



## **TOWN OF PLYMOUTH, 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

November, 2024





A C T U A R I E S  
L L C

November 15, 2024

Ms. Lynne A. Barrett  
Director of Finance  
Town of Plymouth  
26 Court Street  
Plymouth, MA 02360

Dear Lynne:

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 Plymouth. 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 Plymouth as well as health plan rates provided by the Town as of July 1, 2023. 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 3.95%, the rate that reflects a blended-rate of the long-term expected rate of return on OPEB plan assets and the municipal bond rate. The municipal bond rate of 3.93% is based on the Bond Buyer 20-Bond GO Index published on June 30, 2024. The long-term expected rate of return is 6%. 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 in the Horizon Actuarial Services, LLC 'Survey of Capital Market Expectations, 2024 Edition.'

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 Plymouth 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 Plymouth 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 Plymouth 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 Plymouth, other than as consulting actuary for this assignment, that would impair our independence.

Ms. Lynne A. Barrett  
November 15, 2024  
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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,



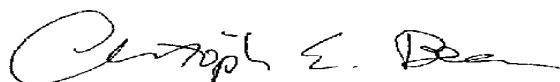
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## EXECUTIVE SUMMARY

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### Purpose of Report

This report presents the results of the actuarial valuation of the Town of Plymouth'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 Plymouth. 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 Plymouth.

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 Plymouth Other Postemployment Benefits Program

The Town of Plymouth 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	
<b>Membership Data</b>			
Active Plan Members	1,607	1,602	0.3%
Inactive Plan Members (excludes covered spouses)	1,422	1,379	3.1%
Total Plan Members	3,029	2,981	1.6%
Covered Spouses	815	870	(6.3%)
Covered Payroll	\$131,614,100	\$128,790,794	2.2%
<b>Net OPEB Liability</b>			
Discount Rate	3.95%	3.65%	
Total OPEB Liability (TOL)	\$580,593,780	\$587,234,406	(1.1%)
Fiduciary Net Position (FNP)	\$13,598,744	\$10,819,823	25.7%
Net OPEB Liability	\$566,995,036	\$576,414,583	(1.6%)
FNP as % of TOL	2.3%	1.8%	
<b>OPEB Expense (Income)</b>			
OPEB Expense (Income)	\$42,233,311	(\$148,456,266)	
Deferred Outflows	\$83,249,671	\$139,417,335	
Deferred Inflows	\$197,346,001	\$221,997,352	
Recognition Period (Years)	6.54	6.54	

## EXECUTIVE SUMMARY

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### 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 \$867,889 is the difference in the projected earnings of \$714,820 and actual earnings of \$1,582,709.

### Changes of Assumptions

The discount rate changed from 3.65% as of June 30, 2023 to 3.95% 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	(27,203,000)
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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 \$580,593,780. The Total OPEB Liability as of the prior measurement date, June 30, 2023, was \$587,234,406. During the current measurement period ending June 30, 2024, the Total OPEB Liability decreased by \$6,640,626, or -1.1%. The development of the Total OPEB Liability for the current measurement period is shown in Section 1, Exhibit 1.2.

## EXECUTIVE SUMMARY

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### 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 \$13,598,744. The Fiduciary Net Position as of the prior measurement date, June 30, 2023, was \$10,819,823. During the plan years ended June 30, 2024 and June 30, 2023, the actual rates of return were 13.29% and 10.99%, respectively. The expected long-term rate of return is 6.00%. The Fiduciary Net Position is shown in Section 1, Exhibit 1.1.

### Employer Future Period Contributions

The Town's funding policy is to contribute an amount equal to at least 1% of covered payroll each year.

### Discount Rate

As of the June 30, 2024 measurement date, the OPEB plan's fiduciary net position was projected to be insufficient to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to the first 7 periods of projected future benefit payments and the 3.93% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 3.95%.

### OPEB Expense (Income)

The OPEB Expense for the current measurement period ending June 30, 2024, is \$42,233,311. Benefit changes are recognized immediately and experience gains and losses and assumption changes developed in this valuation are recognized over 6.54 years. Investment gains and losses are recognized over 5 years. The OPEB Income for the prior measurement period was \$148,456,266. 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 special legislation enacted under Chapter 113 of the Acts of 2012 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
<b>Trust Fund Composition at Fiscal Year-End</b>		
Domestic Equities	\$5,908,662	\$4,523,593
International Equities	2,653,908	2,271,304
Fixed Income	5,036,174	4,024,926
Total Market Value of Assets	\$13,598,744	\$10,819,823
<b>Asset Activity</b>		
Market value, beginning of year	\$10,819,823	\$8,587,208
Employer Premiums	18,940,333	17,636,873
OPEB Trust Contributions	1,196,212	1,171,619
Benefit Payments	(18,940,333)	(17,636,873)
Administrative Expenses	-	-
Investment Return	1,582,709	1,060,996
Market value, end of year	\$13,598,744	\$10,819,823
<b>Money-Weighted Rate of Return</b>	13.29%	10.99%
<b>(Gain) / Loss on OPEB Plan Investments</b>		
Projected earnings	\$714,820	\$555,373
Actual earnings	1,582,709	1,060,996
(Gain) / Loss on OPEB plan investments	(\$867,889)	(\$505,623)

## 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	\$247,613,010
b. Retirees, Covered Spouses and Survivors	339,621,396
c. Total OPEB Liability at 3.65% (a. + b.)	\$587,234,406
2. Service Cost	\$17,765,602
3. Expected Benefit Payments	
a. Current retirees	(\$17,393,597)
b. Future retirees	(1,546,736)
c. Total (a. + b.)	(\$18,940,333)
4. Interest [3.65% x (1.c. + 2. + .5 x 3.c.)]	\$21,736,839
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	\$0
7. Changes of assumptions or other inputs	(\$27,202,734)
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$258,031,815
b. Retirees, Covered Spouses and Survivors	322,561,965
c. Total OPEB Liability at 3.95% (a. + b.)	\$580,593,780

## SECTION 1 - PRINCIPAL VALUATION RESULTS

### Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

The Town's funding policy is to contribute an amount equal to at least 1% of covered payroll each year.

The Actuarially Determined Employer Contribution (ADEC) equals the Normal Cost plus a provision for amortizing the Unfunded Actuarial Accrued Liability. We have assumed increasing dollar amortization over an amortization period of 30 years.

Fiscal Year Ending	June 30, 2024	June 30, 2025
<b>Discount Rate</b>	<b>3.65%</b>	<b>3.95%</b>
1. Normal Cost	\$17,765,602	\$16,884,000
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$587,234,406	\$580,593,780
b. Actuarial Value of Plan Assets	\$10,819,823	\$13,598,744
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$576,414,583	\$566,995,036
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$576,414,583	\$566,995,036
b. Amortization Period in years	30	30
c. Payroll Growth Rate	3.5%	3.5%
d. Amortization Factor	29.38	28.19
e. Amortization Amount (3.a. / 3.d.)	\$19,619,285	\$20,113,339
4. Interest on 1. and 3.e.	\$1,364,548	\$1,461,395
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$38,749,435	\$38,458,734
6. Actual Employer Contribution to OPEB Trust	\$1,196,212	TBD
7. Expected Benefit Payments	\$18,940,333	
8. Total Contribution (6. + 7.)	\$20,136,545	

## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

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### Exhibit 2.1 - Plan Description

#### Plan Administration

The Town of Plymouth 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 <sup>1</sup>	1,422
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	1,607
	<hr/>
	3,029
	<hr/>

<sup>1</sup>Per 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

The Town's funding policy is to contribute an amount equal to at least 1% of covered payroll each year.

## 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	\$ 580,593,780
Fiduciary net position	(13,598,744)
Net OPEB liability	\$ 566,995,036

Fiduciary net position as a percentage of the total OPEB liability 2.34%

#### 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	3.95%, 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 Employees Mortality Table projected generationally with Scale MP-2018.
Healthy Retiree Mortality - General and Public Safety employees	RP-2014 Blue Collar Healthy Annuitant Table projected generationally with Scale MP-2018.
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-2018.
Pre-Retirement Mortality - Teachers	PUB-2010 Teachers Headcount-Weighted Employee Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2021.
Healthy Retiree Mortality - Teachers	PUB-2010 Teachers Headcount-Weighted Retiree 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

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 <sup>1</sup>
Domestic Equities	40%	4.52%
International Equities	20%	5.44%
Fixed Income	40%	2.44%
Total	100%	

<sup>1</sup> Target asset allocation provided by Fiduciary Investment Advisors in the investment policy statement and long-term expected real rates of return are based on those provided in the Horizon Actuarial Services, LLC "Survey of Capital Market Expectations, 2024 Edition" and professional judgement.

