



TOWN OF SOUTHBOROUGH, MASSACHUSETTS

OTHER POSTEMPLOYMENT BENEFITS PROGRAM

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

Disclosures as of
June 30, 2023

KMS Actuarial, LLC
52 Hunt Road
Kingston, NH 03848

March, 2024



March 7, 2024

Mr. Brian Ballantine
Treasurer-Collector
Town of Southborough
17 Common Street
Southborough, MA 01772

Dear Brian:

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 Southborough. The valuation was prepared in accordance with and for the purpose of financial reporting and disclosures as of June 30, 2023 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, 2023.

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 Southborough as well as health plan rates provided by the Town. Although we did not audit the data used in the valuation and disclosure calculations, we believe that the information is complete and reliable.

Liabilities presented in this report are based on a discount rate of 5.59%, 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 3.65% is based on the Bond Buyer 20-Bond GO Index published on June 30, 2023. 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 by Bartholomew & Company.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions other than those explicitly applicable to the postemployment benefit plans are consistent with those used by the Worcester Regional 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 Southborough 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 Southborough 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 Southborough, other than as consulting actuary for this assignment, that would impair our independence.

Mr. Brian Ballantine

March 7, 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.

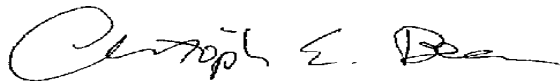
Respectfully submitted,



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EXECUTIVE SUMMARY

Purpose of Report

This report presents the results of the actuarial valuation of the Town of Southborough'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, 2023 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 Southborough. 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 Southborough.

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 Southborough Other Postemployment Benefits Program

The Town of Southborough 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:

Disclosure Date	June 30, 2023	June 30, 2022	% Change
Valuation Date	July 1, 2022	July 1, 2020	
Membership Data			
Active Plan Members	350	350	0.0%
Inactive Plan Members (excludes covered spouses)	193	184	4.9%
Total Plan Members	543	534	1.7%
Covered Spouses	116	109	
Covered Payroll	\$26,232,855	\$25,627,949	2.4%
Net OPEB Liability			
Discount Rate	5.59%	6.05%	
Total OPEB Liability (TOL)	\$45,281,382	\$49,570,491	(8.7%)
Fiduciary Net Position (FNP)	\$3,036,428	\$2,565,167	18.4%
Net OPEB Liability	\$42,244,954	\$47,005,324	(10.1%)
FNP as % of TOL	6.7%	5.2%	
OPEB Expense			
OPEB Expense	(\$4,516,094)	\$4,869,015	(192.8%)
Deferred Outflows	\$13,021,798	\$11,600,697	
Deferred Inflows	\$6,999,040	\$7,093,441	
Recognition Period	7.19	7.38	

EXECUTIVE SUMMARY

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, the difference between expected and actual experience resulted in an actuarial gain of approximately \$2,083,000. This gain is primarily attributable to the following:

- ◆ a gain due to high active employee turnover with high-service employees replaced by lower service employees
- ◆ a gain due to lower than expected dental premiums
- ◆ a loss due to the inclusion of both active employees who were hired prior to June 30, 2021 and retirees who were retired prior to June 30, 2021 who were not included in the prior valuation's census data

Changes of Assumptions

The discount rate changed from 6.05% as of June 30, 2022 to 5.59% as of June 30, 2023. In addition, many other assumptions were updated in this valuation, including the inflation rate, healthcare and dental trend rates, mortality tables and mortality improvement rates, and participation rates. A summary of the impact on the Total OPEB Liability (TOL) of each assumption change is provided below:

◆ Decrease due to change in Inflation Assumption	(83,000)
◆ Increase due to change in Trend Assumption	1,157,000
◆ Increase due to change in Mortality Tables and Mortality Improvement Rates	531,000
◆ Increase due to change in Participation Rate	84,000
◆ Increase due to change in Discount Rate	2,791,000
Total	\$ 4,480,000

All of the assumptions used in this valuation are shown in Section 6, Actuarial Assumptions and Methods.

Changes of Benefit Terms

The Town previously offered Tufts and Fallon non-Medicare health plans. Effective July 1, 2023, the Town replaced the Tufts and Fallon plans with Harvard Pilgrim and also replaced the Medicare plans previously offered with an Aetna Medicare Advantage plan. All other 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, 2023, is \$45,281,382. The Total OPEB Liability as of the prior measurement date, June 30, 2022, was \$49,570,491. During the current measurement period ending June 30, 2023, the Total OPEB Liability decreased by \$4,289,109, or -8.7%. The development of the Total OPEB Liability for the current measurement period is shown in Section 1, Exhibit 1.2.

EXECUTIVE SUMMARY

Fiduciary Net Position

The Fiduciary Net Position is equal to the market value of assets and as of the current measurement date, June 30, 2023, is \$3,036,428. The Fiduciary Net Position as of the prior measurement date, June 30, 2022, was \$2,565,167. During the plan years ended June 30, 2023 and June 30, 2022, the actual rates of return were 7.92% and -13.56%, 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 is expected to contribute \$250,000 annually until their pension system is fully funded in 2036. Given the COVID-19 situation and market volatility, it was assumed the Town will reallocate the funds used to pay the pension amortization towards OPEB beginning in 2037.

Discount Rate

As of the June 30, 2023 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 94 years of projected future benefit payments that are expected to be funded and the 3.65% municipal bond rate was applied to all other years to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 5.59%.

OPEB Expense

The OPEB Income for the current measurement period ending June 30, 2023, is \$4,516,094. Benefit changes are recognized immediately and experience gains and losses and assumption changes developed in this valuation are recognized over 7.19 years. Investment gains and losses are recognized over 5 years. The OPEB Expense for the prior measurement period was \$4,869,015. The development of the OPEB expense for the current measurement period is shown in Section 4, Exhibit 4.2.

COVID-19 Pandemic

The assumptions in this report, other than medical trend rates in the short term, do not reflect the potential impact of the COVID-19 pandemic on the OPEB program. Especially in the short range, it is very likely that the pandemic materially affected the economic, demographic and healthcare-specific experience in a way not anticipated by the assumptions on which the projections are based.

