,839	316,300	2,816,839
2033	2,098,496	58,865,036	2,696,722	52,802,369	6,062,667	623,731	170,139	2,892,366	195,644	2,892,366
2034	2,171,943	61,994,035	2,794,261	56,215,165	5,778,870	623,395	174,709	2,970,047	175,786	2,970,047
2035	2,247,961	65,296,093	2,974,756	59,818,402	5,477,691	623,173	179,446	3,050,580	75,824	3,050,580
2036	2,326,640	68,699,249	3,040,754	63,541,323	5,157,926	623,691	184,396	3,134,727	93,973	3,134,727
2037	2,408,072	72,330,669	3,170,498	67,513,045	4,817,624	623,237	189,457	3,220,766	50,268	3,220,766
2038	2,492,355	76,141,838	3,392,648	71,685,302	4,456,536	623,292	194,728	3,310,375	-	3,310,375
2039	2,579,587	80,051,768	3,445,233	75,978,946	4,072,822	623,709	200,206	3,403,502	-	3,403,502
2040	2,669,873	84,244,550	3,506,998	80,579,867	3,664,683	623,245	205,820	3,498,938	-	3,498,938
2041	2,763,319	88,731,644	3,621,712	85,500,116	3,231,528	623,847	211,698	3,598,864	-	3,598,864
2042	2,860,035	93,480,223	3,833,597	90,709,562	2,770,661	622,620	217,666	3,700,321	-	3,700,321
2043	2,960,136	98,409,943	4,016,343	96,127,650	2,282,293	623,577	223,982	3,807,695	-	3,807,695
2044	3,063,741	103,565,757	4,189,136	101,803,372	1,762,385	622,751	230,406	3,916,898	-	3,916,898
2045	3,170,972	108,975,779	4,257,336	107,764,918	1,210,861	624,155	237,195	4,032,322	-	4,032,322
2046	3,281,956	114,767,561	4,371,952	114,144,186	623,375	623,375	244,083	4,149,414	-	4,149,414
2047	3,396,824	120,921,107	4,300,961	120,921,107	-	-	212,302	3,609,126	-	3,609,126
2048	3,515,713	127,654,472	4,396,124	127,654,472	-	-	219,732	3,735,445	-	3,735,445
2049	3,638,763	134,836,901	4,470,912	134,836,901	-	-	227,423	3,866,186	-	3,866,186
2050	3,766,120	142,521,882	4,482,403	142,521,882	-	-	235,383	4,001,503	-	4,001,503
2051	3,897,934	150,810,647	4,611,566	150,810,647	-	-	243,621	4,141,555	-	4,141,555
2052	4,034,362	159,624,374	4,536,772	159,624,374	-	-	252,148	4,286,510	-	4,286,510
2053	4,175,565	169,211,008	4,568,666	169,211,008	-	-	260,973	4,436,538	-	4,436,538

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.1 - Plan Description

Plan Administration

The Town of Littleton administers the retiree health care benefits program - a single-employer defined benefit plan that is used to provide postemployment benefits other than pensions (OPEB) for all permanent full-time employees.

Plan Membership

At June 30, 2024, OPEB plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments ¹	190
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	396
	<hr/>
	586
	<hr/>

¹Per paragraph 34a of GASB 74 and further clarified by Question 4.67 of the 2017-2 GASB 74 Implementation Guide, the total shown for inactive plan members or beneficiaries currently receiving benefit payments does not include covered spouses or other dependents.

Benefits Provided

The Town provides health care benefits for retirees and their dependents. Benefits are provided through the Town, and the full cost of benefits is shared between the Town and retirees.

Employer Future Period Contributions

Contributions will be made based on the actuarially determined contributions developed in the most recent actuarial valuation.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

The components of the net OPEB liability at June 30, 2024, were as follows:

Total OPEB liability	\$ 37,106,839
Fiduciary net position	(29,300,758)
Net OPEB liability	\$ 7,806,081

Fiduciary net position as a percentage of the total OPEB liability 78.96%

Actuarial Assumptions

The total OPEB liability was determined by an actuarial valuation as of July 1, 2022, rolled forward to the measurement date and using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.5% per year, based on current economic data, analyses from economists and other experts, and professional judgment.
Discount rate	6.25%, net of investment expenses, including inflation.
Healthcare cost trend rate	8% for 2022, decreasing 0.5% per year to 6%, then grading down to an ultimate trend rate of 4.1%, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical trend rate is reached in 2075.
Pre-Retirement Mortality - General and Public Safety employees	RP-2014 Blue Collar Employee Mortality Table, projected with generational mortality improvement using scale MP-2021.
Healthy Retiree Mortality - General and Public Safety employees	RP-2014 Blue Collar Healthy Annuitant Mortality Table, projected with generational mortality improvement using scale MP-2021.
Disabled Retiree Mortality - General and Public Safety employees	RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2021
Pre-Retirement Mortality - Teachers	PUB-2010 Teachers Headcount-Weighted Employee Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2021.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

Healthy Retiree Mortality - Teachers	PUB-2010 Teachers Headcount-Weighted Retiree Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2021.
Disabled Retiree Mortality - Teachers	PUB-2010 Teachers Headcount-Weighted Retiree Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2021.

Long-Term Expected Rate of Return

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage provided in the investment policy statement and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of June 30, 2024 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rates of Return ¹
Domestic Equity	40%	4.24%
International Equity	20%	5.34%
Domestic Bond	25%	1.84%
Alternative	10%	5.10%
International Bond	5%	1.68%
Cash & Equivalents	0%	0.00%
Total	100%	

¹ provided by the Town's investment consultant, Bartholomew & Company.

Discount Rate

The discount rate used to measure the total OPEB liability was 6.25%. The projection of cash flows used to determine the discount rate assumed that contributions from the Town will be made in accordance with the plan's funding policy. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability calculated using the current discount rate of 6.25 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (5.25 percent) or 1-percentage point higher (7.25 percent) than the current rate:

	1% Decrease (5.25%)	Assumed Discount Rate (6.25%)	1% Increase (7.25%)
Total OPEB Liability	\$ 42,518,504	\$ 37,106,839	\$ 32,707,691
Fiduciary Net Position	(29,300,758)	(29,300,758)	(29,300,758)
Net OPEB Liability	\$ 13,217,746	\$ 7,806,081	\$ 3,406,933
% Change in NOL	69.3%		-56.4%

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the net OPEB liability calculated using the current healthcare cost trend rates as well as what the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower (7% year 1 decreasing to 3.1%) or 1-percentage point higher (9% year 1 decreasing to 5.1%) than the current healthcare cost trend rates:

	1% Decrease 7% Year 1 Decreasing to 3.1%	Assumed Healthcare Cost Trend Rates 8% Year 1 Decreasing to 4.1%	1% Increase 9% Year 1 Decreasing to 5.1%
Total OPEB Liability	\$ 31,674,390	\$ 37,106,839	\$ 43,980,925
Fiduciary Net Position	(29,300,758)	(29,300,758)	(29,300,758)
Net OPEB Liability	\$ 2,373,632	\$ 7,806,081	\$ 14,680,167
% Change in NOL	-69.6%		88.1%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios

Fiscal Year Ended June 30	2024	2023	2022	2021	2020
Total OPEB Liability					
Service cost	\$ 1,629,547	\$ 1,060,820	\$ 1,062,792	\$ 1,225,955	\$ 1,022,757
Interest	2,211,549	1,925,770	1,828,880	2,285,218	2,157,973
Changes of benefit terms	-	-	-	-	(406,443)
Differences between expected and actual experience	-	1,475,538	-	(9,876,472)	-
Changes of assumptions	(1,247,458)	3,572,480	(104,824)	2,019,866	3,264,788
Benefit payments	(1,432,800)	(1,310,029)	(1,278,495)	(1,141,254)	(1,179,063)
Net change in total OPEB liability	\$ 1,160,838	\$ 6,724,579	\$ 1,508,353	\$ (5,486,687)	\$ 4,860,012
Total OPEB liability—beginning	\$ 35,946,001	\$ 29,221,422	\$ 27,713,069	\$ 33,199,756	\$ 28,339,744
Total OPEB liability—ending (a)	<u>\$ 37,106,839</u>	<u>\$ 35,946,001</u>	<u>\$ 29,221,422</u>	<u>\$ 27,713,069</u>	<u>\$ 33,199,756</u>
Plan Fiduciary Net Position					
Contributions--employer	\$ 3,352,800	\$ 3,936,014	\$ 3,289,960	\$ 3,839,864	\$ 3,441,437
Net investment income	2,821,741	1,808,985	(3,538,375)	4,325,944	274,805
Benefit payments	(1,432,800)	(1,310,029)	(1,278,495)	(1,141,254)	(1,179,063)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
Net change in plan fiduciary net position	\$ 4,741,741	\$ 4,434,970	\$ (1,526,910)	\$ 7,024,554	\$ 2,537,179
Plan fiduciary net position—beginning	\$ 24,559,017	\$ 20,124,047	\$ 21,650,957	\$ 14,626,403	\$ 12,089,224
Plan fiduciary net position—ending (b)	<u>\$ 29,300,758</u>	<u>\$ 24,559,017</u>	<u>\$ 20,124,047</u>	<u>\$ 21,650,957</u>	<u>\$ 14,626,403</u>
Net OPEB liability—ending (a) – (b)	<u>\$ 7,806,081</u>	<u>\$ 11,386,984</u>	<u>\$ 9,097,375</u>	<u>\$ 6,062,112</u>	<u>\$ 18,573,353</u>
Plan fiduciary net position as a percentage of the total OPEB liability	78.96%	68.32%	68.87%	78.13%	44.06%
Covered payroll	\$ 30,390,274	\$ 25,756,169	Not Available	\$ 22,079,971	\$ 23,272,636
Net OPEB liability as a percentage of covered payroll	25.69%	44.21%	Not available	27.46%	79.81%
Discount Rate	6.25%	6.00%	6.50%	6.50%	6.75%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios, continued