#### Discount Rate

The discount rate used to measure the total OPEB liability was 3.95%. 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 insufficient to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to the first 7 periods of projected future benefit payments and the 3.93% municipal bond rate was applied to all periods thereafter 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 3.95 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (2.95 percent) or 1-percentage point higher (4.95 percent) than the current rate:

	1% Decrease (2.95%)	Assumed Discount Rate (3.95%)	1% Increase (4.95%)
Total OPEB Liability	\$ 679,316,468	\$ 580,593,780	\$ 502,273,965
Fiduciary Net Position	(13,598,744)	(13,598,744)	(13,598,744)
Net OPEB Liability	\$ 665,717,724	\$ 566,995,036	\$ 488,675,221
% Change in NOL	17.4%		-13.8%

#### 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	\$ 488,247,695	\$ 580,593,780	\$ 700,618,435
Fiduciary Net Position	(13,598,744)	(13,598,744)	(13,598,744)
Net OPEB Liability	\$ 474,648,951	\$ 566,995,036	\$ 687,019,691
% Change in NOL	-16.3%		21.2%

## 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
<b>Total OPEB Liability</b>					
Service cost	\$ 17,765,602	\$ 25,374,857	\$ 38,009,669	\$ 40,436,080	\$ 28,061,321
Interest	21,736,839	27,729,027	21,117,382	22,650,812	27,716,155
Changes of benefit terms	-	(205,058,796)	-	(9,686,259)	(32,274,418)
Differences between expected and actual experience	-	(25,800,860)	-	(52,938,875)	-
Changes of assumptions	(27,202,734)	15,877,625	(221,863,323)	(25,487,904)	216,350,799
Benefit payments	(18,940,333)	(17,636,873)	(20,322,457)	(19,306,442)	(19,083,851)
<b>Net change in total OPEB liability</b>	<b>\$ (6,640,626)</b>	<b>\$(179,515,020)</b>	<b>\$(183,058,729)</b>	<b>\$ (44,332,588)</b>	<b>\$ 220,770,006</b>
<b>Total OPEB liability—beginning</b>	<b>\$ 587,234,406</b>	<b>\$ 766,749,426</b>	<b>\$ 949,808,155</b>	<b>\$ 994,140,743</b>	<b>\$ 773,370,737</b>
<b>Total OPEB liability—ending (a)</b>	<b><u>\$ 580,593,780</u></b>	<b><u>\$ 587,234,406</u></b>	<b><u>\$ 766,749,426</u></b>	<b><u>\$ 949,808,155</u></b>	<b><u>\$ 994,140,743</u></b>
<b>Plan Fiduciary Net Position</b>					
Contributions—employer	\$ 20,136,545	\$ 18,808,492	\$ 21,456,716	\$ 19,831,950	\$ 20,125,099
Net investment income	1,582,709	1,060,996	(1,166,553)	1,511,928	377,296
Benefit payments	(18,940,333)	(17,636,873)	(20,322,457)	(19,306,442)	(19,083,851)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
<b>Net change in plan fiduciary net position</b>	<b>\$ 2,778,921</b>	<b>\$ 2,232,615</b>	<b>\$ (32,294)</b>	<b>\$ 2,037,436</b>	<b>\$ 1,418,544</b>
<b>Plan fiduciary net position—beginning</b>	<b>\$ 10,819,823</b>	<b>\$ 8,587,208</b>	<b>\$ 8,619,502</b>	<b>\$ 6,582,066</b>	<b>\$ 5,163,522</b>
<b>Plan fiduciary net position—ending (b)</b>	<b><u>\$ 13,598,744</u></b>	<b><u>\$ 10,819,823</u></b>	<b><u>\$ 8,587,208</u></b>	<b><u>\$ 8,619,502</u></b>	<b><u>\$ 6,582,066</u></b>
<b>Net OPEB liability—ending (a) – (b)</b>	<b><u>\$ 566,995,036</u></b>	<b><u>\$ 576,414,583</u></b>	<b><u>\$ 758,162,218</u></b>	<b><u>\$ 941,188,653</u></b>	<b><u>\$ 987,558,677</u></b>
Plan fiduciary net position as a percentage of the total OPEB liability	2.34%	1.84%	1.12%	0.91%	0.66%
Covered payroll	\$ 131,614,100	\$ 128,790,794	\$ 118,519,409	\$ 117,913,268	\$ 112,135,762
Net OPEB liability as a percentage of covered payroll	430.80%	447.56%	639.69%	798.20%	880.68%
<b>Discount Rate</b>	3.95%	3.65%	3.54%	2.16%	2.21%

## 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
<b>Total OPEB Liability</b>					
Service cost	\$ 21,914,725	\$ 23,038,206	\$ 27,863,367		
Interest	23,742,073	22,140,028	19,356,363		
Changes of benefit terms	-	-	-		
Differences between expected and actual experience	15,849,776	-	-		
Changes of assumptions	129,379,977	(31,391,364)	(86,284,600)		
Benefit payments	(18,182,695)	(17,036,667)	(16,651,413)		
<b>Net change in total OPEB liability</b>	<b>\$172,703,856</b>	<b>\$ (3,249,797)</b>	<b>\$ (55,716,283)</b>		
<b>Total OPEB liability—beginning</b>	<b>\$600,666,881</b>	<b>\$603,916,678</b>	<b>\$659,632,961</b>		
<b>Total OPEB liability—ending (a)</b>	<b><u>\$773,370,737</u></b>	<b><u>\$600,666,881</u></b>	<b><u>\$603,916,678</u></b>		
<b>Plan Fiduciary Net Position</b>					
Contributions—employer	\$ 19,153,288	\$ 17,980,980	\$ 17,363,363		
Net investment income	370,873	228,269	171,891		
Benefit payments	(18,182,695)	(17,036,667)	(16,651,413)		
Administrative expenses	-	-	-		
Other	-	-	-		
<b>Net change in plan fiduciary net position</b>	<b>\$ 1,341,466</b>	<b>\$ 1,172,582</b>	<b>\$ 883,841</b>		
<b>Plan fiduciary net position—beginning</b>	<b>\$ 3,822,056</b>	<b>\$ 2,649,474</b>	<b>\$ 1,765,633</b>		
<b>Plan fiduciary net position—ending (b)</b>	<b><u>\$ 5,163,522</u></b>	<b><u>\$ 3,822,056</u></b>	<b><u>\$ 2,649,474</u></b>		
<b>Net OPEB liability—ending (a) – (b)</b>	<b><u>\$768,207,215</u></b>	<b><u>\$596,844,825</u></b>	<b><u>\$601,267,204</u></b>		
Plan fiduciary net position as a percentage of the total OPEB liability	0.67%	0.64%	0.44%		
Covered payroll	\$108,493,908	\$104,133,239	\$ 92,397,157		
Net OPEB liability as a percentage of covered payroll	708.06%	573.15%	650.74%		
<b>Discount Rate</b>	3.50%	3.87%	3.58%		

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

##### Changes of Benefit Terms

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

##### Changes of Assumptions

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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### 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	13.29%	10.99%	-12.30%	21.56%	6.17%	7.88%	6.50%	7.11%		

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 <sub>mw</sub> ) <sup>(c)</sup>
Beginning value - July 1, 2023	\$ 10,819,823	12	1.00	\$ 12,257,593
Monthly net external cash flows:				
July	1,196,212	11	0.92	1,341,151
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	-	2	0.17	-
May	-	1	0.08	-
June	-	0	0.00	-
Ending value - June 30, 2024				\$ 13,598,744
Money-weighted rate of return:				13.29%