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.1 - OPEB Trust Assets

The Town has established an irrevocable trust pursuant to Section 20 of Massachusetts General Law Chapter 32B 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

2023

2022

Trust Fund Composition at Fiscal Year-End		
Domestic Equity	1,281,871	1,027,337
International Equity	646,185	452,671
Domestic Bonds	550,072	565,291
International Bonds	131,157	121,620
Alternatives	420,880	387,143
Cash	6,263	11,105
Total Market Value of Assets	3,036,428	2,565,167

Asset Activity		
Market value, beginning of year	\$2,565,167	\$2,714,632
Employer Premiums	1,509,778	1,604,815
OPEB Trust Contributions	250,000	250,000
Benefit Payments	(1,509,778)	(1,604,815)
Administrative Expenses	-	-
Investment Return	221,261	(399,465)
Market value, end of year	\$3,036,428	\$2,565,167

Money-Weighted Rate of Return	7.92%	-13.56%
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(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$185,782	\$195,721
Actual earnings	221,261	(399,465)
(Gain) / Loss on OPEB plan investments	(\$35,479)	\$595,186

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, 2023 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, 2022 to the end of the measurement period, June 30, 2023 is shown below:

Measurement Date	June 30, 2023
1. Total OPEB Liability, beginning of year:	
a. Actives	\$30,582,044
b. Retirees, Covered Spouses and Survivors	18,988,447
c. Total OPEB Liability at 6.05% (a. + b.)	\$49,570,491
2. Service Cost	\$1,628,317
3. Expected Benefit Payments	
a. Current retirees	(\$1,410,260)
b. Future retirees	(99,518)
c. Total (a. + b.)	(\$1,509,778)
4. Interest [6.05% x (1.c. + 2. + .5 x 3.c)]	\$3,051,857
5. Changes of benefit terms	(\$9,856,769)
6. Differences between expected and actual experience	(\$2,082,982)
7. Changes of assumptions or other inputs	\$4,480,246
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$27,101,663
b. Retirees, Covered Spouses and Survivors	18,179,719
c. Total OPEB Liability at 5.59% (a. + b.)	\$45,281,382

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

The Town is expected to contribute \$250,000 annually until their pension system is fully funded in 2036. Given the COVID-19 situation and market volatility, it was assumed the Town will reallocate the funds used to pay the pension amortization towards OPEB beginning in 2037.

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

Fiscal Year Ending	June 30, 2023	June 30, 2024
Discount Rate	6.05%	5.59%
1. Normal Cost	\$1,628,317	\$1,534,959
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$49,570,491	\$45,281,382
b. Actuarial Value of Plan Assets	\$2,565,167	\$3,036,428
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$47,005,324	\$42,244,954
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$47,005,324	\$42,244,954
b. Amortization Period in years	30	30
c. Payroll Growth Rate	0.0%	0.0%
d. Amortization Factor	14.52	15.19
e. Amortization Amount (3.a. / 3.d.)	\$3,237,281	\$2,781,103
4. Interest on 1. and 3.e.	\$294,369	\$241,268
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$5,159,967	\$4,557,330
6. Actual Employer Contribution to OPEB Trust	\$250,000	TBD
7. Expected Benefit Payments	\$1,509,778	
8. Total Contribution (6. + 7.)	\$1,759,778	

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.1 - Plan Description

Plan Administration

The Town of Southborough 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, 2023, OPEB plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments ¹	193
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	350
	<u>543</u>

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

Benefits Provided

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

Employer Future Period Contributions

The Town is expected to contribute \$250,000 annually until their pension system is fully funded in 2036. Given the COVID-19 situation and market volatility, it was assumed the Town will reallocate the funds used to pay the pension amortization towards OPEB beginning in 2037.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

The components of the net OPEB liability at June 30, 2023, were as follows:

Total OPEB liability	\$	45,281,382
Fiduciary net position		(3,036,428)
Net OPEB liability	\$	42,244,954

Fiduciary net position as a percentage of the total OPEB liability 6.71%

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 judgement.
Discount rate	5.59%, 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 with generational mortality improvement using scale MP-2020.
Healthy Retiree Mortality - General and Public Safety employees	RP-2014 Blue Collar Healthy Annuitant Mortality Table, projected with generational mortality improvement using scale MP-2020.
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-2020.
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.
Disabled 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

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, 2023 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rates of Return ¹
Domestic Equity	34%	3.90%
International Equity	22%	5.75%
Domestic Bonds	20%	1.39%
International Bonds	4%	1.21%
Alternatives	20%	3.14%
Total	100%	

¹ provided by Bartholomew & Company.

Discount Rate

The discount rate used to measure the total OPEB liability was 5.59%. 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 94 years of projected future benefit payments that are expected to be funded and the 3.65% municipal bond rate was applied to all other years 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 5.59 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (4.59 percent) or 1-percentage point higher (6.59 percent) than the current rate:

	1% Decrease (4.59%)	Assumed Discount Rate (5.59%)	1% Increase (6.59%)
Total OPEB Liability	\$ 52,394,044	\$ 45,281,382	\$ 39,537,284
Fiduciary Net Position	(3,036,428)	(3,036,428)	(3,036,428)
Net OPEB Liability	\$ 49,357,616	\$ 42,244,954	\$ 36,500,856
% Change in NOL	16.8%		-13.6%

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	\$ 38,558,162	\$ 45,281,382	\$ 53,825,092
Fiduciary Net Position	(3,036,428)	(3,036,428)	(3,036,428)
Net OPEB Liability	\$ 35,521,734	\$ 42,244,954	\$ 50,788,664
% Change in NOL	-15.9%		20.2%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios

Fiscal Year Ended June 30	2023	2022	2021	2020	2019
Total OPEB Liability					
Service cost	\$ 1,628,317	\$ 1,683,692	\$ 931,942	\$ 889,551	\$ 1,102,359
Interest	3,051,857	2,865,258	2,182,825	2,206,645	1,984,110
Changes of benefit terms	(9,856,769)	-	-	-	-
Differences between expected and actual experience	(2,082,982)	-	6,649,997	(3,592,503)	-
Changes of assumptions	4,480,246	(3,204,882)	8,145,723	83,922	(6,007,783)
Benefit payments	(1,509,778)	(1,604,815)	(1,458,469)	(1,231,651)	(1,255,235)
Net change in total OPEB liability	\$ (4,289,109)	\$ (260,747)	\$ 16,452,018	\$ (1,644,036)	\$ (4,176,549)
Total OPEB liability—beginning	\$ 49,570,491	\$ 49,831,238	\$ 33,379,220	\$ 35,023,256	\$ 39,199,805
Total OPEB liability—ending (a)	\$ 45,281,382	\$ 49,570,491	\$ 49,831,238	\$ 33,379,220	\$ 35,023,256
Plan Fiduciary Net Position					
Contributions—employer	\$ 1,759,778	\$ 1,854,815	\$ 1,708,469	\$ 1,481,651	\$ 1,505,235
Net investment income	221,261	(399,465)	609,270	35,991	78,416
Benefit payments	(1,509,778)	(1,604,815)	(1,458,469)	(1,231,651)	(1,255,235)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
Net change in plan fiduciary net position	\$ 471,261	\$ (149,465)	\$ 859,270	\$ 285,991	\$ 328,416
Plan fiduciary net position—beginning	\$ 2,565,167	\$ 2,714,632	\$ 1,855,362	\$ 1,569,371	\$ 1,240,955
Plan fiduciary net position—ending (b)	\$ 3,036,428	\$ 2,565,167	\$ 2,714,632	\$ 1,855,362	\$ 1,569,371
Net OPEB liability—ending (a) – (b)	\$ 42,244,954	\$ 47,005,324	\$ 47,116,606	\$ 31,523,858	\$ 33,453,885
Plan fiduciary net position as a percentage of the total OPEB liability	6.71%	5.17%	5.45%	5.56%	4.48%
Covered payroll	\$ 26,232,855	\$ 25,627,949	\$ 24,234,544	\$ 23,409,824	\$ 22,223,655
Net OPEB liability as a percentage of covered payroll	161.04%	183.41%	194.42%	134.66%	150.53%
Discount Rate	5.59%	6.05%	5.65%	6.50%	6.25%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Fiscal Year Ended June 30	2018	2017	2016	2015	2014
Total OPEB Liability					
Service cost	\$ 1,408,106	\$ 1,414,513			
Interest	1,894,830	1,255,435			
Changes of benefit terms	-	-			
Differences between expected and actual experience	2,242,713	6,017,400			
Changes of assumptions	-	-			
Benefit payments	(1,169,027)	(688,801)			
Net change in total OPEB liability	\$ 4,376,622	\$ 7,998,547			
Total OPEB liability—beginning	\$ 34,823,183	\$ 26,824,636			
Total OPEB liability—ending (a)	\$ 39,199,805	\$ 34,823,183			
Plan Fiduciary Net Position					
Contributions—employer	\$ 1,419,027	\$ 938,801			
Net investment income	66,625	67,927			
Benefit payments	(1,169,027)	(688,801)			
Administrative expenses	-	-			
Other	-	-			
Net change in plan fiduciary net position	\$ 316,625	\$ 317,927			
Plan fiduciary net position—beginning	\$ 924,330	\$ 606,403			
Plan fiduciary net position—ending (b)	\$ 1,240,955	\$ 924,330			
Net OPEB liability—ending (a) – (b)	\$ 37,958,850	\$ 33,898,853			
Plan fiduciary net position as a percentage of the total OPEB liability	3.17%	2.65%			
Covered payroll	\$ 21,576,364	\$ 19,326,334			
Net OPEB liability as a percentage of covered payroll	175.93%	175.40%			
Discount Rate	5.00%	4.50%			

Note: Only 7 years are presented here and on the previous page, beginning with the year of implementation; 10 years of information will be required.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Notes to Schedule

Changes of Benefit Terms

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

Changes of Assumptions

The discount rate changed from 6.05% as of June 30, 2022 to 5.59% as of June 30, 2023. In addition, many other assumptions were updated in this valuation, including the inflation rate, healthcare and dental trend rates, mortality tables and mortality improvement rates, and participation rates.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Fiscal Year Ended June 30	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expenses	7.92%	-13.56%	29.26%	2.00%	5.34%	6.76%	8.37%			

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 7 years are presented here, beginning with the year of implementation; 10 years of information will be required.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Calculation of Money-Weighted Rate of Return

	Plan Investments/ Net External Cash Flows (a)	Periods Invested (b)	Period Weight (c)=(b)÷12	(d)=(a) x (1+r _{mw}) ^(c)
Beginning value - July 1, 2022	\$ 2,565,167	12	1.00	\$ 2,768,335
Monthly net external cash flows:				
July	250,000	11	0.92	268,092
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, 2023				\$ 3,036,428
Money-weighted rate of return:				7.92%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Schedule of Employer Contributions

Fiscal Year Ended June 30	2023	2022	2021	2020	2019
Actuarially determined contribution	\$ 5,159,967	\$ 5,075,423	\$ 3,406,099	\$ 3,156,233	\$ 3,451,305
Contributions in relation to the actuarially determined contribution	<u>1,759,778</u>	<u>1,854,815</u>	<u>1,708,469</u>	<u>1,481,651</u>	<u>1,505,235</u>
Contribution deficiency (excess)	<u>\$ 3,400,189</u>	<u>\$ 3,220,608</u>	<u>\$ 1,697,630</u>	<u>\$ 1,674,582</u>	<u>\$ 1,946,070</u>
Covered payroll	\$ 26,232,855	\$ 25,627,949	\$ 24,234,544	\$ 23,409,824	\$ 22,223,655
Contributions as a percentage of covered payroll	6.71%	7.24%	7.05%	6.33%	6.77%
Discount rate	6.05%	5.65%	6.50%	6.25%	5.00%
Inflation	2.50%	2.40%	2.20%	2.50%	Not available

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Schedule of Employer Contributions, continued

Fiscal Year Ended June 30	2018	2017	2016	2015	2014
Actuarially determined contribution	\$ 3,135,467	\$ 2,954,779			
Contributions in relation to the actuarially determined contribution	1,419,027	938,801			
Contribution deficiency (excess)	\$ 1,716,440	\$ 2,015,978			
Covered payroll	\$ 21,576,364	\$ 19,326,334			
Contributions as a percentage of covered payroll	6.58%	4.86%			
Discount rate	4.50%	Not available			
Inflation	Not available	Not available			

Note: Only 7 years are presented here and on the previous page, beginning with the year of implementation; 10 years of information will be required.