Fiscal Year Ended June 30	2019	2018	2017	2016	2015
Total OPEB Liability					
Service cost	\$ 923,015	\$ 887,514	\$ 853,379		
Interest	1,949,574	1,818,827	1,690,414		
Changes of benefit terms	-	-	-		
Differences between expected and actual experience	(1,661,369)	-	-		
Changes of assumptions	2,595,779	-	-		
Benefit payments	(1,077,132)	(919,952)	(811,562)		
Net change in total OPEB liability	\$ 2,729,867	\$ 1,786,389	\$ 1,732,231		
Total OPEB liability—beginning	\$ 25,609,877	\$ 23,823,488	\$ 22,091,257		
Total OPEB liability—ending (a)	<u>\$ 28,339,744</u>	<u>\$ 25,609,877</u>	<u>\$ 23,823,488</u>		
Plan Fiduciary Net Position					
Contributions--employer	\$ 3,498,393	\$ 2,352,890	\$ 1,959,853		
Net investment income	664,043	461,845	541,215		
Benefit payments	(1,077,132)	(919,952)	(811,562)		
Administrative expenses	-	-	-		
Other	-	-	-		
Net change in plan fiduciary net position	\$ 3,085,304	\$ 1,894,783	\$ 1,689,506		
Plan fiduciary net position—beginning	\$ 9,003,920	\$ 7,109,137	\$ 5,419,631		
Plan fiduciary net position—ending (b)	<u>\$ 12,089,224</u>	<u>\$ 9,003,920</u>	<u>\$ 7,109,137</u>		
Net OPEB liability—ending (a) – (b)	<u>\$ 16,250,520</u>	<u>\$ 16,605,957</u>	<u>\$ 16,714,351</u>		
Plan fiduciary net position as a percentage of the total OPEB liability	42.66%	35.16%	29.84%		
Covered payroll	\$ 21,401,305	\$ 19,528,449	\$ 20,907,161		
Net OPEB liability as a percentage of covered payroll	75.93%	85.03%	79.95%		
Discount Rate	7.50%	7.50%	7.50%		

Note: Only 8 years are presented here and on the previous page, beginning with the year of implementation; 10 years of information will be required.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule

Changes of Benefit Terms

All benefit terms are the same as those used in the prior measurement.

Changes of Assumptions

The discount rate changed from 6% as of June 30, 2023 to 6.25% as of June 30, 2024.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Fiscal Year Ended June 30	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Annual money-weighted rate of return, net of investment expenses	11.41%	8.51%	-15.59%	26.99%	2.11%	6.73%	5.90%	8.66%		

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of OPEB plan investments by the proportion of time they are available to earn a return during that period. The rate of return is then calculated by solving, through an iterative process, for the rate that equates the sum of the weighted external cash flows into and out of the OPEB plan investments to the ending fair value of OPEB plan investments.

Note: Only 8 years are presented here, beginning with the year of implementation; 10 years of information will be required.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Calculation of Money-Weighted Rate of Return

	Plan Investments/ Net External Cash Flows (a)	Periods Invested (b)	Period Weight (c)=(b)÷12	(d)=(a) x (1+r _{mw}) ^(c)
Beginning value - July 1, 2023	\$ 24,559,017	12	1.00	\$ 27,361,675
Monthly net external cash flows:				
July	-	11	0.92	-
August	-	10	0.83	-
September	-	9	0.75	-
October	-	8	0.67	-
November	-	7	0.58	-
December	-	6	0.50	-
January	-	5	0.42	-
February	-	4	0.33	-
March	-	3	0.25	-
April	1,050,000	2	0.17	1,069,083
May	-	1	0.08	-
June	870,000	0	0.00	870,000
Ending value - June 30, 2024				\$ 29,300,758
Money-weighted rate of return:				11.41%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Schedule of Employer Contributions

Fiscal Year Ended June 30	2024	2023	2022	2021	2020
Actuarially determined contribution	\$ 2,652,949	\$ 1,888,481	\$ 1,642,881	\$ 2,843,309	\$ 2,519,732
Contributions in relation to the actuarially determined contribution	3,352,800	3,936,014	3,289,960	3,839,864	3,441,437
Contribution deficiency (excess)	\$ (699,851)	\$ (2,047,533)	\$ (1,647,079)	\$ (996,555)	\$ (921,705)
Covered payroll	\$ 30,390,274	\$ 25,756,169	Not Available	\$ 22,079,971	\$ 23,272,636
Contributions as a percentage of covered payroll	11.03%	15.28%	Not available	17.39%	14.79%
Discount rate	6.00%	6.50%	6.50%	6.75%	7.50%
Inflation	2.50%	2.50%	2.40%	2.20%	2.40%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Schedule of Employer Contributions, continued

Fiscal Year Ended June 30	2019	2018	2017	2016	2015
Actuarially determined contribution	\$ 2,657,431	\$ 2,383,507	\$ 2,602,241		
Contributions in relation to the actuarially determined contribution	<u>3,498,393</u>	<u>2,352,890</u>	<u>1,959,853</u>		
Contribution deficiency (excess)	<u>\$ (840,962)</u>	<u>\$ 30,617</u>	<u>\$ 642,388</u>		
Covered payroll	\$ 21,401,305	\$ 19,528,449	\$ 20,907,161		
Contributions as a percentage of covered payroll	16.35%	12.05%	9.37%		
Discount rate	7.50%	7.50%	6.70%		
Inflation	2.60%	3.00%	3.00%		

Note: Only 8 years are presented here and on the previous page, beginning with the year of implementation; 10 years of information will be required.

Notes to Schedule

Valuation Date

Actuarially determined contributions are determined as of July 1, one year prior to the end of the fiscal year in which contributions are reported.

Methods and Assumptions as of Current Measurement Date

Actuarial cost method	Entry Age Normal
Amortization method	Level dollar amount over 23 years on a closed amortization period for partial pre-funding.
Amortization period	23 years
Asset valuation method	Market value
Healthcare cost trend rates	8% for 2022, decreasing 0.5% per year to 6%, then grading down to an ultimate trend rate of 4.1%, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical trend rate is reached in 2075.

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between expected and actual experience are recognized in OPEB Expense over the average expected remaining service life of all active and inactive participants.

						Balances at June 30, 2024	
		Amounts Recognized in OPEB Expense through June 30, 2024			Deferred Outflows of Resources		Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)		(b) + (c)	
2019	\$ -	\$ 1,661,369	\$ (1,252,290)	\$ -	\$ -	\$ 409,079	
2020	-	-	-	-	-	-	
2021	-	9,876,472	(5,267,452)	-	-	4,609,020	
2022	-	-	-	-	-	-	
2023	1,475,538	-	382,760	1,092,778	-	-	
2024	-	-	-	-	-	-	
Total				\$ 1,092,778		\$ 5,018,099	

Deferred Outflows of Resources and Deferred Inflows of Resources arising from changes of assumptions are recognized in OPEB Expense over the average expected remaining service life of all active and inactive participants.

						Balances at June 30, 2024	
		Amounts Recognized in OPEB Expense through June 30, 2024			Deferred Outflows of Resources		Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)		(b) + (c)	
2019	\$ 2,595,779	\$ -	\$ 1,956,618	\$ 639,161	\$ -	\$ -	
2020	3,264,788	-	2,050,745	1,214,043	-	-	
2021	2,019,866	-	1,077,260	942,606	-	-	
2022	-	104,824	(41,931)	-	-	62,893	
2023	3,572,480	-	926,714	2,645,766	-	-	
2024	-	1,247,458	(161,797)	-	-	1,085,661	
Total				\$ 5,441,576		\$ 1,148,554	

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between projected and actual earnings on OPEB Plan investments are recognized in OPEB Expense over five years.

Balances at June 30, 2024					
	Investment Earnings Less Than Projected	Investment Earnings Greater Than Projected	Amounts Recognized in OPEB Expense through June 30, 2024	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2019	\$ 75,432	\$ -	\$ 75,432	\$ -	\$ -
2020	702,166	-	702,166	-	-
2021	-	3,240,895	(2,592,716)	-	648,179
2022	5,010,030	-	3,006,018	2,004,012	-
2023	-	426,505	(170,602)	-	255,903
2024	-	1,337,953	(267,591)	-	1,070,362
Subtotal				\$ 2,004,012	\$ 1,974,444
Net				\$ 29,568	\$ -

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources will be recognized in OPEB expense as follows:

Year ended June 30		
2025	\$	(40,113)
2026	\$	603,372
2027	\$	(527,732)
2028	\$	(312,396)
2029	\$	485,955
Thereafter		188,183
Deferred Outflows	\$	6,563,922
Deferred Inflows	\$	6,166,653

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.2 - OPEB Expense

The OPEB Expense and deferred outflows and inflows of resources primarily result from changes in the components of the net OPEB liability (NOL). Most changes in the NOL are included in the OPEB Expense in the period of the change, including service cost, interest on total OPEB liability, changes in benefit terms and projected earnings on the OPEB plan's investments. Other changes in the net OPEB liability are included in OPEB Expense over the current and future periods. These include the effects on the total OPEB liability of changes of economic and demographic assumptions and differences between expected and actual experience. In addition, the effect on the net OPEB liability of differences between the projected earnings on OPEB plan investments and actual experience with regard to those earnings are included in OPEB Expense over the current and future periods. The OPEB Expense for the reporting period ending June 30, 2024 is presented below:

Fiscal Year Ended June 30, 2024

Measurement Date	6/30/2024
1. Service cost	\$ 1,629,547
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	35,946,001
b. Service cost, beginning of year	1,629,547
c. Benefit payments	<u>(1,432,800)</u>
d. Interest on total OPEB liability = 6.% times (a. + b. + .5 times c.)	2,211,549
3. Differences between expected and actual experience	(1,334,198)
4. Changes of benefit terms	-
5. Changes of assumptions	1,293,150
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	24,559,017
b. Contributions - Employer	3,352,800
c. Benefit payments	(1,432,800)
d. Administrative expenses and other	-
e. Total projected earnings	(1,483,788)
7. Differences between projected and actual earnings on OPEB plan investments	141,369
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense	\$ 2,457,629

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Eligibility for Postemployment Benefits Employees of the Town and their dependents are eligible for postemployment medical, dental and life insurance based on the eligibility requirements under the Middlesex County and Massachusetts Teachers Retirement Systems.