## 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	\$ 38,749,435	\$ 52,588,955	\$ 65,195,315	\$ 69,213,245	\$ 55,546,616
Contributions in relation to the actuarially determined contribution	<u>20,136,545</u>	<u>18,808,492</u>	<u>21,456,716</u>	<u>19,831,950</u>	<u>20,125,099</u>
Contribution deficiency (excess)	<u><u>\$ 18,612,890</u></u>	<u><u>\$ 33,780,463</u></u>	<u><u>\$ 43,738,599</u></u>	<u><u>\$ 49,381,295</u></u>	<u><u>\$ 35,421,517</u></u>
Covered payroll	\$ 131,614,100	\$ 128,790,794	\$ 118,519,409	\$ 117,913,268	\$ 112,135,762
Contributions as a percentage of covered payroll	15.30%	14.60%	18.10%	16.82%	17.95%
Discount rate	3.65%	3.54%	2.16%	2.21%	3.50%
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	\$ 44,515,201	\$ 44,853,623	\$ 39,477,033		
Contributions in relation to the actuarially determined contribution	<u>19,153,288</u>	<u>17,980,980</u>	<u>17,363,363</u>		
Contribution deficiency (excess)	<u><u>\$ 25,361,913</u></u>	<u><u>\$ 26,872,643</u></u>	<u><u>\$ 22,113,670</u></u>		
Covered payroll	\$ 108,493,908	\$ 104,133,239	\$ 92,397,157		
Contributions as a percentage of covered payroll	17.65%	17.27%	18.79%		
Discount rate	3.87%	3.58%	4.00%		
Inflation	2.60%	2.25%	2.25%		

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	Increasing at 3.5% over 30 years on an open amortization period for partial pre-funding.
Amortization period	30 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	Experience Losses	Experience Gains	(c)	(a) - (c)	(b) + (c)
2019	\$ 15,849,776	\$ -	\$ 14,088,690	\$ 1,761,086	\$ -
2020	-	-	-	-	-
2021	-	52,938,875	(31,232,376)	-	21,706,499
2022	-	-	-	-	-
2023	-	25,800,860	(7,890,172)	-	17,910,688
2024	-	-	-	-	-
<b>Total</b>				<b>\$ 1,761,086</b>	<b>\$ 39,617,187</b>

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					
	Increases in the Total OPEB Liability	Decreases in the Total OPEB Liability	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	\$129,379,977	\$ -	\$ 115,004,424	\$ 14,375,553	\$ -
2020	216,350,799	-	160,259,850	56,090,949	-
2021	-	25,487,904	(15,037,112)	-	10,450,792
2022	-	221,863,323	(98,169,612)	-	123,693,711
2023	15,877,625	-	4,855,542	11,022,083	-
2024	-	27,202,734	(4,159,439)	-	23,043,295
<b>Total</b>				<b>\$ 81,488,585</b>	<b>\$ 157,187,798</b>

## 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	\$ -	\$ 76,529	\$ (76,529)	\$ -	\$ -		
2020	4,927	-	4,927	-	-		
2021	-	1,090,857	(872,685)	-	218,172		
2022	1,687,100	-	1,012,260	674,840	-		
2023	-	505,623	(202,250)	-	303,373		
2024	-	867,889	(173,578)	-	694,311		
Subtotal				\$ 674,840	\$ 1,215,856		
Net				\$ -	\$ 541,016		

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	\$	(1,934,176)
2026	\$	(25,865,633)
2027	\$	(47,697,207)
2028	\$	(31,374,430)
2029	\$	(4,978,784)
Thereafter	\$	(2,246,100)
<b>Deferred Outflows</b>	\$	83,249,671
<b>Deferred Inflows</b>	\$	197,346,001

## 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	\$ 17,765,602
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	587,234,406
b. Service cost, beginning of year	17,765,602
c. Benefit payments	(18,940,333)
d. Interest on total OPEB liability = 3.65% times (a. + b. + .5 times c.)	21,736,839
3. Differences between expected and actual experience	(9,405,065)
4. Changes of benefit terms	-
5. Changes of assumptions	13,005,224
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	10,819,823
b. Contributions - Employer	20,136,545
c. Benefit payments	(18,940,333)
d. Administrative expenses and other	-
e. Total projected earnings	(714,820)
7. Differences between projected and actual earnings on OPEB plan investments	(154,469)
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
<b>10. Total OPEB Expense</b>	<b>\$ 42,233,311</b>

## 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 Plymouth 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
Blue Choice	\$1,079.06	\$2,556.78
Blue Care Elect	\$1,173.57	\$2,702.84
Access Blue New England Saver (QHDHP)	\$930.11	\$2,203.95

Medicare Plans - July 1, 2023	
Medex w/ OBRA	\$385.40
Managed Blue	\$364.69

**Participant Contributions** Retired employees contribute a percentage of the total medical and dental premium, depending on the retirees' date of retirement or hire date, as follows:

Retired prior to July 1, 1994 - 1%

Retired after July 1, 1994 and hired before July 1, 2003 - 10%

Hired on or after July 1, 2003 and before July 1, 2016 - 20%

Hired on or after July 1, 2016 and before June 30, 2018 - 22.5%

Hired on or after July 1, 2018 and before June 30, 2024 - 25%

Hired on or after July 1, 2024 - 30%

## SECTION 5 - SUMMARY OF PLAN PROVISIONS

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**Continuation of Coverage to Spouse After Death of Retiree** Surviving spouse may continue coverage for lifetime by paying the required medical premium.

**Medicare Penalty Reimbursement** The Town reimburses the Medicare late-enrollment penalty, if applicable, based on information provided in the retiree data.

**Medicare Part B Reimbursement** The Town reimburses a portion of the Medicare Part B premium for certain retirees, survivors and covered spouses. Effective February 1, 2021, the Town reimburses the following amounts:

\$1,050 annually for employees retired as of February 1, 2021 who become Medicare-eligible prior to July 1, 2022 and for covered spouses who were Medicare-eligible as of March 31, 2016.

\$950 annually for employees approved for retirement between February 1, 2021 and July 1, 2022 who become Medicare-eligible on or before July 1, 2022.

\$575 annually for employees retired as of February 1, 2021 who become Medicare-eligible on or after July 1, 2022 but prior to July 1, 2023.

Retirees, spouses and current employees not identified above do not qualify for the Medicare Part B reimbursement.

**Dental Coverage** Dental coverage is provided. The total monthly costs are \$36.58 and \$73.16 for individual and two-person plans, respectively. Retirees contribute the percentage of the monthly premiums shown under Participant Contributions.

**Life Insurance Coverage** Retirees are eligible for a \$2,000 life insurance benefit. The total monthly cost is \$1.38. Retired Town employees contribute 1% of the total life insurance premium rates and retired School employees contribute 10% of the total life insurance premium rates.

## SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

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<b>Valuation Date</b>	July 1, 2022
<b>Measurement Date</b>	June 30, 2024
<b>GASB 75 Reporting Date</b>	June 30, 2024
<b>Long-Term Expected Rate of Return</b>	6%, net of investment expenses and including inflation at 2.5%.  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.
<b>Municipal Bond Rate</b>	3.93%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2024.
<b>Discount Rate (GASB)</b>	3.95%, compounded annually, for the measurement as of June 30, 2024. 3.65%, 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.
<b>Discount Rate (ADEC)</b>	3.65%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2024.
<b>Amortization Method</b>	Increasing at 3.5% over 30 years on an open 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

Dental trend rates are 4% per year.

### Medicare Trend Rates

5.5% per year.

### 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 - 90% of eligible retired employees will elect to participate.

Dental - 90% of eligible retirees will elect to participate.

Life - 90% 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.

70% 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	\$4,660	\$5,471	\$4,660	\$5,471
20-24	3,672	5,825	3,672	5,825
25-29	3,821	8,593	3,821	8,593
30-34	4,800	10,858	4,800	10,858
35-39	6,021	11,184	6,021	11,184
40-44	7,502	11,454	7,502	11,454
45-49	9,469	12,572	9,469	12,572
50-54	12,479	14,791	12,479	14,791
55-59	16,217	17,102	16,217	17,102
60-64	20,811	20,355	20,811	20,355
65-69	3,394	3,306	25,965	24,399
70-74	4,068	3,899	31,110	28,770
75-79	4,803	4,524	36,739	33,384
80-84	5,521	5,189	42,228	38,286
85-89	6,150	5,800	47,037	42,797
90-94	6,696	6,190	51,203	45,677
95+	7,116	5,987	54,428	44,167

### Retiree Contributions

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

Plan	Contribution				
	1%	10%	20%	22.5%	25%
Non-Medicare	\$ 136	\$ 1,365	\$ 2,729	\$ 3,070	\$ 3,412
Medicare	42	418	836	940	1,045

### 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

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### 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 Employees Mortality Table projected generationally with Scale MP-2018.