Notes to Schedule

Valuation Date

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

Methods and Assumptions as of Current Measurement Date

Actuarial cost method	Entry Age Normal
Amortization method	Level dollar amount over 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, 2023
	Experience Losses	Experience Gains	Amounts Recognized in OPEB Expense through June 30, 2023	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2018	\$ 2,242,713	\$ -	\$ 2,054,394	\$ 188,319	\$ -
2019	-	-	-	-	-
2020	-	3,592,503	(2,144,776)	-	1,447,727
2021	6,649,997	-	2,703,252	3,946,745	-
2022	-	-	-	-	-
2023	-	2,082,982	(289,705)	-	1,793,277
Total				<u>\$ 4,135,064</u>	<u>\$ 3,241,004</u>

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, 2023
	Increases in the Total OPEB Liability	Decreases in the Total OPEB Liability	Amounts Recognized in OPEB Expense through June 30, 2023	Deferred Outflows of Resources	Deferred Inflows of Resources
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)
2018	\$ -	\$ -	\$ -	\$ -	\$ -
2019	-	6,007,783	(4,586,097)	-	1,421,686
2020	83,922	-	50,107	33,815	-
2021	8,145,723	-	3,311,271	4,834,452	-
2022	-	3,204,882	(868,532)	-	2,336,350
2023	4,480,246	-	623,122	3,857,124	-
Total				<u>\$ 8,725,391</u>	<u>\$ 3,758,036</u>

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, 2023	
	Investment Earnings Less Than Projected	Investment Earnings Greater Than Projected	Amounts Recognized in OPEB Expense through June 30, 2023	Deferred Outflows of Resources	Deferred Inflows of Resources	
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)	
2018	\$ -	\$ 20,881	\$ (20,881)	\$ -	\$ -	
2019	17,734	-	17,734	-	-	
2020	89,861	-	71,888	17,973	-	
2021	-	463,399	(278,040)	-	185,359	
2022	595,186	-	238,074	357,112	-	
2023	-	35,479	(7,096)	-	28,383	
Subtotal				\$ 375,085	\$ 213,742	
Net				\$ 161,343	\$ -	

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

Year ended June 30

2024	\$	688,658
2025	\$	895,117
2026	\$	1,649,360
2027	\$	1,896,897
2028	\$	660,984
Thereafter		231,742
Deferred Outflows	\$	13,021,798
Deferred Inflows	\$	6,999,040

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.2 - OPEB Expense (Income)

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, 2023 is presented below:

Fiscal Year Ended June 30, 2023

Measurement Date	6/30/2023
1. Service cost	\$ 1,628,317
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	49,570,491
b. Service cost, beginning of year	1,628,317
c. Benefit payments	(1,509,778)
d. Interest on total OPEB liability = 6.05% times (a. + b. + .5 times c.)	3,051,857
3. Differences between expected and actual experience	417,584
4. Changes of benefit terms	(9,856,769)
5. Changes of assumptions	387,920
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	2,565,167
b. Contributions - Employer	1,759,778
c. Benefit payments	(1,509,778)
d. Administrative expenses and other	-
e. Total projected earnings	(185,782)
7. Differences between projected and actual earnings on OPEB plan investments	40,779
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense (Income)	\$ (4,516,094)

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 Worcester Regional 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
HPHC HMO	\$915.22	\$2,379.58
HPHC Focus	\$809.70	\$2,105.21
HPHC PPO	\$1,098.27	\$2,855.50
Medicare Plans - January 1, 2024		
Aetna Advantage Plan	\$300.00	

Participant Contributions Retired employees contribute 25% of the total medical premium for the HPHC HMO, HPHC Focus, and Aetna Advantage plans, and 50% for the HPHC PPO plan.

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

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Dental Coverage

Dental coverage is provided. The total monthly costs are \$44.56 and \$132.70 for individual and family plans, respectively. Retirees contribute 50% of the monthly premiums.

Life Insurance Coverage

Retirees are eligible for a \$1,000 life insurance benefit. The total monthly cost is \$0.42. Retirees contribute \$0.21 towards the monthly premiums.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date	July 1, 2022
Disclosure Date	June 30, 2023
GASB 75 Reporting Date	June 30, 2023
Long-Term Expected Rate of Return	<p>6%, net of investment expenses and including inflation at 2.5%. Previously, 6.65%.</p> <p>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.</p>
Municipal Bond Rate	3.65%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2023.
Discount Rate (GASB)	<p>5.59%, compounded annually, for the measurement as of June 30, 2023.</p> <p>6.05%, compounded annually, for the measurement as of June 30, 2022.</p> <p>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.</p>
Discount Rate (ADEC)	6.05%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2023.
Amortization Method	Level dollar amount 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%

Trend rates after year 5 grade down to the ultimate rate of 4.1 percent utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate 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 - 80% of eligible retired employees will elect to participate.

Dental - 85% of eligible retirees will elect to participate.

Life - 70% 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	\$4,215	\$4,949	\$4,215	\$4,949
20-24	3,322	5,269	3,322	5,269
25-29	3,457	7,773	3,457	7,773
30-34	4,342	9,822	4,342	9,822
35-39	5,446	10,117	5,446	10,117
40-44	6,787	10,361	6,787	10,361
45-49	8,565	11,373	8,565	11,373
50-54	11,288	13,379	11,288	13,379
55-59	14,669	15,470	14,669	15,470
60-64	18,825	18,412	18,825	18,412
65-69	2,545	2,478	23,487	22,071
70-74	3,050	2,923	28,141	26,025
75-79	3,601	3,392	33,242	30,223
80-84	4,139	3,890	38,207	34,649
85-89	4,611	4,349	43,729	39,556
90-94	5,020	4,641	43,729	39,556
95+	5,335	4,488	43,729	39,556

Retiree Contributions

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

Plan	Contribution
Non-Medicare	\$ 3,391
Medicare	804

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 disclosure date.