Retirement Eligibility General employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service

General employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service

Public Safety employees hired before April 2, 2012: retire after attaining age 55 or any age with 20 or more years of service

Public Safety employees hired after April 1, 2012: retire after attaining age 55

Ordinary Disability Eligibility Any member who is unable to perform his or her duties due to a non-occupational disability and has ten or more years of creditable service.

Accidental Disability Eligibility Any member who is unable to perform his or her duties due to a job-related disability.

Medical Premiums The total monthly premiums by plan are shown below:

Non-Medicare Plans - July 1, 2023	Individual	Family
HMO	\$910.53	\$2,388.05
PPO	\$1,106.18	\$2,901.20

Medicare Plans - January 1, 2024

Medex	\$348.01
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Participant Contributions Retired employees contribute 30% of the health plan premium.

Continuation of Coverage to Spouse After Death of Retiree Surviving spouse may continue coverage for lifetime by paying 30% of the required medical premium for employees hired prior to July 1, 2010. For employees hired after July 1, 2010, surviving spouses may continue coverage for lifetime by paying 50% of the required medical premium.

Dental Coverage Dental coverage is provided. Retirees contribute 100% of the monthly premiums.

Life Insurance Coverage Retirees are eligible for a \$5,000 life insurance benefit. The total monthly cost is \$3.95. Retirees contribute \$1.18 towards the monthly premiums.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date	July 1, 2022
Measurement Date	June 30, 2024
GASB 75 Reporting Date	June 30, 2024
Long-Term Expected Rate of Return	6.25%, net of investment expenses and including inflation at 2.5%. Previously, 6%. A long-term assumption based on capital market expectations by asset class, historical returns and professional judgment. A building block approach was used that considered the target asset allocation, expected returns by asset class and risk analysis to determine a long-term expected average annual rate of return.
Municipal Bond Rate	3.93%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2024.
Discount Rate (GASB)	6.25%, compounded annually, for the measurement as of June 30, 2024. 6%, compounded annually, for the measurement as of June 30, 2023. The single rate that reflects the long-term expected rate of return on OPEB plan investments to the extent that the OPEB plan's assets, which are expected to be invested using a strategy to achieve that return, are sufficient to pay benefits, and a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.
Discount Rate (ADEC)	6%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2024.
Amortization Method	Level dollar amount over 23 years on a closed amortization period for partial pre-funding.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Trend Rates

Year	Trend
1	8.00%
2	7.50%
3	7.00%
4	6.50%
5	6.00%
Ultimate	4.10%

8% for 2022, decreasing 0.5% per year to 6%, then grading down to an ultimate trend rate of 4.1%, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical trend rate is reached in 2075.

Health care trend assumptions begin at current levels and grade down over a period of years to a lower level equal to some real rate plus inflation. The principal components of health trend are medical inflation, deductible erosion, cost shifting, utilization, technology and catastrophic claims. The overall effect of these components are expected to decline year by year.

Dental Trend Rates

Not applicable as retirees pay 100% of the dental premium.

Inflation

2.5% per year, based on current economic data, analyses from economists and other experts, and professional judgment.

Payroll Growth

3.5% per year.

Participation Rates

Medical - 80% of eligible retired employees will elect to participate.

Dental - Not applicable as retirees pay 100% of dental premium.

Life - 80% of eligible retirees will elect to participate.

Medicare - all retired employees are assumed to enroll in Medicare at age 65.

Dependent Status

Male spouses are assumed to be three years older and female spouses are assumed to be three years younger than the retired employee.

60% of employees are assumed to retire with a covered spouse.

For current retirees, the actual census information is used.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Per Capita Costs

The following annual per capita costs are for the fiscal year beginning July 1, 2022 and are applicable to retirees, survivors and spouses. Annual costs for current and future retirees are based on the blended curves shown below, developed using the plan coverages elected by current retirees and survivors and premium rates currently in effect. Future years' costs are based on the first year cost adjusted with trend.

Age	Medicare-Eligible		Medicare-Ineligible	
	Male	Female	Male	Female
Under 20	\$4,470	\$5,248	\$4,470	\$5,248
20-24	3,522	5,587	3,522	5,587
25-29	3,665	8,242	3,665	8,242
30-34	4,604	10,415	4,604	10,415
35-39	5,775	10,728	5,775	10,728
40-44	7,196	10,987	7,196	10,987
45-49	9,083	12,060	9,083	12,060
50-54	11,970	14,187	11,970	14,187
55-59	15,555	16,404	15,555	16,404
60-64	19,962	19,524	19,962	19,524
65-69	2,955	2,878	24,906	23,404
70-74	3,541	3,395	29,841	27,597
75-79	4,182	3,939	35,249	32,049
80-84	4,807	4,517	40,515	36,742
85-89	5,355	5,050	46,370	41,945
90-94	5,829	5,389	46,370	41,945
95+	6,195	5,212	46,370	41,945

Retiree Contributions

Annual per capita participant contributions for the fiscal year beginning July 1, 2022 are as follows:

Plan	Contribution	
	30%	50%
Non-Medicare	\$ 3,705	\$6,175
Medicare	1,119	1,865

Actuarial Cost Method

Entry Age Normal. The costs of each employee's postemployment benefits are allocated as a level basis over the earnings of the employee between the employee's date of hire and the assumed exit ages.

Actuarial Value of Assets

Market value of assets as of the measurement date

Census Data

Employee and retiree data were compiled and submitted by the Town as of June 30, 2023. We made reasonable adjustments for missing or invalid data.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Use of ProVal®

KMS Actuaries has used ProVal® to develop the liabilities, normal costs and projected benefit payments in this report. We have a lease agreement with WinTech, the developer of ProVal®, and have relied on their system to perform these calculations. The actuaries signing this report and the KMS staff members who were involved in preparing it have a clear understanding of ProVal® and have used it only for its intended purpose. We have reviewed the output produced by ProVal® for reasonableness and we are not aware of any material inconsistencies, limitations or known weaknesses that would affect this report.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

General and Public Safety Employees

Pre-Retirement Mortality

Pre-retirement mortality rates for General and Public Safety employees are based on the RP-2014 Blue Collar Employee Mortality Table, projected with generational mortality improvement using scale MP-2021.

Healthy Retiree Mortality

Healthy retiree mortality rates for General and Public Safety employees are based on the RP-2014 Blue Collar Healthy Annuitant Mortality Table, projected with generational mortality improvement using scale MP-2021.

Disabled Retiree Mortality

Disabled retiree mortality rates for General and Public Safety employees are based on the RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2021.

Turnover Rates

Turnover rates for General and Public Safety employees are as follows:

General Employees		Public Safety	
Service	Rate	Service	Rate
0	15.00%	0	1.50%
1	12.00%	1	1.50%
2	10.00%	2	1.50%
3	9.00%	3	1.50%
4	8.00%	4	1.50%
5	7.60%	5	1.50%
10	5.40%	10	1.50%
15	3.30%	15	0.00%
20	2.00%	20	0.00%
25	1.00%	25	0.00%
30	0.00%	30	0.00%

Disability Rates

Disability rates for General and Public Safety employees are as follows:

General Employees		Public Safety	
Age	Rate	Age	Rate
25	0.02%	25	0.20%
30	0.03%	30	0.30%
35	0.06%	35	0.30%
40	0.10%	40	0.30%
45	0.15%	45	1.00%
50	0.19%	50	1.25%
55	0.24%	55	1.20%
60	0.28%	60	0.85%

55% of the General employee disabilities are job-related.

90% of the Public Safety employee disabilities are job-related.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

General and Public Safety Employees

Retirement Rates

Retirement rates for General and Public Safety employees are as follows:

General Employees			Public Safety	
Age	Male	Female	Age	All
45	0.00%	0.00%	45	1.00%
50	0.00%	0.00%	50	2.00%
55	2.00%	5.50%	55	15.00%
60	12.00%	5.00%	60	20.00%
62	30.00%	15.00%	62	25.00%
65	40.00%	15.00%	65	100.00%
69	50.00%	20.00%		
70	100.00%	100.00%		

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Teachers

Pre-Retirement Mortality

Pre-retirement mortality rates for Teachers are based on the PUB-2010 Teachers Headcount-Weighted Employee Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2021.