#### Healthy Retiree Mortality

Healthy retiree mortality rates for General and Public Safety employees are based on the RP-2014 Blue Collar Healthy Annuitant Table projected generationally with Scale MP-2018.

#### 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-2018.

#### 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	1.00%	1.50%	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	30.00%	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:

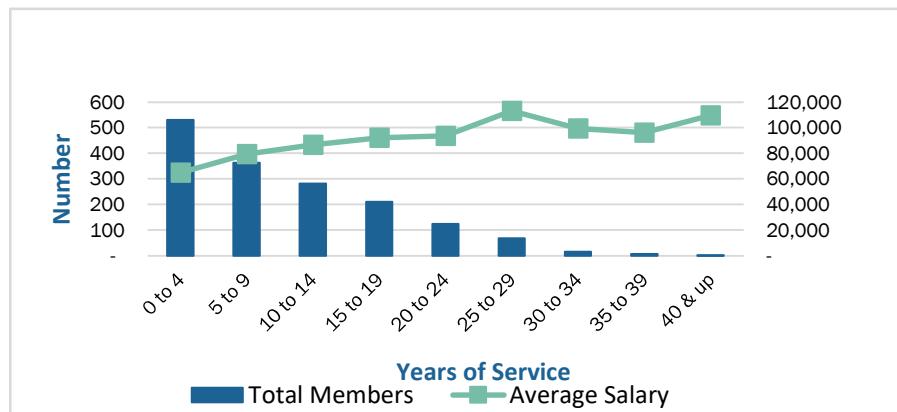
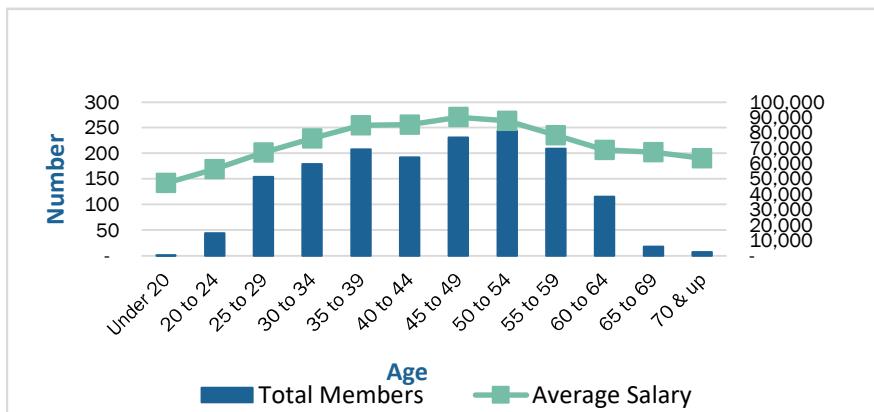
Age	Years of Service						
	Less than 20		20-29		30+		
	Male	Female	Male	Female	Male	Female	
50	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%	
51	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%	
52	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%	
53	0.0%	0.0%	1.5%	1.0%	2.0%	1.5%	
54	0.0%	0.0%	2.5%	1.0%	2.0%	2.0%	
55	5.0%	3.0%	3.0%	3.0%	6.0%	5.0%	
56	5.0%	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	47,344	47,344	
20 to 24	42	2	-	-	-	-	-	-	-	44	2,479,978	56,363	
25 to 29	121	31	2	-	-	-	-	-	-	154	10,343,594	67,166	
30 to 34	90	71	18	-	-	-	-	-	-	179	13,650,348	76,259	
35 to 39	76	58	60	13	1	-	-	-	-	208	17,657,314	84,891	
40 to 44	51	56	37	44	4	-	-	-	-	192	16,391,462	85,372	
45 to 49	39	50	51	48	37	6	-	-	-	231	20,830,136	90,174	
50 to 54	42	45	53	49	27	26	2	-	-	244	21,421,094	87,791	
55 to 59	44	27	44	29	31	20	10	4	-	209	16,406,009	78,498	
60 to 64	21	17	15	23	17	15	4	2	1	115	7,904,757	68,737	
65 to 69	2	5	1	2	6	1	-	-	1	18	1,214,383	67,466	
70 & up	1	1	1	2	1	-	-	1	-	7	444,374	63,482	
<b>Total</b>	530	363	282	210	124	68	16	7	2	1,602	128,790,794	80,394	
<b>Total Salary</b>	34,421,173	28,804,235	24,442,348	19,352,793	11,590,303	7,696,588	1,590,775	673,331	219,247				
<b>Average Salary</b>	64,946	79,351	86,675	92,156	93,470	113,185	99,423	96,190	109,624				

Average Age: 44.8      Average Service: 10.3



## 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			Total
	Blue Choice	Blue Care Elect	Access Blue New England Saver (OHDHP)	Medex w/ OBRA	Managed Blue		
Under 40	4	0	0	0	0	0	4
40 to 44	6	2	0	0	0	0	8
45 to 49	6	0	0	0	0	0	6
50 to 54	21	1	0	0	0	0	22
55 to 59	63	8	0	0	0	0	71
60 to 64	73	18	0	11	20	122	
65 to 69	24	3	0	77	198	302	
70 to 74	16	6	0	146	168	336	
75 to 79	3	5	0	175	51	234	
80 to 84	2	3	0	120	7	132	
85 to 89	3	1	0	54	6	64	
90+	0	0	0	27	0	27	
Total	221	47	0	610	450	1,328	
Covered Spouses	174	27	0	272	285	758	

Average Age: 71.8

In addition, there are 163 retirees, survivors and covered spouses that are not covered under any medical plan but are covered under either a life insurance plan and/or a dental 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

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**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

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**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	School	Sewer	Water	Solid Waste	Airport	Total
<b>Summary of Member Data Used in Valuation</b>							
Active Members	480	1,089	3	18	4	8	1,602
Average Age	43.6	45.1	46.4	46.7	63.5	55.8	44.8
Average Service	10.5	10.2	3.8	10.7	5.5	12.1	10.3
Covered Payroll	45,493,426	80,755,757	244,588	1,419,175	249,437	628,410	128,790,794
Retired Members and Survivors	457	881	5	24	6	6	1,379
Average Age	70.0	72.6	81.3	71.6	76.1	75.3	71.8
Covered Spouses	282	567	2	12	4	3	870
Expected Benefit Payments	6,929,101	11,519,938	39,047	330,028	56,625	65,594	18,940,333
OPEB Trust contributions	406,617	768,397	1,670	13,520	2,340	3,668	1,196,212
Total Employer Contributions	7,335,718	12,288,335	40,717	343,548	58,965	69,262	20,136,545
<b>Beginning Net OPEB Liability - June 30, 2023</b>							
Total OPEB Liability	199,516,685	377,190,601	822,466	6,764,293	1,151,255	1,789,106	587,234,406
Fiduciary Net Position	3,731,808	6,867,789	17,849	150,854	21,264	30,259	10,819,823
Net OPEB Liability	195,784,877	370,322,812	804,617	6,613,439	1,129,991	1,758,847	576,414,583
Total OPEB Liability, beginning of year	199,516,685	377,190,601	822,466	6,764,293	1,151,255	1,789,106	587,234,406
Service cost	6,678,358	10,781,686	31,436	171,012	35,603	67,507	17,765,602
Interest	7,399,664	13,950,748	30,455	247,116	42,287	66,569	21,736,839
Changes of benefit terms	0	0	0	0	0	0	0
Differences between expected and actual experience	0	0	0	0	0	0	0
Changes of assumptions	(9,308,081)	(17,454,393)	(34,636)	(291,073)	(37,181)	(77,370)	(27,202,734)
Benefit payments	(6,929,101)	(11,519,938)	(39,047)	(330,028)	(56,625)	(65,594)	(18,940,333)
Net change in total OPEB liability	(2,159,160)	(4,241,897)	(11,792)	(202,973)	(15,916)	(8,888)	(6,640,626)
Total OPEB Liability, end of year	197,357,525	372,948,704	810,674	6,561,320	1,135,339	1,780,218	580,593,780
<b>Ending Net OPEB Liability - June 30, 2024</b>							
Total OPEB Liability	197,357,525	372,948,704	810,674	6,561,320	1,135,339	1,780,218	580,593,780
Fiduciary Net Position	4,683,586	8,641,902	22,093	186,058	26,713	38,392	13,598,744
Net OPEB Liability	192,673,939	364,306,802	788,581	6,375,262	1,108,626	1,741,826	566,995,036

## SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	Town	School	Sewer	Water	Solid Waste	Airport	Total
<b>Total Deferred Outflows of Resources</b>							
Differences between Expected and Actual							
Experience	598,340	1,131,175	2,467	20,286	3,453	5,365	1,761,086
Changes in Assumptions	27,686,273	52,341,498	114,131	938,659	159,756	248,268	81,488,585
Differences between Expected and Actual							
Earnings on OPEB Plan Investments	0	0	0	0	0	0	0
<b>Total Deferred Outflows of Resources</b>	<b>28,284,614</b>	<b>53,472,673</b>	<b>116,597</b>	<b>958,944</b>	<b>163,208</b>	<b>253,634</b>	<b>83,249,671</b>
<b>Total Deferred Inflows of Resources</b>							
Differences between Expected and Actual							
Experience	13,460,195	25,446,790	55,487	456,346	77,668	120,700	39,617,187
Changes in Assumptions	53,405,570	100,964,384	220,153	1,810,630	308,162	478,898	157,187,798
Differences between Expected and Actual							
Earnings on OPEB Plan Investments	186,599	343,405	892	7,543	1,063	1,513	541,016
<b>Total Deferred Inflows of Resources</b>	<b>67,052,365</b>	<b>126,754,579</b>	<b>276,533</b>	<b>2,274,520</b>	<b>386,893</b>	<b>601,112</b>	<b>197,346,001</b>
<b>Total OPEB Expense</b>	<b>13,952,262</b>	<b>27,710,823</b>	<b>36,957</b>	<b>262,817</b>	<b>107,545</b>	<b>162,907</b>	<b>42,233,311</b>
<b>Sensitivity of the Net OPEB Liability to Changes in the Discount Rate</b>							
Current Discount Rate: 3.95%	192,673,939	364,306,802	788,581	6,375,262	1,108,626	1,741,826	566,995,036
1% Decrease in the Discount Rate: 2.95%	226,232,110	427,722,050	926,426	7,490,932	1,301,676	2,044,530	665,717,724
1% Increase in the Discount Rate: 4.95%	166,051,186	313,997,490	679,224	5,490,166	955,473	1,501,682	488,675,221
<b>Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates</b>							
Current Trend Rates	192,673,939	364,306,802	788,581	6,375,262	1,108,626	1,741,826	566,995,036
1% Decrease in Trend Rates	161,283,326	304,987,612	659,640	5,331,654	928,045	1,458,674	474,648,951
1% Increase in Trend Rates	233,473,151	441,405,526	956,170	7,731,667	1,343,332	2,109,846	687,019,691
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in OPEB Expense</b>							
2025	(657,196)	(1,242,285)	(2,711)	(22,302)	(3,792)	(5,890)	(1,934,176)
2026	(8,788,647)	(16,613,006)	(36,257)	(298,241)	(50,709)	(78,773)	(25,865,633)
2027	(16,206,599)	(30,635,010)	(66,860)	(549,967)	(93,510)	(145,261)	(47,697,207)
2028	(10,660,431)	(20,151,202)	(43,979)	(361,759)	(61,509)	(95,550)	(31,374,430)
2029	(1,691,696)	(3,197,778)	(6,979)	(57,407)	(9,761)	(15,163)	(4,978,784)
Thereafter	(763,182)	(1,442,629)	(3,148)	(25,898)	(4,403)	(6,840)	(2,246,100)

## 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.

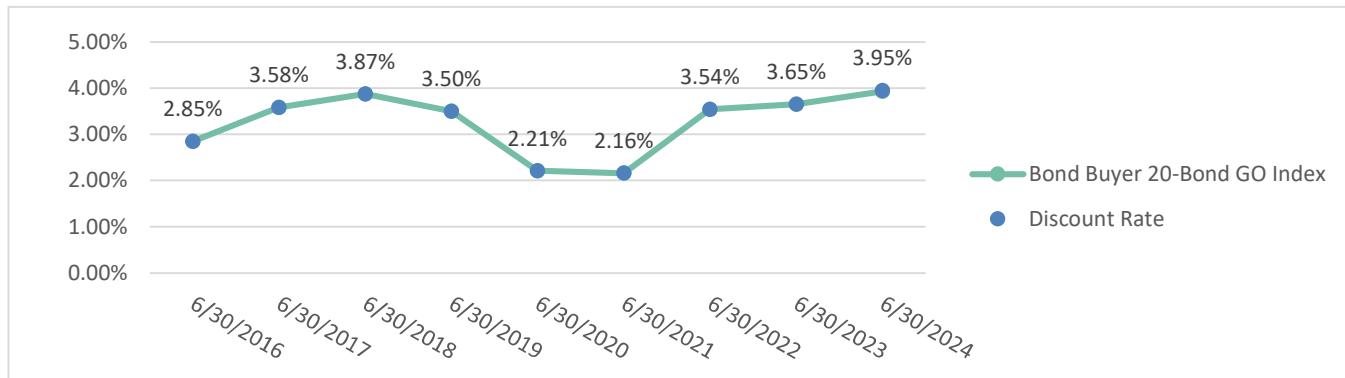
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. 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 3.95%, a long-term investment return rate of 6% 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 insufficient to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to the first 7 periods of projected future benefit payments and the 3.93% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 3.95%.

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) * 13.19%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2024	123,684,997	-	123,684,997	18,940,333	1,196,212	-	20,136,545
2025	119,220,965	8,793,007	128,013,972	20,207,784	1,280,140	1,159,726	20,328,198
2026	115,043,301	17,451,160	132,494,461	21,242,564	1,324,945	2,301,666	20,265,843
2027	111,225,875	25,905,892	137,131,767	22,664,990	1,371,318	3,416,776	20,619,532
2028	107,392,883	34,538,496	141,931,379	23,801,256	1,419,314	4,555,346	20,665,224
2029	103,570,516	43,328,461	146,898,977	24,723,461	1,468,990	5,714,671	20,477,780
2030	99,709,694	52,330,747	152,040,441	26,162,808	1,520,404	6,901,999	20,781,213
2031	95,526,106	61,835,750	157,361,856	27,562,619	1,573,619	8,155,631	20,980,607
2032	91,228,686	71,640,835	162,869,521	28,765,548	1,628,695	9,448,842	20,945,401
2033	86,851,865	81,718,089	168,569,954	30,031,507	1,685,700	10,777,950	20,939,257
2034	82,364,319	92,105,583	174,469,902	31,022,914	1,744,699	12,147,976	20,619,637
2035	78,324,851	102,251,498	180,576,349	31,947,805	1,805,763	13,486,139	20,267,429
2036	74,250,586	112,645,935	186,896,521	32,849,141	1,868,965	14,857,081	19,861,025
2037	70,314,533	123,123,366	193,437,899	33,856,706	1,934,379	16,238,968	19,552,117
2038	66,537,465	133,670,760	200,208,225	34,533,955	2,002,082	17,630,084	18,905,953
2039	62,756,944	144,458,569	207,215,513	35,450,083	2,072,155	19,052,908	18,469,330
2040	58,919,128	155,548,928	214,468,056	36,379,604	2,144,681	20,515,636	18,008,649
2041	55,236,224	166,738,214	221,974,438	36,804,095	2,219,744	21,991,411	17,032,428
2042	51,530,065	178,213,478	229,743,543	37,656,524	2,297,435	23,504,905	16,449,054
2043	47,936,117	189,848,450	237,784,567	38,491,787	2,377,846	25,039,463	15,830,170
2044	44,328,261	201,778,766	246,107,027	38,620,064	2,461,070	26,612,975	14,468,159
2045	41,025,220	213,695,553	254,720,773	39,176,643	2,547,208	28,184,702	13,539,149
2046	37,656,615	225,979,385	263,636,000	39,556,838	2,636,360	29,804,839	12,388,359
2047	34,552,512	238,310,748	272,863,260	39,539,422	2,728,633	31,431,245	10,836,810
2048	31,915,904	250,497,570	282,413,474	39,509,052	2,824,135	33,038,588	9,294,599
2049	29,097,266	263,200,680	292,297,946	39,603,135	2,922,979	34,714,024	7,812,090
2050	26,422,007	276,106,367	302,528,374	39,458,475	3,025,284	36,416,179	6,067,580
2051	23,859,887	289,256,980	313,116,867	39,016,000	3,131,169	38,150,638	3,996,531
2052	21,298,781	302,777,176	324,075,957	39,159,098	3,240,760	39,933,842	2,466,016
2053	18,631,874	316,786,741	335,418,615	38,962,933	3,354,186	41,781,589	535,530
2054	16,112,380	331,045,887	347,158,267	38,657,110	3,471,583	43,662,254	-
2055	13,681,134	345,627,672	359,308,806	38,652,224	3,593,088	45,585,473	-