Census Data

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

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Use of ProVal®

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

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

General and Public Safety

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 with generational mortality improvement using scale MP-2020.

Healthy Retiree Mortality

Healthy retiree mortality rates for General and Public Safety employees are based on the RP-2014 Blue Collar Healthy Annuitant Mortality Table, projected with generational mortality improvement using scale MP-2020.

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-2020

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

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:

Service						
0			5		10+	
Age	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:

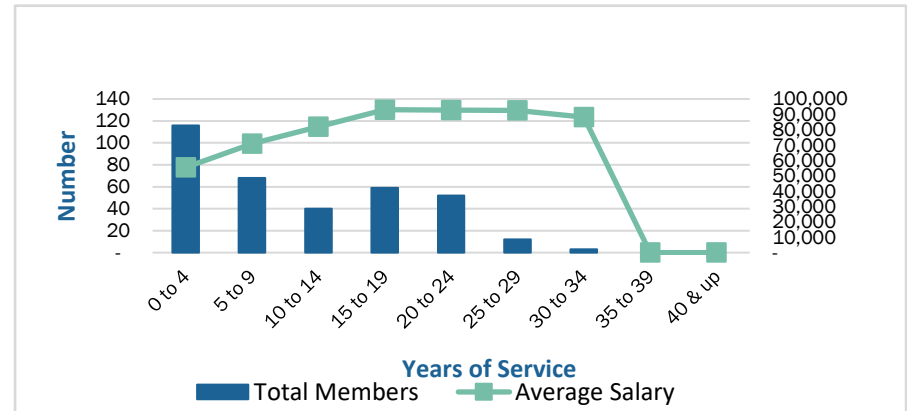
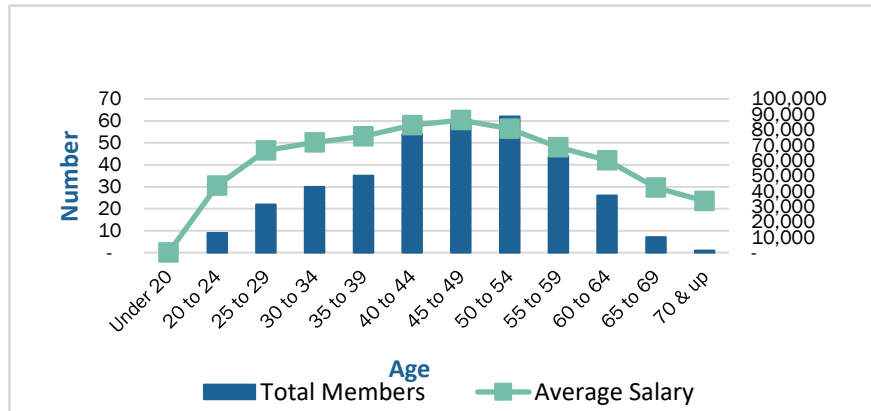
Age	Years of Service					
	Less than 20		20-29		30+	
	Male	Female	Male	Female	Male	Female
50	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
51	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
52	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
53	0.0%	0.0%	1.5%	1.0%	2.0%	1.5%
54	0.0%	0.0%	2.5%	1.0%	2.0%	2.0%
55	5.0%	3.0%	3.0%	3.0%	6.0%	5.0%
56	5.0%	3.0%	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	-	-	-	-	-	-	-	-	-	-	-	-
20 to 24	9	-	-	-	-	-	-	-	-	9	392,194	43,577
25 to 29	16	6	-	-	-	-	-	-	-	22	1,462,426	66,474
30 to 34	16	12	2	-	-	-	-	-	-	30	2,154,694	71,823
35 to 39	16	9	8	2	-	-	-	-	-	35	2,649,910	75,712
40 to 44	19	8	4	18	5	-	-	-	-	54	4,483,109	83,021
45 to 49	11	8	4	20	15	2	-	-	-	60	5,174,819	86,247
50 to 54	15	11	8	9	16	3	-	-	-	62	5,004,462	80,717
55 to 59	10	8	8	3	9	3	3	-	-	44	3,017,328	68,576
60 to 64	3	5	5	6	6	1	-	-	-	26	1,563,485	60,134
65 to 69	1	1	1	1	-	3	-	-	-	7	296,816	42,402
70 & up	-	-	-	-	1	-	-	-	-	1	33,612	33,612
Total	116	68	40	59	52	12	3	-	-	350	26,232,855	74,951
Total Salary	6,445,008	4,823,609	3,275,069	5,490,557	4,822,604	1,111,338	264,670	-	-			
Average Salary	55,560	70,935	81,877	93,060	92,742	92,611	88,223	-	-			

Average Age: 46.3 Average Service: 11.0



SECTION 7 - PLAN MEMBER INFORMATION

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

Non-Medicare Plans				Medicare Plans	
Age	HPHC HMO	HPHC Focus	HPHC PPO	Aetna Advantage Plan	Total
Under 40	0	0	0	0	0
40 to 44	0	0	0	0	0
45 to 49	1	0	0	0	1
50 to 54	1	0	0	0	1
55 to 59	7	0	1	0	8
60 to 64	16	1	3	1	21
65 to 69	1	0	0	31	32
70 to 74	0	0	0	30	30
75 to 79	0	0	0	25	25
80 to 84	1	0	0	21	22
85 to 89	0	0	1	11	12
90+	0	0	0	3	3
Total	27	1	5	122	155
Covered Spouses	19	0	1	66	86

Average Age: 72.8

In addition, there are 68 retirees, survivors and covered spouses that are not covered under any medical plan but are covered under a dental and/or life insurance plan which the Town contributes to.

SECTION 8 - GLOSSARY OF TERMS

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

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

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

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

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

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

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

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

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

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

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

SECTION 8 - GLOSSARY OF TERMS

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

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

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

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

GASB – Governmental Accounting Standards Board.