Healthy Retiree Mortality

Healthy retiree mortality rates for Teachers are based on the PUB-2010 Teachers Headcount-Weighted Retiree Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2021.

Disabled Retiree Mortality

Disabled retiree mortality rates for Teachers are based on the PUB-2010 Teachers Headcount-Weighted Retiree Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2021.

Turnover Rates

Turnover rates for Teachers are as follows:

Age	Service						
	0		5		10+		
	Male	Female	Male	Female	Male	Female	
20	13.0%	10.0%	5.5%	7.0%	1.5%	5.0%	
30	15.0%	15.0%	5.4%	8.8%	1.5%	4.5%	
40	13.3%	10.5%	5.2%	5.0%	1.7%	2.2%	
50	16.2%	9.8%	7.0%	5.0%	2.3%	2.0%	

Disability Rates

Disability rates for Teachers are as follows:

Age	Rate
20	0.004%
30	0.006%
40	0.010%
50	0.050%
60	0.070%

35% of the disabilities are job-related.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Teachers

Retirement Rates

Retirement rates for Teachers are as follows:

Age	Years of Service						
	Less than 20		20-29		30+		Female
	Male	Female	Male	Female	Male	Female	
50	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%	
51	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%	
52	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%	
53	0.0%	0.0%	1.5%	1.0%	2.0%	1.5%	
54	0.0%	0.0%	2.5%	1.0%	2.0%	2.0%	
55	5.0%	3.0%	3.0%	3.0%	6.0%	5.0%	
56	5.0%	3.0%	6.0%	5.0%	20.0%	15.0%	
57	5.0%	4.0%	10.0%	8.0%	40.0%	35.0%	
58	5.0%	8.0%	15.0%	10.0%	50.0%	35.0%	
59	10.0%	8.0%	20.0%	15.0%	50.0%	35.0%	
60	10.0%	10.0%	25.0%	20.0%	40.0%	35.0%	
61	20.0%	12.0%	30.0%	25.0%	40.0%	35.0%	
62	20.0%	12.0%	35.0%	30.0%	35.0%	35.0%	
63	25.0%	15.0%	40.0%	30.0%	35.0%	35.0%	
64	25.0%	20.0%	40.0%	30.0%	35.0%	35.0%	
65	25.0%	25.0%	40.0%	40.0%	35.0%	35.0%	
66	30.0%	25.0%	30.0%	30.0%	40.0%	35.0%	
67	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	
68	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	
69	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%	
70	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

SECTION 7 - PLAN MEMBER INFORMATION

Exhibit 7.1 - Active Members by Age and Years of Service as of July 1, 2022

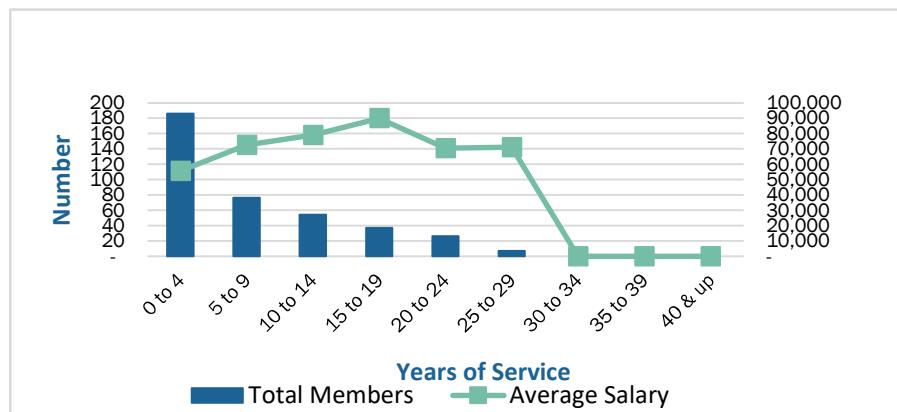
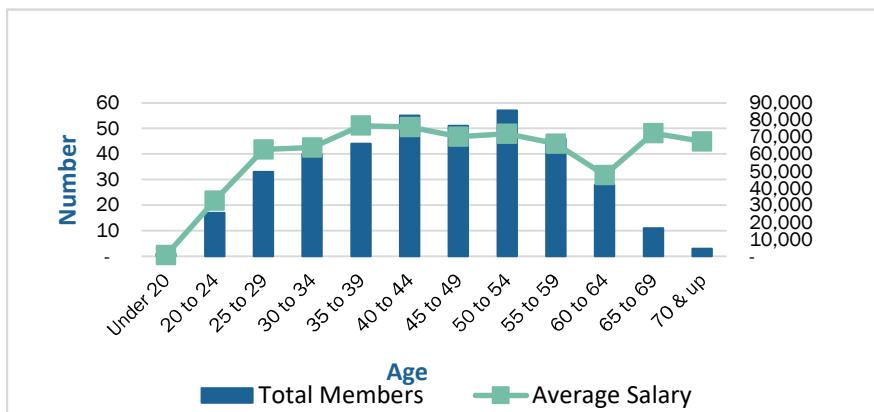
Age	Years of Service										Total	Total Salary	Average Salary
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up				
Under 20	1	-	-	-	-	-	-	-	-	1	666	666	
20 to 24	17	-	-	-	-	-	-	-	-	17	555,147	32,656	
25 to 29	29	4	-	-	-	-	-	-	-	33	2,068,344	62,677	
30 to 34	26	10	3	1	-	-	-	-	-	40	2,553,723	63,843	
35 to 39	25	10	8	1	-	-	-	-	-	44	3,372,758	76,654	
40 to 44	27	13	6	7	2	-	-	-	-	55	4,166,881	75,761	
45 to 49	21	9	8	4	8	1	-	-	-	51	3,576,292	70,123	
50 to 54	20	12	15	6	2	2	-	-	-	57	4,096,826	71,874	
55 to 59	10	9	8	11	8	-	-	-	-	46	3,034,799	65,974	
60 to 64	9	6	4	4	4	1	-	-	-	28	1,334,156	47,648	
65 to 69	1	2	2	2	2	2	-	-	-	11	794,502	72,227	
70 & up	-	1	-	1	-	1	-	-	-	3	202,076	67,359	
Total	186	76	54	37	26	7	-	-	-	386	25,756,169	66,726	
Total Salary	10,325,931	5,508,376	4,266,469	3,328,227	1,829,964	497,201	-	-	-				
Average Salary	55,516	72,479	79,009	89,952	70,383	71,029	-	-	-				

Average Age:

45.0

Average Service:

7.6



SECTION 7 - PLAN MEMBER INFORMATION

Exhibit 7.2 - Retired Members, Covered Spouses and Survivors as of July 1, 2022

Age	Non-Medicare Plans		Medicare Plans		
	HMO	PPO	Medex	Medex (Low Income Subsidy)	Total
Under 40	0	0	0	0	0
40 to 44	0	0	0	0	0
45 to 49	1	0	0	0	1
50 to 54	1	1	0	0	2
55 to 59	8	2	1	0	11
60 to 64	11	0	5	0	16
65 to 69	1	0	28	0	29
70 to 74	1	0	38	0	39
75 to 79	1	0	32	0	33
80 to 84	0	0	8	1	9
85 to 89	0	0	7	1	8
90+	0	0	4	0	4
Total	24	3	123	2	152
Covered Spouses	16	1	72	0	89

Average Age: 72.7

In addition, there are 24 retirees that are not covered under any medical plan but are covered under a life insurance plan which the Town contributes to.

SECTION 8 - GLOSSARY OF TERMS

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting OPEB costs, such as mortality, withdrawal, disability and retirement; changes in compensation and OPEB benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

Actuarial Cost Method (or Funding Method) – A procedure for allocating the Actuarial Present Value of projected benefit payments to the current year (Service Cost) and the past (Total OPEB Liability).

Actuarial Gain or Loss (or Experience Gain or Loss) – A measure of the difference between actual experience and that expected based upon the set of Actuarial Assumptions during the period between the valuation date and the most recent immediately preceding valuation date.

Actuarial Present Value of Projected Benefit Payments – The dollar value on the valuation date of all benefits expected to be paid to current members based upon the Actuarial Assumptions and the terms of the Plan.

Actuarially Determined Contribution – A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Actuarial Valuation Date – The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

Deferred Inflow of Resources – Acquisition of resources by a governmental entity that is applicable to future reporting periods. Under GASB 75, deferred inflows of resources are made up of experience gains, assumption changes reducing the Total OPEB Liability and investment gains that are recognized in future reporting periods.

Deferred Outflow of Resources – Consumption of resources by a governmental entity that is applicable to future reporting periods. Under GASB 75, deferred outflows of resources are made up of experience losses, assumption changes increasing the Total OPEB Liability and investment losses that are recognized in future reporting periods.

Discount Rate – Single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the sum of:

- (1) a long-term expected rate of return on OPEB plan investments to the extent that the OPEB plan's assets are sufficient to pay benefits and OPEB plan assets are expected to be invested using a strategy to achieve that return and
- (2) a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.

Employer Future Period Contributions – Contributions made by the employer, generally to an outside trust fund, to pay for future OPEB costs. These are costs in addition to the employer contributions made during the year to pay for ongoing premiums.

SECTION 8 - GLOSSARY OF TERMS

Entry Age Normal Actuarial Cost Method – A method under which the actuarial present value of the projected benefits of each individual in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age.

Explicit Subsidy – The difference between (a) the blended rates based on combined active and retired member experience and (b) actual cash contributions made by the employer.

Fiduciary Net Position – The fair market value of assets as of the measurement date.