## 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) * 13.19%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2056	11,542,787	360,341,827	371,884,614	38,508,657	3,718,846	47,526,150	-
2057	9,531,453	375,369,122	384,900,575	38,439,934	3,849,006	49,508,128	-
2058	7,683,718	390,688,377	398,372,095	38,327,614	3,983,721	51,528,613	-
2059	5,968,099	406,347,019	412,315,118	38,083,106	4,123,151	53,593,860	-
2060	4,381,830	422,364,317	426,746,147	37,603,372	4,267,461	55,706,411	-
2061	3,119,003	438,563,259	441,682,262	36,933,565	4,416,823	57,842,919	-
2062	2,119,871	455,021,270	457,141,141	35,683,647	4,571,411	60,013,597	-
2063	1,350,784	471,790,297	473,141,081	34,698,500	4,731,411	62,225,295	-
2064	896,525	488,804,494	489,701,019	34,012,694	4,897,010	64,469,329	-
2065	591,156	506,249,399	506,840,555	32,743,117	5,068,406	66,770,170	-
2066	337,506	524,242,468	524,579,974	32,303,411	5,245,800	69,143,309	-
2067	225,002	542,715,271	542,940,273	31,850,549	5,429,403	71,579,721	-
2068	130,827	561,812,356	561,943,183	31,316,420	5,619,432	74,098,471	-
2069	76,507	581,534,687	581,611,194	30,964,836	5,816,112	76,699,685	-
2070	35,733	601,931,853	601,967,586	30,516,457	6,019,676	79,389,905	-
2071	23,261	623,013,191	623,036,452	30,053,413	6,230,365	82,170,362	-
2072	18,144	644,824,584	644,842,728	29,463,455	6,448,427	85,047,107	-
2073	2,424	667,409,799	667,412,223	28,846,768	6,674,122	88,025,913	-
2074	1,708	690,769,943	690,771,651	28,134,894	6,907,717	91,106,925	-
2075	-	714,948,659	714,948,659	27,388,225	7,149,487	94,295,901	-
2076	-	739,971,862	739,971,862	26,560,066	7,399,719	97,596,257	-
2077	-	765,870,877	765,870,877	25,662,561	7,658,709	101,012,126	-
2078	-	792,676,358	792,676,358	24,718,288	7,926,764	104,547,551	-
2079	-	820,420,031	820,420,031	23,692,856	8,204,200	108,206,715	-
2080	-	849,134,732	849,134,732	22,666,847	8,491,347	111,993,950	-
2081	-	878,854,448	878,854,448	21,547,581	8,788,544	115,913,739	-
2082	-	909,614,354	909,614,354	20,429,487	9,096,144	119,970,719	-
2083	-	941,450,856	941,450,856	19,276,485	9,414,509	124,169,695	-
2084	-	974,401,636	974,401,636	18,067,273	9,744,016	128,515,634	-
2085	-	1,008,505,693	1,008,505,693	16,897,666	10,085,057	133,013,681	-
2086	-	1,043,803,392	1,043,803,392	15,664,015	10,438,034	137,669,160	-
2087	-	1,080,336,511	1,080,336,511	14,459,321	10,803,365	142,487,580	-

## APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

**Table 1: Projection of Contributions**

Year	Projected Payroll			Projected Contributions			Employer Contributions Related to Payroll of Future Employees	Portion of Employer Contributions for Current Plan Members
	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)	(f) = (b) * 13.19% (g) = (d) + (e) - (f)		
2088	-	1,118,148,289	1,118,148,289	13,261,931	11,181,483	147,474,646		-
2089	-	1,157,283,479	1,157,283,479	12,056,028	11,572,835	152,636,258		-
2090	-	1,197,788,401	1,197,788,401	10,923,450	11,977,884	157,978,527		-
2091	-	1,239,710,995	1,239,710,995	9,775,898	12,397,110	163,507,776		-
2092	-	1,283,100,880	1,283,100,880	8,701,122	12,831,009	169,230,548		-
2093	-	1,328,009,411	1,328,009,411	7,660,599	13,280,094	175,153,617		-
2094	-	1,374,489,740	1,374,489,740	6,677,667	13,744,897	181,283,994		-
2095	-	1,422,596,881	1,422,596,881	5,762,194	14,225,969	187,628,934		-
2096	-	1,472,387,772	1,472,387,772	4,921,592	14,723,878	194,195,946		-
2097	-	1,523,921,344	1,523,921,344	4,162,349	15,239,213	200,992,804		-
2098	-	1,577,258,591	1,577,258,591	3,476,663	15,772,586	208,027,553		-
2099	-	1,632,462,642	1,632,462,642	2,873,141	16,324,626	215,308,517		-
2100	-	1,689,598,834	1,689,598,834	2,341,697	16,895,988	222,844,315		-
2101	-	1,748,734,793	1,748,734,793	1,882,439	17,487,348	230,643,866		-
2102	-	1,809,940,511	1,809,940,511	1,490,202	18,099,405	238,716,401		-
2103	-	1,873,288,429	1,873,288,429	1,161,101	18,732,884	247,071,475		-
2104	-	1,938,853,524	1,938,853,524	889,383	19,388,535	255,718,977		-
2105	-	2,006,713,397	2,006,713,397	669,069	20,067,134	264,669,141		-
2106	-	2,076,948,366	2,076,948,366	493,784	20,769,484	273,932,561		-
2107	-	2,149,641,559	2,149,641,559	357,032	21,496,416	283,520,201		-
2108	-	2,224,879,014	2,224,879,014	252,705	22,248,790	293,443,408		-
2109	-	2,302,749,779	2,302,749,779	174,913	23,027,498	303,713,927		-
2110	-	2,383,346,021	2,383,346,021	118,225	23,833,460	314,343,915		-
2111	-	2,466,763,132	2,466,763,132	77,938	24,667,631	325,345,952		-
2112	-	2,553,099,842	2,553,099,842	50,091	25,530,998	336,733,060		-
2113	-	2,642,458,336	2,642,458,336	31,350	26,424,583	348,518,717		-
2114	-	2,734,944,378	2,734,944,378	19,105	27,349,444	360,716,872		-
2115	-	2,830,667,431	2,830,667,431	11,336	28,306,674	373,341,963		-
2116	-	2,929,740,791	2,929,740,791	6,548	29,297,408	386,408,931		-
2117	-	3,032,281,719	3,032,281,719	3,692	30,322,817	399,933,244		-
2118	-	3,138,411,579	3,138,411,579	2,020	31,384,116	413,930,907		-
2119	-	3,248,255,984	3,248,255,984	1,075	32,482,560	428,418,489		-