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

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

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

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

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

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

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

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

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

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

SECTION 8 - GLOSSARY OF TERMS

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

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

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

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

SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	Town	School	Police	Fire	Water	60% Town - 40% Water	40% Town - 60% Water	Total
Summary of Member Data Used in Valuation								
Active Members	57	246	19	22	3	2	1	350
Average Age	48.1	47.0	36.3	42.0	43.2	55.9	64.3	46.3
Average Service	9.0	11.3	10.6	11.3	11.6	14.2	25.5	11.0
Covered Payroll	4,167,498	17,260,608	2,206,775	2,211,782	177,609	142,405	66,178	26,232,855
Retired Members and Survivors	50	130	7	3	2	1	0	193
Average Age	73.5	73.0	70.0	62.9	72.0	70.1	-	72.8
Covered Spouses	26	81	5	3	1	0	0	116
Expected Benefit Payments	371,325	1,003,197	57,872	65,255	6,751	2,908	2,470	1,509,778
OPEB Trust contributions	39,267	176,537	16,208	16,108	0	1,444	436	250,000
Total Employer Contributions	410,592	1,179,734	74,080	81,363	6,751	4,352	2,906	1,759,778
Beginning Net OPEB Liability - June 30, 2022								
Total OPEB Liability*	9,376,037	32,429,877	3,346,455	3,544,378	649,095	125,935	98,714	49,570,491
Fiduciary Net Position	430,207	1,745,144	194,891	194,925	0	0	0	2,565,167
Net OPEB Liability	8,945,830	30,684,733	3,151,564	3,349,453	649,095	125,935	98,714	47,005,324
Total OPEB Liability, beginning of year	9,376,037	32,429,877	3,346,455	3,544,378	649,095	125,935	98,714	49,570,491
Service cost	224,454	1,017,794	153,553	212,569	9,276	8,178	2,493	1,628,317
Interest	569,597	1,993,238	210,000	225,321	39,627	8,026	6,048	3,051,857
Changes of benefit terms	(1,840,776)	(6,796,400)	(519,218)	(515,709)	(102,349)	(59,120)	(23,197)	(9,856,769)
Differences between expected and actual experience	(1,376,257)	501,962	(443,190)	(727,092)	(188,422)	159,319	(9,302)	(2,082,982)
Changes of assumptions	462,304	3,525,930	217,780	215,376	33,456	19,549	5,851	4,480,246
Benefit payments	(371,325)	(1,003,197)	(57,872)	(65,255)	(6,751)	(2,908)	(2,470)	(1,509,778)
Net change in total OPEB liability	(2,332,003)	(760,673)	(438,947)	(654,790)	(215,163)	133,044	(20,577)	(4,289,109)
Total OPEB Liability, end of year	7,044,034	31,669,204	2,907,508	2,889,588	433,932	258,979	78,137	45,281,382
Ending Net OPEB Liability - June 30, 2023								
Total OPEB Liability	7,044,034	31,669,204	2,907,508	2,889,588	433,932	258,979	78,137	45,281,382
Fiduciary Net Position	506,389	2,072,677	227,708	227,637	0	1,549	468	3,036,428
Net OPEB Liability	6,537,645	29,596,527	2,679,800	2,661,951	433,932	257,430	77,669	42,244,954

*June 30, 2022 Total OPEB liability was revised to allocate liability to active members and retirees in the 60% Town/40% Water and 40% Town/60% Water units.

SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	Town	School	Police	Fire	Water	60% Town - 40% Water	40% Town - 60% Water	Total
Total Deferred Outflows of Resources								
Differences between Expected and Actual Experience	782,129	2,705,231	279,154	295,664	54,146	10,505	8,235	4,135,064
Changes in Assumptions	1,650,369	5,708,302	589,043	623,881	114,254	22,167	17,376	8,725,391
Differences between Expected and Actual Earnings on OPEB Plan Investments	27,059	109,765	12,258	12,260	0	0	0	161,343
Total Deferred Outflows of Resources	2,459,557	8,523,299	880,455	931,806	168,400	32,672	25,610	13,021,798
Total Deferred Inflows of Resources								
Differences between Expected and Actual Experience	613,021	2,120,321	218,797	231,738	42,439	8,234	6,454	3,241,004
Changes in Assumptions	710,816	2,458,572	253,701	268,706	49,209	9,547	7,484	3,758,036
Differences between Expected and Actual Earnings on OPEB Plan Investments	0	0	0	0	0	0	0	0
Total Deferred Inflows of Resources	1,323,837	4,578,894	472,498	500,444	91,648	17,781	13,938	6,999,040
Total OPEB Expense (Income)	(2,275,092)	(898,716)	(503,667)	(720,899)	(208,865)	120,956	(29,811)	(4,516,094)
Sensitivity of the Net OPEB Liability to Changes in the Discount Rate								
Current Discount Rate: 5.59%	6,537,645	29,596,527	2,679,800	2,661,951	433,932	257,430	77,669	42,244,954
1% Decrease in the Discount Rate: 4.59%	7,644,100	34,571,029	3,136,503	3,115,839	502,093	298,110	89,943	49,357,616
1% Increase in the Discount Rate: 6.59%	5,644,085	25,579,180	2,310,973	2,295,397	378,886	224,578	67,757	36,500,856
Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates								
Current Trend Rates	6,537,645	29,596,527	2,679,800	2,661,951	433,932	257,430	77,669	42,244,954
1% Decrease in Trend Rates	5,491,772	24,894,395	2,248,103	2,232,915	369,503	218,978	66,067	35,521,734
1% Increase in Trend Rates	7,866,716	35,571,886	3,228,390	3,207,160	515,806	306,294	92,412	50,788,664
Deferred Outflows of Resources and Deferred Inflows of Resources recognized in OPEB Expense								
2024	129,861	451,013	46,647	49,323	8,776	1,703	1,335	688,658
2025	168,793	586,228	60,631	64,110	11,407	2,213	1,735	895,117
2026	311,022	1,080,193	111,721	118,130	21,019	4,078	3,197	1,649,360
2027	357,700	1,242,310	128,488	135,860	24,173	4,690	3,676	1,896,897
2028	124,643	432,890	44,772	47,341	8,423	1,634	1,281	660,984
Thereafter	43,700	151,772	15,697	16,598	2,953	573	449	231,742

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.