Funded Ratio – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

GASB – Governmental Accounting Standards Board.

Health Cost Trend Rate – The rate of change in per capita health claims cost over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Implicit Subsidy – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group and (b) the blended rates based on combined active and retired member experience.

Long-Term Expected Rate of Return – Long-term expected rate of return on OPEB plan investments expected to be used to finance the payment of benefits, net of investment expenses.

Measurement Date – The date as of which the Total OPEB Liability and Fiduciary Net Position are measured.

Municipal Bond Rate – Yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.

Net OPEB Liability – The liability of the employer for benefits provided through an OPEB plan. It is calculated as the Total OPEB Liability less the Fiduciary Net Position.

OPEB – Other Postemployment Benefits including medical, dental, vision, hearing and life insurance benefits.

Pay-As-You-Go – A method of financing an OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Present Value of Future Benefits – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

Reporting Date – The last day of the Plan or employer's fiscal year.

SECTION 8 - GLOSSARY OF TERMS

Service Cost – The portion of the actuarial present value of projected benefit amounts that is attributed to a valuation year.

Substantive Plan – The terms of an OPEB plan as understood by the employer and plan members.

Total OPEB Liability – The portion of the actuarial present value of projected benefit amounts that is attributed to past periods of employee service.

Unfunded Actuarial Accrued Liability – The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	Town	Public Safety	Teachers	Dispatch	Water	Total
Summary of Member Data Used in Valuation						
Active Members	56	46	268	7	9	386
Average Age	48.7	39.2	45.5	34.7	44.2	45.0
Average Service	6.8	6.8	8.1	4.5	6.0	7.6
Covered Payroll	3,823,514	4,785,684	15,891,121	483,553	772,297	25,756,169
Retired Members and Survivors	37	14	120	0	5	176
Average Age	75.3	66.1	72.9	-	66.4	72.7
Covered Spouses	13	8	64	0	4	89
Expected Benefit Payments	250,079	199,712	886,389	97	96,523	1,432,800
OPEB Trust contributions	254,191	291,878	1,314,397	9,534	50,000	1,920,000
Total Employer Contributions	504,270	491,590	2,200,786	9,631	146,523	3,352,800
Beginning Net OPEB Liability - June 30, 2023						
Total OPEB Liability	4,790,435	5,211,800	24,489,647	157,391	1,296,728	35,946,001
Fiduciary Net Position	3,814,891	3,414,413	16,340,476	196,906	792,331	24,559,017
Net OPEB Liability	975,544	1,797,387	8,149,171	(39,515)	504,397	11,386,984
Total OPEB Liability, beginning of year	4,790,435	5,211,800	24,489,647	157,391	1,296,728	35,946,001
Service cost	180,412	436,756	898,014	23,452	90,913	1,629,547
Interest	290,748	332,922	1,496,669	10,847	80,363	2,211,549
Changes of benefit terms	0	0	0	0	0	0
Differences between expected and actual experience	0	0	0	0	0	0
Changes of assumptions	(148,888)	(198,193)	(853,781)	(9,218)	(37,378)	(1,247,458)
Benefit payments	(250,079)	(199,712)	(886,389)	(97)	(96,523)	(1,432,800)
Net change in total OPEB liability	72,193	371,773	654,513	24,984	37,375	1,160,838
Total OPEB Liability, end of year	4,862,628	5,583,573	25,144,160	182,375	1,334,103	37,106,839
Ending Net OPEB Liability - June 30, 2024						
Total OPEB Liability	4,862,628	5,583,573	25,144,160	182,375	1,334,103	37,106,839
Fiduciary Net Position	4,402,901	4,007,424	19,735,780	223,539	931,114	29,300,758
Net OPEB Liability	459,727	1,576,149	5,408,380	(41,164)	402,989	7,806,081

SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	Town	Public Safety	Teachers	Dispatch	Water	Total
Total Deferred Outflows of Resources						
Differences between Expected and Actual Experience	145,632	158,442	744,499	4,785	39,421	1,092,778
Changes in Assumptions	725,185	788,972	3,707,291	23,826	196,301	5,441,576
Differences between Expected and Actual Earnings on OPEB Plan Investments	4,593	4,111	19,673	237	954	29,568
Total Deferred Outflows of Resources	875,410	951,525	4,471,463	28,848	236,676	6,563,922
Total Deferred Inflows of Resources						
Differences between Expected and Actual Experience	668,750	727,573	3,418,780	21,972	181,025	5,018,099
Changes in Assumptions	153,065	166,529	782,498	5,029	41,433	1,148,554
Differences between Expected and Actual Earnings on OPEB Plan Investments	0	0	0	0	0	0
Total Deferred Inflows of Resources	821,815	894,101	4,201,278	27,001	222,458	6,166,653
Total OPEB Expense	419,624	636,783	1,223,148	121,183	56,892	2,457,629
Sensitivity of the Net OPEB Liability to Changes in the Discount Rate						
Current Discount Rate: 6.25%	459,727	1,576,149	5,408,380	(41,164)	402,989	7,806,081
1% Decrease in the Discount Rate: 5.25%	1,168,893	2,390,458	9,075,407	(14,566)	597,555	13,217,746
1% Increase in the Discount Rate: 7.25%	(116,755)	914,197	2,427,450	(62,785)	244,826	3,406,933
Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates						
Current Trend Rates	459,727	1,576,149	5,408,380	(41,164)	402,989	7,806,081
1% Decrease in Trend Rates	(252,163)	758,713	1,727,270	(67,864)	207,676	2,373,632
1% Increase in Trend Rates	1,360,535	2,610,513	10,066,366	(7,379)	650,133	14,680,167
Deferred Outflows of Resources and Deferred Inflows of Resources recognized in OPEB Expense						
2025	(5,412)	(5,798)	(27,280)	(187)	(1,436)	(40,113)
2026	81,401	87,215	410,356	2,805	21,595	603,372
2027	(71,196)	(76,282)	(358,912)	(2,454)	(18,888)	(527,732)
2028	(42,145)	(45,156)	(212,462)	(1,452)	(11,181)	(312,396)
2029	65,560	70,243	330,500	2,259	17,393	485,955
Thereafter	25,388	27,201	127,984	875	6,735	188,183

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Under GASB 74 and GASB 75, a series of projections and calculations are used to determine the discount rate for the purpose of the measurement of the Total OPEB Liability. The discount rate is the single rate that reflects (1) the long-term expected rate of return on OPEB plan investments that are expected to be used to finance the payment of benefits, to the extent that the OPEB plan's fiduciary net position is projected to be sufficient to make projected benefit payments and OPEB plan assets are expected to be invested using a strategy to achieve that return, and (2) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher, to the extent that the conditions for use of the long-term expected rate of return are not met.

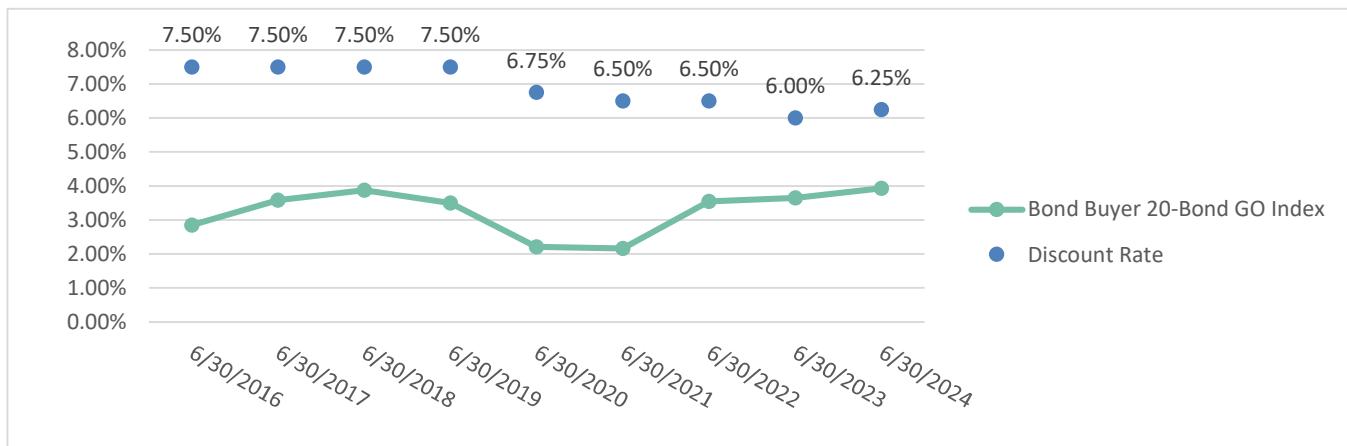
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. The OPEB plan's projected fiduciary net position at the beginning of each period is compared to the amount of benefit payments projected to occur in that period.

It is assumed that the OPEB plan's fiduciary net position is expected to always be invested using a strategy to achieve the long-term expected rate of return on OPEB plan investments.

The benefit payments that are projected to occur in a period are discounted using the long-term expected rate of return on OPEB plan investments if the amount of the OPEB plan's beginning fiduciary net position is projected to be sufficient to make the benefit payments in that period. In periods in which benefit payments are projected to be greater than the amount of the OPEB plan's fiduciary net position, they are discounted using a municipal bond rate as required by GASB 74.

For purposes of this valuation, liabilities are based on a discount rate of 6.25%, a long-term investment return rate of 6.25% and a municipal bond rate of 3.93%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2024. The OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 6.25%.