## 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) * 13.19%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2120	-	3,361,944,943	3,361,944,943	556	33,619,449	443,413,136	-
2121	-	3,479,613,016	3,479,613,016	261	34,796,130	458,932,596	-
2122	-	3,601,399,472	3,601,399,472	127	36,013,995	474,995,237	-
2123	-	3,727,448,454	3,727,448,454	57	37,274,485	491,620,070	-
2124	-	3,857,909,150	3,857,909,150	20	38,579,092	508,826,773	-
2125	-	3,992,935,970	3,992,935,970	10	39,929,360	526,635,710	-
2126	-	4,132,688,729	4,132,688,729	3	41,326,887	545,067,960	-
2127	-	4,277,332,835	4,277,332,835	2	42,773,328	564,145,338	-
2128	-	4,427,039,484	4,427,039,484	-	44,270,395	583,890,425	-

## 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	10,819,823	20,136,545	18,940,333	-	1,582,709	13,598,744
2025	13,598,744	20,328,198	20,207,784	-	819,537	14,538,695
2026	14,538,695	20,265,843	21,242,564	-	843,020	14,404,994
2027	14,404,994	20,619,532	22,664,990	-	802,936	13,162,472
2028	13,162,472	20,665,224	23,801,256	-	695,667	10,722,107
2029	10,722,107	20,477,780	24,723,461	-	515,956	6,992,382
2030	6,992,382	20,781,213	26,162,808	-	258,095	1,868,882
2031	1,868,882	20,980,607	27,562,619	-	-	-
2032	-	20,945,401	28,765,548	-	-	-
2033	-	20,939,257	30,031,507	-	-	-
2034	-	20,619,637	31,022,914	-	-	-
2035	-	20,267,429	31,947,805	-	-	-
2036	-	19,861,025	32,849,141	-	-	-
2037	-	19,552,117	33,856,706	-	-	-
2038	-	18,905,953	34,533,955	-	-	-
2039	-	18,469,330	35,450,083	-	-	-
2040	-	18,008,649	36,379,604	-	-	-
2041	-	17,032,428	36,804,095	-	-	-
2042	-	16,449,054	37,656,524	-	-	-
2043	-	15,830,170	38,491,787	-	-	-
2044	-	14,468,159	38,620,064	-	-	-
2045	-	13,539,149	39,176,643	-	-	-
2046	-	12,388,359	39,556,838	-	-	-
2047	-	10,836,810	39,539,422	-	-	-
2048	-	9,294,599	39,509,052	-	-	-
2049	-	7,812,090	39,603,135	-	-	-
2050	-	6,067,580	39,458,475	-	-	-
2051	-	3,996,531	39,016,000	-	-	-
2052	-	2,466,016	39,159,098	-	-	-
2053	-	535,530	38,962,933	-	-	-
2054	-	-	38,657,110	-	-	-
2055	-	-	38,652,224	-	-	-
2056	-	-	38,508,657	-	-	-
2057	-	-	38,439,934	-	-	-

## 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	-	-	38,327,614	-	-	-
2059	-	-	38,083,106	-	-	-
2060	-	-	37,603,372	-	-	-
2061	-	-	36,933,565	-	-	-
2062	-	-	35,683,647	-	-	-
2063	-	-	34,698,500	-	-	-
2064	-	-	34,012,694	-	-	-
2065	-	-	32,743,117	-	-	-
2066	-	-	32,303,411	-	-	-
2067	-	-	31,850,549	-	-	-
2068	-	-	31,316,420	-	-	-
2069	-	-	30,964,836	-	-	-
2070	-	-	30,516,457	-	-	-
2071	-	-	30,053,413	-	-	-
2072	-	-	29,463,455	-	-	-
2073	-	-	28,846,768	-	-	-
2074	-	-	28,134,894	-	-	-
2075	-	-	27,388,225	-	-	-
2076	-	-	26,560,066	-	-	-
2077	-	-	25,662,561	-	-	-
2078	-	-	24,718,288	-	-	-
2079	-	-	23,692,856	-	-	-
2080	-	-	22,666,847	-	-	-
2081	-	-	21,547,581	-	-	-
2082	-	-	20,429,487	-	-	-
2083	-	-	19,276,485	-	-	-
2084	-	-	18,067,273	-	-	-
2085	-	-	16,897,666	-	-	-
2086	-	-	15,664,015	-	-	-
2087	-	-	14,459,321	-	-	-
2088	-	-	13,261,931	-	-	-
2089	-	-	12,056,028	-	-	-
2090	-	-	10,923,450	-	-	-
2091	-	-	9,775,898	-	-	-

## 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	-	-	8,701,122	-	-	-
2093	-	-	7,660,599	-	-	-
2094	-	-	6,677,667	-	-	-
2095	-	-	5,762,194	-	-	-
2096	-	-	4,921,592	-	-	-
2097	-	-	4,162,349	-	-	-
2098	-	-	3,476,663	-	-	-
2099	-	-	2,873,141	-	-	-
2100	-	-	2,341,697	-	-	-
2101	-	-	1,882,439	-	-	-
2102	-	-	1,490,202	-	-	-
2103	-	-	1,161,101	-	-	-
2104	-	-	889,383	-	-	-
2105	-	-	669,069	-	-	-
2106	-	-	493,784	-	-	-
2107	-	-	357,032	-	-	-
2108	-	-	252,705	-	-	-
2109	-	-	174,913	-	-	-
2110	-	-	118,225	-	-	-
2111	-	-	77,938	-	-	-
2112	-	-	50,091	-	-	-
2113	-	-	31,350	-	-	-
2114	-	-	19,105	-	-	-
2115	-	-	11,336	-	-	-
2116	-	-	6,548	-	-	-
2117	-	-	3,692	-	-	-
2118	-	-	2,020	-	-	-
2119	-	-	1,075	-	-	-
2120	-	-	556	-	-	-
2121	-	-	261	-	-	-
2122	-	-	127	-	-	-
2123	-	-	57	-	-	-
2124	-	-	20	-	-	-
2125	-	-	10	-	-	-

## 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	-	-	3	-	-	-
2127	-	-	2	-	-	-
2128	-	-	-	-	-	-

## 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) = 3.95%
2025	13,598,744	20,207,784	13,598,744	6,609,040	13,208,268	6,482,879	19,819,869
2026	14,538,695	21,242,564	14,538,695	6,703,869	13,321,914	6,327,237	20,042,561
2027	14,404,994	22,664,990	14,404,994	8,259,996	12,452,267	7,501,144	20,571,502
2028	13,162,472	23,801,256	13,162,472	10,638,784	10,734,132	9,296,056	20,781,387
2029	10,722,107	24,723,461	10,722,107	14,001,354	8,249,046	11,771,610	20,765,773
2030	6,992,382	26,162,808	6,992,382	19,170,426	5,075,080	15,508,031	21,139,143
2031	1,868,882	27,562,619	1,868,882	25,693,737	1,279,658	19,999,137	21,423,365
2032	-	28,765,548	-	28,765,548	-	21,543,472	21,508,199
2033	-	30,031,507	-	30,031,507	-	21,641,096	21,600,942
2034	-	31,022,914	-	31,022,914	-	21,510,167	21,465,566
2035	-	31,947,805	-	31,947,805	-	21,313,820	21,264,979
2036	-	32,849,141	-	32,849,141	-	21,086,444	21,033,529
2037	-	33,856,706	-	33,856,706	-	20,911,400	20,854,367
2038	-	34,533,955	-	34,533,955	-	20,523,140	20,462,694
2039	-	35,450,083	-	35,450,083	-	20,270,936	20,206,818
2040	-	36,379,604	-	36,379,604	-	20,015,830	19,948,160
2041	-	36,804,095	-	36,804,095	-	19,483,673	19,413,561
2042	-	37,656,524	-	37,656,524	-	19,181,122	19,107,922
2043	-	38,491,787	-	38,491,787	-	18,865,179	18,789,079
2044	-	38,620,064	-	38,620,064	-	18,212,305	18,134,876
2045	-	39,176,643	-	39,176,643	-	17,776,171	17,696,730
2046	-	39,556,838	-	39,556,838	-	17,269,972	17,189,037
2047	-	39,539,422	-	39,539,422	-	16,609,611	16,528,159
2048	-	39,509,052	-	39,509,052	-	15,969,261	15,887,478
2049	-	39,603,135	-	39,603,135	-	15,401,990	15,319,765
2050	-	39,458,475	-	39,458,475	-	14,765,449	14,683,413
2051	-	39,016,000	-	39,016,000	-	14,047,795	13,966,695
2052	-	39,159,098	-	39,159,098	-	13,566,168	13,484,901
2053	-	38,962,933	-	38,962,933	-	12,987,789	12,907,167
2054	-	38,657,110	-	38,657,110	-	12,398,582	12,318,926
2055	-	38,652,224	-	38,652,224	-	11,928,236	11,849,012
2056	-	38,508,657	-	38,508,657	-	11,434,552	11,356,126

## APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

**Table 3: Actuarial Present Value of Projected Benefit Payments**

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"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) = 3.95%
2057	-	38,439,934	-	38,439,934	-	10,982,532	10,904,824
2058	-	38,327,614	-	38,327,614	-	10,536,363	10,459,526
2059	-	38,083,106	-	38,083,106	-	10,073,268	9,997,623
2060	-	37,603,372	-	37,603,372	-	9,570,263	9,496,320
2061	-	36,933,565	-	36,933,565	-	9,044,350	8,972,511
2062	-	35,683,647	-	35,683,647	-	8,407,840	8,339,234
2063	-	34,698,500	-	34,698,500	-	7,866,563	7,800,669
2064	-	34,012,694	-	34,012,694	-	7,419,496	7,355,740
2065	-	32,743,117	-	32,743,117	-	6,872,464	6,811,920
2066	-	32,303,411	-	32,303,411	-	6,523,789	6,464,904
2067	-	31,850,549	-	31,850,549	-	6,189,100	6,131,896
2068	-	31,316,420	-	31,316,420	-	5,855,201	5,799,815
2069	-	30,964,836	-	30,964,836	-	5,570,543	5,516,645
2070	-	30,516,457	-	30,516,457	-	5,282,286	5,230,034
2071	-	30,053,413	-	30,053,413	-	5,005,422	4,954,826
2072	-	29,463,455	-	29,463,455	-	4,721,605	4,672,857
2073	-	28,846,768	-	28,846,768	-	4,447,973	4,401,089
2074	-	28,134,894	-	28,134,894	-	4,174,163	4,129,262
2075	-	27,388,225	-	27,388,225	-	3,909,733	3,866,831
2076	-	26,560,066	-	26,560,066	-	3,648,139	3,607,320
2077	-	25,662,561	-	25,662,561	-	3,391,574	3,352,893
2078	-	24,718,288	-	24,718,288	-	3,143,249	3,106,721
2079	-	23,692,856	-	23,692,856	-	2,898,924	2,864,610
2080	-	22,666,847	-	22,666,847	-	2,668,515	2,636,352
2081	-	21,547,581	-	21,547,581	-	2,440,822	2,410,877
2082	-	20,429,487	-	20,429,487	-	2,226,661	2,198,863
2083	-	19,276,485	-	19,276,485	-	2,021,546	1,995,872
2084	-	18,067,273	-	18,067,273	-	1,823,087	1,799,540
2085	-	16,897,666	-	16,897,666	-	1,640,592	1,619,049
2086	-	15,664,015	-	15,664,015	-	1,463,309	1,443,778
2087	-	14,459,321	-	14,459,321	-	1,299,690	1,282,063
2088	-	13,261,931	-	13,261,931	-	1,146,985	1,131,182

## APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

**Table 3: Actuarial Present Value of Projected Benefit Payments**

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"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) = 3.95%
2089	-	12,056,028	-	12,056,028	-	1,003,262	989,223
2090	-	10,923,450	-	10,923,450	-	874,640	862,212
2091	-	9,775,898	-	9,775,898	-	753,156	742,292
2092	-	8,701,122	-	8,701,122	-	645,004	635,562
2093	-	7,660,599	-	7,660,599	-	546,398	538,281
2094	-	6,677,667	-	6,677,667	-	458,279	451,373
2095	-	5,762,194	-	5,762,194	-	380,498	374,682
2096	-	4,921,592	-	4,921,592	-	312,701	307,854
2097	-	4,162,349	-	4,162,349	-	254,461	250,462
2098	-	3,476,663	-	3,476,663	-	204,505	201,247
2099	-	2,873,141	-	2,873,141	-	162,614	159,988
2100	-	2,341,697	-	2,341,697	-	127,524	125,437
2101	-	1,882,439	-	1,882,439	-	98,637	97,002
2102	-	1,490,202	-	1,490,202	-	75,132	73,870
2103	-	1,161,101	-	1,161,101	-	56,326	55,368
2104	-	889,383	-	889,383	-	41,513	40,798
2105	-	669,069	-	669,069	-	30,049	29,525
2106	-	493,784	-	493,784	-	21,338	20,961
2107	-	357,032	-	357,032	-	14,845	14,580
2108	-	252,705	-	252,705	-	10,110	9,927
2109	-	174,913	-	174,913	-	6,733	6,610
2110	-	118,225	-	118,225	-	4,379	4,298
2111	-	77,938	-	77,938	-	2,778	2,726
2112	-	50,091	-	50,091	-	1,718	1,685
2113	-	31,350	-	31,350	-	1,034	1,015
2114	-	19,105	-	19,105	-	607	595
2115	-	11,336	-	11,336	-	346	339
2116	-	6,548	-	6,548	-	192	189
2117	-	3,692	-	3,692	-	104	102
2118	-	2,020	-	2,020	-	55	54
2119	-	1,075	-	1,075	-	28	28
2120	-	556	-	556	-	14	14

## 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) = 3.95%
2121	-	261	-	261	-	6	6
2122	-	127	-	127	-	3	3
2123	-	57	-	57	-	1	1
2124	-	20	-	20	-	-	-
2125	-	10	-	10	-	-	-
2126	-	3	-	3	-	-	-
2127	-	2	-	2	-	-	-
2128	-	-	-	-	-	-	-

## 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	15,849,776	6.75	2,348,115	1,761,086	-	-	-	-	-	-	-	-
2020	-	6.75	-	-	-	-	-	-	-	-	-	-
2021	(52,938,875)	6.78	(7,808,094)	(7,808,094)	(7,808,094)	(6,090,311)	-	-	-	-	-	-
2022	-	6.78	-	-	-	-	-	-	-	-	-	-
2023	(25,800,860)	6.54	(3,945,086)	(3,945,086)	(3,945,086)	(3,945,086)	(3,945,086)	(2,130,344)	-	-	-	-
2024	-	6.54	-	-	-	-	-	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(9,405,065)	(9,992,094)	(11,753,180)	(10,035,397)	(3,945,086)	(2,130,344)	-	-	-	-
Year	Changes of Assumptions		Recognition Period (Years)									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
2019	129,379,977	6.75	19,167,404	14,375,553	-	-	-	-	-	-	-	-
2020	216,350,799	6.75	32,051,970	32,051,970	24,038,979	-	-	-	-	-	-	-
2021	(25,487,904)	6.78	(3,759,278)	(3,759,278)	(3,759,278)	(2,932,236)	-	-	-	-	-	-
2022	(221,863,323)	6.78	(32,723,204)	(32,723,204)	(32,723,204)	(32,723,204)	(25,524,099)	-	-	-	-	-
2023	15,877,625	6.54	2,427,771	2,427,771	2,427,771	2,427,771	2,427,771	1,310,999	-	-	-	-
2024	(27,202,734)	6.54	(4,159,439)	(4,159,439)	(4,159,439)	(4,159,439)	(4,159,439)	(4,159,439)	(2,246,100)	-	-	-
Net Increase (Decrease) in OPEB Expense			13,005,224	8,213,373	(14,175,171)	(37,387,108)	(27,255,767)	(2,848,440)	(2,246,100)	-	-	-

## 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 Projected and Actual Earnings on OPEB Plan Investments									
			2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
2019	(76,529)	5	-	-	-	-	-	-	-	-	-	-
2020	4,927	5	986	-	-	-	-	-	-	-	-	-
2021	(1,090,857)	5	(218,172)	(218,172)	-	-	-	-	-	-	-	-
2022	1,687,100	5	337,420	337,420	337,420	-	-	-	-	-	-	-
2023	(505,623)	5	(101,125)	(101,125)	(101,124)	(101,124)	-	-	-	-	-	-
2024	(867,889)	5	(173,578)	(173,578)	(173,578)	(173,578)	(173,577)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(154,469)	(155,455)	62,718	(274,702)	(173,577)	-	-	-	-	-