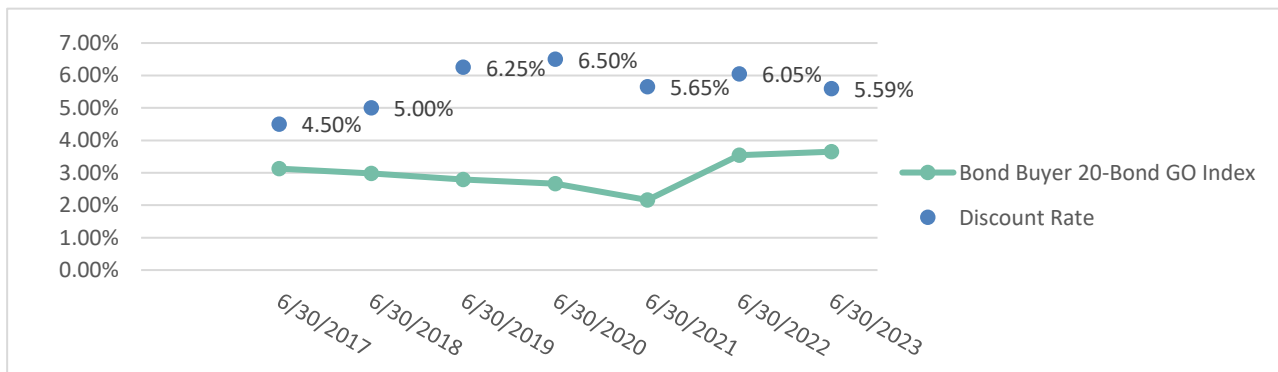
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. 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 5.59%, a long-term investment return rate of 6% and a municipal bond rate of 3.65%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2023. 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 94 years of projected future benefit payments that are expected to be funded and the 3.65% municipal bond rate was applied to all other years to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 5.59%.

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 75¹:



¹Bond rates prior to 2021 are based on the S&P Municipal Bond 20 Year High Grade Index.

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.56%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2023	26,661,206	-	26,661,206	1,509,778	250,000	-	1,759,778
2024	25,740,790	1,853,558	27,594,348	1,610,576	250,000	103,106	1,757,470
2025	24,985,690	3,574,460	28,560,150	1,697,606	250,000	198,832	1,748,774
2026	24,287,378	5,272,377	29,559,755	1,774,644	250,000	293,280	1,731,364
2027	23,565,233	7,029,113	30,594,346	1,847,626	250,000	391,000	1,706,626
2028	22,879,194	8,785,954	31,665,148	1,995,641	250,000	488,726	1,756,915
2029	22,073,275	10,700,153	32,773,428	2,172,363	250,000	595,205	1,827,158
2030	21,140,565	12,779,933	33,920,498	2,334,628	250,000	710,895	1,873,733
2031	20,162,655	14,945,060	35,107,715	2,544,280	250,000	831,332	1,962,948
2032	19,127,266	17,209,219	36,336,485	2,847,221	250,000	957,277	2,139,944
2033	17,985,711	19,622,551	37,608,262	3,121,188	250,000	1,091,521	2,279,667
2034	16,800,265	22,124,286	38,924,551	3,418,271	250,000	1,230,682	2,437,589
2035	15,595,283	24,691,627	40,286,910	3,744,131	250,000	1,373,493	2,620,638
2036	14,150,901	27,546,051	41,696,952	3,899,541	250,000	1,532,272	2,617,269
2037	12,773,264	30,383,081	43,156,345	4,054,557	250,000	1,690,084	2,614,473
2038	11,541,293	33,125,524	44,666,817	4,302,892	5,749,551	1,842,635	8,209,808
2039	10,559,293	35,670,863	46,230,156	4,351,263	5,979,533	1,984,222	8,346,574
2040	9,622,943	38,225,268	47,848,211	4,334,042	6,218,714	2,126,313	8,426,443
2041	8,824,596	40,698,302	49,522,898	4,447,796	6,467,462	2,263,877	8,651,381
2042	8,077,779	43,178,420	51,256,199	4,526,295	6,726,161	2,401,836	8,850,620
2043	7,494,936	45,555,230	53,050,166	4,318,434	6,995,207	2,534,048	8,779,593
2044	6,946,833	47,960,089	54,906,922	4,245,990	7,275,016	2,667,820	8,853,186
2045	6,431,204	50,397,460	56,828,664	4,289,067	7,566,016	2,803,401	9,051,682
2046	5,952,290	52,865,377	58,817,667	4,231,454	7,868,657	2,940,681	9,159,430
2047	5,459,069	55,417,216	60,876,285	4,221,420	8,183,403	3,082,629	9,322,194
2048	5,069,852	57,937,103	63,006,955	4,349,737	8,510,739	3,222,800	9,637,676
2049	4,623,532	60,588,666	65,212,198	4,461,344	-	3,370,295	1,091,049
2050	4,177,191	63,317,434	67,494,625	4,505,397	-	3,522,086	983,311
2051	3,744,777	66,112,160	69,856,937	4,682,475	-	3,677,544	1,004,931
2052	3,337,313	68,964,617	72,301,930	4,757,533	-	3,836,215	921,318
2053	2,903,352	71,929,146	74,832,498	4,830,031	-	4,001,119	828,912
2054	2,508,706	74,942,929	77,451,635	4,973,394	-	4,168,763	804,631
2055	2,143,740	78,018,702	80,162,442	4,996,265	-	4,339,856	656,409
2056	1,726,616	81,241,511	82,968,127	5,067,856	-	4,519,127	548,729