Below are the historical Bond Buyer 20-Bond GO Indices and the Town's discount rate used in disclosures since the implementation of GASB 74 and GASB 75:



APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.77%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2024	26,679,903	-	26,679,903	1,432,799	1,920,000	-	3,352,799
2025	25,465,358	2,148,342	27,613,700	1,549,311	806,369	123,984	2,231,696
2026	24,341,604	4,238,576	28,580,180	1,691,095	723,849	244,614	2,170,330
2027	23,334,974	6,245,512	29,580,486	1,769,938	706,481	360,436	2,115,983
2028	22,454,672	8,161,131	30,615,803	1,948,329	591,217	470,989	2,068,557
2029	21,461,799	10,225,557	31,687,356	2,157,013	448,496	590,130	2,015,379
2030	20,579,282	12,217,131	32,796,413	2,246,885	426,819	705,066	1,968,638
2031	19,687,593	14,256,694	33,944,287	2,273,246	470,254	822,772	1,920,728
2032	18,773,979	16,358,358	35,132,337	2,500,539	316,300	944,062	1,872,777
2033	17,800,500	18,561,469	36,361,969	2,696,722	195,644	1,071,206	1,821,160
2034	16,768,703	20,865,935	37,634,638	2,794,261	175,786	1,204,200	1,765,847
2035	15,945,463	23,006,387	38,951,850	2,974,756	75,824	1,327,728	1,722,852
2036	15,161,069	25,154,096	40,315,165	3,040,754	93,973	1,451,675	1,683,052
2037	14,287,492	27,438,704	41,726,196	3,170,498	50,268	1,583,522	1,637,244
2038	13,402,610	29,784,003	43,186,613	3,392,648	-	1,718,873	1,673,775
2039	12,586,173	32,111,971	44,698,144	3,445,233	-	1,853,223	1,592,010
2040	11,746,564	34,516,015	46,262,579	3,506,998	-	1,991,963	1,515,035
2041	11,059,114	36,822,655	47,881,769	3,621,712	-	2,125,082	1,496,630
2042	10,323,046	39,234,585	49,557,631	3,833,597	-	2,264,278	1,569,319
2043	9,571,196	41,720,952	51,292,148	4,016,343	-	2,407,769	1,608,574
2044	8,791,127	44,296,246	53,087,373	4,189,136	-	2,556,392	1,632,744
2045	8,013,768	46,931,663	54,945,431	4,257,336	-	2,708,486	1,548,850
2046	7,266,608	49,601,913	56,868,521	4,371,952	-	2,862,589	1,509,363
2047	6,646,548	52,212,371	58,858,919	4,300,961	-	3,013,242	1,287,719
2048	6,114,518	54,804,463	60,918,981	4,396,124	-	3,162,835	1,233,289
2049	5,627,893	57,423,252	63,051,145	4,470,912	-	3,313,969	1,156,943
2050	5,136,677	60,121,258	65,257,935	4,482,403	-	3,469,674	1,012,729
2051	4,676,414	62,865,549	67,541,963	4,611,566	-	3,628,050	983,516
2052	4,231,080	65,674,852	69,905,932	4,536,772	-	3,790,179	746,593
2053	3,761,747	68,590,893	72,352,640	4,568,666	-	3,958,467	610,199
2054	3,324,442	71,560,540	74,884,982	4,594,314	-	4,129,849	464,465
2055	2,916,201	74,589,755	77,505,956	4,471,549	-	4,304,669	166,880

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.77%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2056	2,522,180	77,696,484	80,218,664	4,590,136	-	4,483,963	106,173
2057	2,165,069	80,861,248	83,026,317	4,552,726	-	4,666,605	-
2058	1,866,242	84,065,996	85,932,238	4,481,184	-	4,851,555	-
2059	1,554,549	87,385,317	88,939,866	4,510,094	-	5,043,117	-
2060	1,232,985	90,819,776	92,052,761	4,469,905	-	5,241,324	-
2061	959,676	94,314,932	95,274,608	4,312,761	-	5,443,034	-
2062	706,016	97,903,203	98,609,219	4,314,096	-	5,650,118	-
2063	557,490	101,503,052	102,060,542	4,277,358	-	5,857,870	-
2064	420,298	105,212,363	105,632,661	4,084,549	-	6,071,939	-
2065	305,873	109,023,931	109,329,804	4,113,436	-	6,291,909	-
2066	222,484	112,933,863	113,156,347	4,069,989	-	6,517,556	-
2067	153,374	116,963,445	117,116,819	4,045,586	-	6,750,109	-
2068	108,990	121,106,918	121,215,908	3,917,705	-	6,989,234	-
2069	59,964	125,398,501	125,458,465	3,842,388	-	7,236,906	-
2070	41,716	129,807,795	129,849,511	3,810,260	-	7,491,372	-
2071	24,514	134,369,730	134,394,244	3,666,813	-	7,754,647	-
2072	11,972	139,086,071	139,098,043	3,595,143	-	8,026,833	-
2073	8,853	143,957,622	143,966,475	3,518,091	-	8,307,977	-
2074	91	149,005,211	149,005,302	3,434,567	-	8,599,279	-
2075	-	154,220,488	154,220,488	3,339,887	-	8,900,260	-
2076	-	159,618,205	159,618,205	3,227,761	-	9,211,769	-
2077	-	165,204,842	165,204,842	3,110,488	-	9,534,181	-
2078	-	170,987,011	170,987,011	2,990,123	-	9,867,877	-
2079	-	176,971,556	176,971,556	2,866,348	-	10,213,253	-
2080	-	183,165,560	183,165,560	2,722,951	-	10,570,717	-
2081	-	189,576,355	189,576,355	2,583,926	-	10,940,692	-
2082	-	196,211,527	196,211,527	2,431,927	-	11,323,616	-
2083	-	203,078,930	203,078,930	2,285,667	-	11,719,942	-
2084	-	210,186,693	210,186,693	2,137,163	-	12,130,140	-
2085	-	217,543,227	217,543,227	1,974,068	-	12,554,695	-
2086	-	225,157,240	225,157,240	1,824,948	-	12,994,110	-
2087	-	233,037,743	233,037,743	1,664,279	-	13,448,903	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.77%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2088	-	241,194,064	241,194,064	1,512,466	-	13,919,615	-
2089	-	249,635,856	249,635,856	1,369,419	-	14,406,801	-
2090	-	258,373,111	258,373,111	1,218,483	-	14,911,040	-
2091	-	267,416,170	267,416,170	1,087,617	-	15,432,926	-
2092	-	276,775,736	276,775,736	953,967	-	15,973,078	-
2093	-	286,462,887	286,462,887	833,446	-	16,532,136	-
2094	-	296,489,088	296,489,088	717,532	-	17,110,761	-
2095	-	306,866,206	306,866,206	610,735	-	17,709,637	-
2096	-	317,606,523	317,606,523	518,528	-	18,329,475	-
2097	-	328,722,751	328,722,751	433,008	-	18,971,006	-
2098	-	340,228,047	340,228,047	360,544	-	19,634,992	-
2099	-	352,136,029	352,136,029	295,040	-	20,322,216	-
2100	-	364,460,790	364,460,790	238,739	-	21,033,494	-
2101	-	377,216,918	377,216,918	189,665	-	21,769,666	-
2102	-	390,419,510	390,419,510	149,516	-	22,531,605	-
2103	-	404,084,193	404,084,193	116,535	-	23,320,211	-
2104	-	418,227,140	418,227,140	89,642	-	24,136,418	-
2105	-	432,865,090	432,865,090	67,991	-	24,981,193	-
2106	-	448,015,368	448,015,368	50,805	-	25,855,534	-
2107	-	463,695,906	463,695,906	37,368	-	26,760,478	-
2108	-	479,925,263	479,925,263	27,029	-	27,697,095	-
2109	-	496,722,647	496,722,647	19,203	-	28,666,493	-
2110	-	514,107,940	514,107,940	13,384	-	29,669,820	-
2111	-	532,101,718	532,101,718	9,139	-	30,708,264	-
2112	-	550,725,278	550,725,278	6,108	-	31,783,053	-
2113	-	570,000,663	570,000,663	3,988	-	32,895,460	-
2114	-	589,950,686	589,950,686	2,539	-	34,046,801	-
2115	-	610,598,960	610,598,960	1,577	-	35,238,439	-
2116	-	631,969,924	631,969,924	953	-	36,471,785	-
2117	-	654,088,871	654,088,871	559	-	37,748,297	-
2118	-	676,981,981	676,981,981	319	-	39,069,488	-
2119	-	700,676,350	700,676,350	176	-	40,436,920	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.77%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2120	-	725,200,022	725,200,022	93	-	41,852,212	-
2121	-	750,582,023	750,582,023	49	-	43,317,039	-
2122	-	776,852,394	776,852,394	25	-	44,833,136	-
2123	-	804,042,228	804,042,228	13	-	46,402,296	-
2124	-	832,183,706	832,183,706	6	-	48,026,376	-
2125	-	861,310,136	861,310,136	3	-	49,707,299	-
2126	-	891,455,991	891,455,991	2	-	51,447,055	-
2127	-	922,656,951	922,656,951	-	-	53,247,701	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2024	24,559,017	3,352,799	1,432,799	-	2,821,741	29,300,758
2025	29,300,758	2,231,696	1,549,311	-	1,852,622	31,835,765
2026	31,835,765	2,170,330	1,691,095	-	2,004,711	34,319,711
2027	34,319,711	2,115,983	1,769,938	-	2,155,796	36,821,551
2028	36,821,551	2,068,557	1,948,329	-	2,305,104	39,246,884
2029	39,246,884	2,015,379	2,157,013	-	2,448,504	41,553,753
2030	41,553,753	1,968,638	2,246,885	-	2,588,414	43,863,920
2031	43,863,920	1,920,728	2,273,246	-	2,730,479	46,241,881
2032	46,241,881	1,872,777	2,500,539	-	2,870,500	48,484,619
2033	48,484,619	1,821,160	2,696,722	-	3,002,927	50,611,983
2034	50,611,983	1,765,847	2,794,261	-	3,131,111	52,714,680
2035	52,714,680	1,722,852	2,974,756	-	3,255,546	54,718,322
2036	54,718,322	1,683,052	3,040,754	-	3,377,467	56,738,087
2037	56,738,087	1,637,244	3,170,498	-	3,498,216	58,703,049
2038	58,703,049	1,673,775	3,392,648	-	3,615,226	60,599,402
2039	60,599,402	1,592,010	3,445,233	-	3,729,549	62,475,728
2040	62,475,728	1,515,035	3,506,998	-	3,842,484	64,326,249
2041	64,326,249	1,496,630	3,621,712	-	3,953,982	66,155,149
2042	66,155,149	1,569,319	3,833,597	-	4,063,938	67,954,809
2043	67,954,809	1,608,574	4,016,343	-	4,171,933	69,718,973
2044	69,718,973	1,632,744	4,189,136	-	4,277,549	71,440,130
2045	71,440,130	1,548,850	4,257,336	-	4,380,368	73,112,012
2046	73,112,012	1,509,363	4,371,952	-	4,480,045	74,729,468
2047	74,729,468	1,287,719	4,300,961	-	4,576,428	76,292,654
2048	76,292,654	1,233,289	4,396,124	-	4,669,452	77,799,271
2049	77,799,271	1,156,943	4,470,912	-	4,758,893	79,244,195
2050	79,244,195	1,012,729	4,482,403	-	4,844,335	80,618,856
2051	80,618,856	983,516	4,611,566	-	4,925,302	81,916,108
2052	81,916,108	746,593	4,536,772	-	5,001,314	83,127,243
2053	83,127,243	610,199	4,568,666	-	5,071,751	84,240,527
2054	84,240,527	464,465	4,594,314	-	5,135,975	85,246,653
2055	85,246,653	166,880	4,471,549	-	5,193,395	86,135,379
2056	86,135,379	106,173	4,590,136	-	5,243,337	86,894,753
2057	86,894,753	-	4,552,726	-	5,288,649	87,630,676

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2058	87,630,676	-	4,481,184	-	5,336,880	88,486,372
2059	88,486,372	-	4,510,094	-	5,389,458	89,365,736
2060	89,365,736	-	4,469,905	-	5,445,674	90,341,505
2061	90,341,505	-	4,312,761	-	5,511,570	91,540,314
2062	91,540,314	-	4,314,096	-	5,586,454	92,812,672
2063	92,812,672	-	4,277,358	-	5,667,125	94,202,439
2064	94,202,439	-	4,084,549	-	5,760,010	95,877,900
2065	95,877,900	-	4,113,436	-	5,863,824	97,628,288
2066	97,628,288	-	4,069,989	-	5,974,581	99,532,880
2067	99,532,880	-	4,045,586	-	6,094,380	101,581,674
2068	101,581,674	-	3,917,705	-	6,226,426	103,890,395
2069	103,890,395	-	3,842,388	-	6,373,075	106,421,082
2070	106,421,082	-	3,810,260	-	6,532,247	109,143,069
2071	109,143,069	-	3,666,813	-	6,706,854	112,183,110
2072	112,183,110	-	3,595,143	-	6,899,096	115,487,063
2073	115,487,063	-	3,518,091	-	7,108,001	119,076,973
2074	119,076,973	-	3,434,567	-	7,334,981	122,977,387
2075	122,977,387	-	3,339,887	-	7,581,715	127,219,215
2076	127,219,215	-	3,227,761	-	7,850,333	131,841,787
2077	131,841,787	-	3,110,488	-	8,142,909	136,874,208
2078	136,874,208	-	2,990,123	-	8,461,197	142,345,282
2079	142,345,282	-	2,866,348	-	8,807,007	148,285,941
2080	148,285,941	-	2,722,951	-	9,182,779	154,745,769
2081	154,745,769	-	2,583,926	-	9,590,863	161,752,706
2082	161,752,706	-	2,431,927	-	10,033,546	169,354,325
2083	169,354,325	-	2,285,667	-	10,513,218	177,581,876
2084	177,581,876	-	2,137,163	-	11,032,081	186,476,794
2085	186,476,794	-	1,974,068	-	11,593,110	196,095,836
2086	196,095,836	-	1,824,948	-	12,198,960	206,469,848
2087	206,469,848	-	1,664,279	-	12,852,357	217,657,926
2088	217,657,926	-	1,512,466	-	13,556,356	229,701,816
2089	229,701,816	-	1,369,419	-	14,313,569	242,645,966
2090	242,645,966	-	1,218,483	-	15,127,295	256,554,778
2091	256,554,778	-	1,087,617	-	16,000,686	271,467,847

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2092	271,467,847	-	953,967	-	16,936,929	287,450,809
2093	287,450,809	-	833,446	-	17,939,630	304,556,993
2094	304,556,993	-	717,532	-	19,012,389	322,851,850
2095	322,851,850	-	610,735	-	20,159,155	342,400,270
2096	342,400,270	-	518,528	-	21,383,813	363,265,555
2097	363,265,555	-	433,008	-	22,690,566	385,523,113
2098	385,523,113	-	360,544	-	24,083,928	409,246,497
2099	409,246,497	-	295,040	-	25,568,686	434,520,143
2100	434,520,143	-	238,739	-	27,150,048	461,431,452
2101	461,431,452	-	189,665	-	28,833,539	490,075,326
2102	490,075,326	-	149,516	-	30,625,035	520,550,845
2103	520,550,845	-	116,535	-	32,530,786	552,965,096
2104	552,965,096	-	89,642	-	34,557,517	587,432,971
2105	587,432,971	-	67,991	-	36,712,436	624,077,416
2106	624,077,416	-	50,805	-	39,003,251	663,029,862
2107	663,029,862	-	37,368	-	41,438,199	704,430,693
2108	704,430,693	-	27,029	-	44,026,074	748,429,738
2109	748,429,738	-	19,203	-	46,776,259	795,186,794
2110	795,186,794	-	13,384	-	49,698,756	844,872,166
2111	844,872,166	-	9,139	-	52,804,225	897,667,252
2112	897,667,252	-	6,108	-	56,104,012	953,765,156
2113	953,765,156	-	3,988	-	59,610,198	1,013,371,366
2114	1,013,371,366	-	2,539	-	63,335,631	1,076,704,458
2115	1,076,704,458	-	1,577	-	67,293,979	1,143,996,860
2116	1,143,996,860	-	953	-	71,499,774	1,215,495,681
2117	1,215,495,681	-	559	-	75,968,463	1,291,463,585
2118	1,291,463,585	-	319	-	80,716,464	1,372,179,730
2119	1,372,179,730	-	176	-	85,761,228	1,457,940,782
2120	1,457,940,782	-	93	-	91,121,296	1,549,061,985
2121	1,549,061,985	-	49	-	96,816,373	1,645,878,309
2122	1,645,878,309	-	25	-	102,867,394	1,748,745,678
2123	1,748,745,678	-	13	-	109,296,604	1,858,042,269
2124	1,858,042,269	-	6	-	116,127,642	1,974,169,905
2125	1,974,169,905	-	3	-	123,385,619	2,097,555,521

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2126	2,097,555,521	-	2	-	131,097,220	2,228,652,739
2127	2,228,652,739	-	-	-	139,290,796	2,367,943,535

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments

Year	Projected Benefit Payments				Actuarial Present Value of Projected Benefit Payments			Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.25%
	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)		
2025	29,300,758	1,549,311	1,549,311	-	1,503,052	-	1,503,052	
2026	31,835,765	1,691,095	1,691,095	-	1,544,097	-	1,544,097	
2027	34,319,711	1,769,938	1,769,938	-	1,521,023	-	1,521,023	
2028	36,821,551	1,948,329	1,948,329	-	1,575,836	-	1,575,836	
2029	39,246,884	2,157,013	2,157,013	-	1,641,998	-	1,641,998	
2030	41,553,753	2,246,885	2,246,885	-	1,609,799	-	1,609,799	
2031	43,863,920	2,273,246	2,273,246	-	1,532,881	-	1,532,881	
2032	46,241,881	2,500,539	2,500,539	-	1,586,962	-	1,586,962	
2033	48,484,619	2,696,722	2,696,722	-	1,610,795	-	1,610,795	
2034	50,611,983	2,794,261	2,794,261	-	1,570,877	-	1,570,877	
2035	52,714,680	2,974,756	2,974,756	-	1,573,974	-	1,573,974	
2036	54,718,322	3,040,754	3,040,754	-	1,514,253	-	1,514,253	
2037	56,738,087	3,170,498	3,170,498	-	1,485,990	-	1,485,990	
2038	58,703,049	3,392,648	3,392,648	-	1,496,574	-	1,496,574	
2039	60,599,402	3,445,233	3,445,233	-	1,430,372	-	1,430,372	
2040	62,475,728	3,506,998	3,506,998	-	1,370,367	-	1,370,367	
2041	64,326,249	3,621,712	3,621,712	-	1,331,945	-	1,331,945	
2042	66,155,149	3,833,597	3,833,597	-	1,326,936	-	1,326,936	
2043	67,954,809	4,016,343	4,016,343	-	1,308,415	-	1,308,415	
2044	69,718,973	4,189,136	4,189,136	-	1,284,429	-	1,284,429	
2045	71,440,130	4,257,336	4,257,336	-	1,228,555	-	1,228,555	
2046	73,112,012	4,371,952	4,371,952	-	1,187,417	-	1,187,417	
2047	74,729,468	4,300,961	4,300,961	-	1,099,422	-	1,099,422	
2048	76,292,654	4,396,124	4,396,124	-	1,057,645	-	1,057,645	
2049	77,799,271	4,470,912	4,470,912	-	1,012,365	-	1,012,365	
2050	79,244,195	4,482,403	4,482,403	-	955,263	-	955,263	
2051	80,618,856	4,611,566	4,611,566	-	924,978	-	924,978	
2052	81,916,108	4,536,772	4,536,772	-	856,448	-	856,448	
2053	83,127,243	4,568,666	4,568,666	-	811,736	-	811,736	
2054	84,240,527	4,594,314	4,594,314	-	768,275	-	768,275	
2055	85,246,653	4,471,549	4,471,549	-	703,761	-	703,761	
2056	86,135,379	4,590,136	4,590,136	-	679,930	-	679,930	

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments

Year	Projected Benefit Payments				Actuarial Present Value of Projected Benefit Payments			Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.25%
	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)		
2057	86,894,753	4,552,726	4,552,726	-	634,718	-	634,718	
2058	87,630,676	4,481,184	4,481,184	-	587,995	-	587,995	
2059	88,486,372	4,510,094	4,510,094	-	556,977	-	556,977	
2060	89,365,736	4,469,905	4,469,905	-	519,542	-	519,542	
2061	90,341,505	4,312,761	4,312,761	-	471,790	-	471,790	
2062	91,540,314	4,314,096	4,314,096	-	444,176	-	444,176	
2063	92,812,672	4,277,358	4,277,358	-	414,488	-	414,488	
2064	94,202,439	4,084,549	4,084,549	-	372,521	-	372,521	
2065	95,877,900	4,113,436	4,113,436	-	353,088	-	353,088	
2066	97,628,288	4,069,989	4,069,989	-	328,808	-	328,808	
2067	99,532,880	4,045,586	4,045,586	-	307,611	-	307,611	
2068	101,581,674	3,917,705	3,917,705	-	280,364	-	280,364	
2069	103,890,395	3,842,388	3,842,388	-	258,800	-	258,800	
2070	106,421,082	3,810,260	3,810,260	-	241,539	-	241,539	
2071	109,143,069	3,666,813	3,666,813	-	218,773	-	218,773	
2072	112,183,110	3,595,143	3,595,143	-	201,879	-	201,879	
2073	115,487,063	3,518,091	3,518,091	-	185,932	-	185,932	
2074	119,076,973	3,434,567	3,434,567	-	170,840	-	170,840	
2075	122,977,387	3,339,887	3,339,887	-	156,358	-	156,358	
2076	127,219,215	3,227,761	3,227,761	-	142,220	-	142,220	
2077	131,841,787	3,110,488	3,110,488	-	128,991	-	128,991	
2078	136,874,208	2,990,123	2,990,123	-	116,705	-	116,705	
2079	142,345,282	2,866,348	2,866,348	-	105,294	-	105,294	
2080	148,285,941	2,722,951	2,722,951	-	94,142	-	94,142	
2081	154,745,769	2,583,926	2,583,926	-	84,080	-	84,080	
2082	161,752,706	2,431,927	2,431,927	-	74,479	-	74,479	
2083	169,354,325	2,285,667	2,285,667	-	65,882	-	65,882	
2084	177,581,876	2,137,163	2,137,163	-	57,978	-	57,978	
2085	186,476,794	1,974,068	1,974,068	-	50,404	-	50,404	
2086	196,095,836	1,824,948	1,824,948	-	43,855	-	43,855	
2087	206,469,848	1,664,279	1,664,279	-	37,642	-	37,642	
2088	217,657,926	1,512,466	1,512,466	-	32,196	-	32,196	

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments

Year	Projected Benefit Payments				Actuarial Present Value of Projected Benefit Payments			Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.25%
	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)		
2089	229,701,816	1,369,419	1,369,419	-	27,436	-	27,436	
2090	242,645,966	1,218,483	1,218,483	-	22,976	-	22,976	
2091	256,554,778	1,087,617	1,087,617	-	19,302	-	19,302	
2092	271,467,847	953,967	953,967	-	15,934	-	15,934	
2093	287,450,809	833,446	833,446	-	13,102	-	13,102	
2094	304,556,993	717,532	717,532	-	10,616	-	10,616	
2095	322,851,850	610,735	610,735	-	8,505	-	8,505	
2096	342,400,270	518,528	518,528	-	6,796	-	6,796	
2097	363,265,555	433,008	433,008	-	5,341	-	5,341	
2098	385,523,113	360,544	360,544	-	4,186	-	4,186	
2099	409,246,497	295,040	295,040	-	3,224	-	3,224	
2100	434,520,143	238,739	238,739	-	2,455	-	2,455	
2101	461,431,452	189,665	189,665	-	1,836	-	1,836	
2102	490,075,326	149,516	149,516	-	1,362	-	1,362	
2103	520,550,845	116,535	116,535	-	999	-	999	
2104	552,965,096	89,642	89,642	-	723	-	723	
2105	587,432,971	67,991	67,991	-	516	-	516	
2106	624,077,416	50,805	50,805	-	363	-	363	
2107	663,029,862	37,368	37,368	-	251	-	251	
2108	704,430,693	27,029	27,029	-	171	-	171	
2109	748,429,738	19,203	19,203	-	114	-	114	
2110	795,186,794	13,384	13,384	-	75	-	75	
2111	844,872,166	9,139	9,139	-	48	-	48	
2112	897,667,252	6,108	6,108	-	30	-	30	
2113	953,765,156	3,988	3,988	-	19	-	19	
2114	1,013,371,366	2,539	2,539	-	11	-	11	
2115	1,076,704,458	1,577	1,577	-	7	-	7	
2116	1,143,996,860	953	953	-	4	-	4	
2117	1,215,495,681	559	559	-	2	-	2	
2118	1,291,463,585	319	319	-	1	-	1	
2119	1,372,179,730	176	176	-	1	-	1	
2120	1,457,940,782	93	93	-	-	-	-	

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments

Year	Projected Benefit Payments				Actuarial Present Value of Projected Benefit Payments		
	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.25%
2121	1,549,061,985	49	49	-	-	-	-
2122	1,645,878,309	25	25	-	-	-	-
2123	1,748,745,678	13	13	-	-	-	-
2124	1,858,042,269	6	6	-	-	-	-
2125	1,974,169,905	3	3	-	-	-	-
2126	2,097,555,521	2	2	-	-	-	-
2127	2,228,652,739	-	-	-	-	-	-

APPENDIX B - SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Year	Differences between Expected and Actual Experience		Recognition Period (Years)									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
2019	(1,661,369)	7.96	(208,715)	(208,715)	(200,364)	-	-	-	-	-	-	-
2020	-	7.96	-	-	-	-	-	-	-	-	-	-
2021	(9,876,472)	7.50	(1,316,863)	(1,316,863)	(1,316,863)	(1,316,863)	(658,431)	-	-	-	-	-
2022	-	7.50	-	-	-	-	-	-	-	-	-	-
2023	1,475,538	7.71	191,380	191,380	191,380	191,380	191,380	191,380	135,878	-	-	-
2024	-	7.71	-	-	-	-	-	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(1,334,198)	(1,334,198)	(1,325,847)	(1,125,483)	(467,051)	191,380	135,878	-	-	-
Year	Changes of Assumptions		Recognition Period (Years)									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
2019	2,595,779	7.96	326,103	326,103	313,058	-	-	-	-	-	-	-
2020	3,264,788	7.96	410,149	410,149	410,149	393,745	-	-	-	-	-	-
2021	2,019,866	7.50	269,315	269,315	269,315	269,315	134,661	-	-	-	-	-
2022	(104,824)	7.50	(13,977)	(13,977)	(13,977)	(13,977)	(13,977)	(6,985)	-	-	-	-
2023	3,572,480	7.71	463,357	463,357	463,357	463,357	463,357	328,981	-	-	-	-
2024	(1,247,458)	7.71	(161,797)	(161,797)	(161,797)	(161,797)	(161,797)	(161,797)	(161,797)	(114,879)	-	-
Net Increase (Decrease) in OPEB Expense			1,293,150	1,293,150	1,280,105	950,643	422,244	294,575	167,184	(114,879)	-	-

APPENDIX B - SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Year	Projected and Actual Earnings on OPEB Plan Investments	Recognition Period (Years)	Differences between									
			2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
2019	75,432	5	-	-	-	-	-	-	-	-	-	-
2020	702,166	5	140,434	-	-	-	-	-	-	-	-	-
2021	(3,240,895)	5	(648,179)	(648,179)	-	-	-	-	-	-	-	-
2022	5,010,030	5	1,002,006	1,002,006	1,002,006	-	-	-	-	-	-	-
2023	(426,505)	5	(85,301)	(85,301)	(85,301)	(85,301)	-	-	-	-	-	-
2024	(1,337,953)	5	(267,591)	(267,591)	(267,591)	(267,591)	(267,589)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			141,369	935	649,114	(352,892)	(267,589)	-	-	-	-	-