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.56%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2057	1,445,151	84,426,860	85,872,011	5,024,949	-	4,696,315	328,634
2058	1,148,099	87,729,432	88,877,531	4,995,698	-	4,880,023	115,675
2059	887,382	91,100,863	91,988,245	4,912,566	-	5,067,562	-
2060	685,256	94,522,578	95,207,834	4,724,222	-	5,257,898	-
2061	517,297	98,022,811	98,540,108	4,769,493	-	5,452,601	-
2062	398,685	101,590,327	101,989,012	4,700,974	-	5,651,047	-
2063	304,174	105,254,453	105,558,627	4,544,119	-	5,854,867	-
2064	219,786	109,033,393	109,253,179	4,472,700	-	6,065,074	-
2065	133,915	112,943,125	113,077,040	4,437,036	-	6,282,556	-
2066	100,033	116,934,703	117,034,736	4,242,091	-	6,504,591	-
2067	65,699	121,065,253	121,130,952	4,125,655	-	6,734,356	-
2068	48,289	125,322,246	125,370,535	4,053,735	-	6,971,155	-
2069	30,874	129,727,630	129,758,504	3,904,016	-	7,216,208	-
2070	15,267	134,284,785	134,300,052	3,802,519	-	7,469,704	-
2071	3,749	138,996,805	139,000,554	3,674,539	-	7,731,814	-
2072	-	143,865,573	143,865,573	3,539,000	-	8,002,643	-
2073	-	148,900,868	148,900,868	3,399,769	-	8,282,736	-
2074	-	154,112,398	154,112,398	3,251,428	-	8,572,632	-
2075	-	159,506,332	159,506,332	3,111,934	-	8,872,674	-
2076	-	165,089,054	165,089,054	2,947,237	-	9,183,217	-
2077	-	170,867,171	170,867,171	2,791,708	-	9,504,630	-
2078	-	176,847,522	176,847,522	2,640,928	-	9,837,292	-
2079	-	183,037,185	183,037,185	2,490,828	-	10,181,597	-
2080	-	189,443,486	189,443,486	2,348,754	-	10,537,953	-
2081	-	196,074,008	196,074,008	2,200,176	-	10,906,782	-
2082	-	202,936,598	202,936,598	2,056,064	-	11,288,519	-
2083	-	210,039,379	210,039,379	1,914,678	-	11,683,617	-
2084	-	217,390,757	217,390,757	1,775,779	-	12,092,544	-
2085	-	224,999,433	224,999,433	1,638,054	-	12,515,783	-
2086	-	232,874,413	232,874,413	1,501,554	-	12,953,835	-
2087	-	241,025,017	241,025,017	1,368,362	-	13,407,219	-
2088	-	249,460,893	249,460,893	1,235,531	-	13,876,472	-
2089	-	258,192,024	258,192,024	1,109,084	-	14,362,148	-
2090	-	267,228,745	267,228,745	982,408	-	14,864,824	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.56%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2091	-	276,581,751	276,581,751	867,659	-	15,385,092	-
2092	-	286,262,112	286,262,112	754,836	-	15,923,571	-
2093	-	296,281,286	296,281,286	649,476	-	16,480,896	-
2094	-	306,651,131	306,651,131	555,446	-	17,057,727	-
2095	-	317,383,921	317,383,921	467,444	-	17,654,747	-
2096	-	328,492,358	328,492,358	389,302	-	18,272,664	-
2097	-	339,989,591	339,989,591	319,507	-	18,912,207	-
2098	-	351,889,227	351,889,227	259,387	-	19,574,134	-
2099	-	364,205,350	364,205,350	207,008	-	20,259,229	-
2100	-	376,952,537	376,952,537	163,382	-	20,968,302	-
2101	-	390,145,876	390,145,876	127,040	-	21,702,192	-
2102	-	403,800,982	403,800,982	97,241	-	22,461,769	-
2103	-	417,934,016	417,934,016	73,200	-	23,247,931	-
2104	-	432,561,707	432,561,707	54,139	-	24,061,609	-
2105	-	447,701,367	447,701,367	39,304	-	24,903,765	-
2106	-	463,370,915	463,370,915	27,980	-	25,775,397	-
2107	-	479,588,897	479,588,897	19,513	-	26,677,536	-
2108	-	496,374,508	496,374,508	13,316	-	27,611,249	-
2109	-	513,747,616	513,747,616	8,880	-	28,577,643	-
2110	-	531,728,783	531,728,783	5,783	-	29,577,861	-
2111	-	550,339,290	550,339,290	3,673	-	30,613,086	-
2112	-	569,601,165	569,601,165	2,273	-	31,684,544	-
2113	-	589,537,206	589,537,206	1,369	-	32,793,503	-
2114	-	610,171,008	610,171,008	803	-	33,941,275	-
2115	-	631,526,993	631,526,993	457	-	35,129,220	-
2116	-	653,630,438	653,630,438	253	-	36,358,743	-
2117	-	676,507,503	676,507,503	137	-	37,631,299	-
2118	-	700,185,266	700,185,266	72	-	38,948,394	-
2119	-	724,691,750	724,691,750	36	-	40,311,588	-
2120	-	750,055,961	750,055,961	18	-	41,722,493	-
2121	-	776,307,920	776,307,920	9	-	43,182,781	-
2122	-	803,478,697	803,478,697	4	-	44,694,178	-
2123	-	831,600,451	831,600,451	2	-	46,258,474	-
2124	-	860,706,467	860,706,467	1	-	47,877,521	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.56%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2125	-	890,831,193	890,831,193	-	-	49,553,234	-

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)
2023	2,565,167	1,759,778	1,509,778	-	221,261	3,036,428
2024	3,036,428	1,757,470	1,610,576	-	186,593	3,369,915
2025	3,369,915	1,748,774	1,697,606	-	203,730	3,624,813
2026	3,624,813	1,731,364	1,774,644	-	216,190	3,797,723
2027	3,797,723	1,706,626	1,847,626	-	223,633	3,880,356
2028	3,880,356	1,756,915	1,995,641	-	225,660	3,867,290
2029	3,867,290	1,827,158	2,172,363	-	221,681	3,743,766
2030	3,743,766	1,873,733	2,334,628	-	210,799	3,493,670
2031	3,493,670	1,962,948	2,544,280	-	192,180	3,104,518
2032	3,104,518	2,139,944	2,847,221	-	165,053	2,562,294
2033	2,562,294	2,279,667	3,121,188	-	128,492	1,849,265
2034	1,849,265	2,437,589	3,418,271	-	81,535	950,118
2035	950,118	2,620,638	3,744,131	-	23,302	-
2036	-	2,617,269	3,899,541	-	-	-
2037	-	2,614,473	4,054,557	-	-	-
2038	-	8,209,808	4,302,892	-	117,207	4,024,123
2039	4,024,123	8,346,574	4,351,263	-	361,307	8,380,740
2040	8,380,740	8,426,443	4,334,042	-	625,616	13,098,757
2041	13,098,757	8,651,381	4,447,796	-	912,033	18,214,376
2042	18,214,376	8,850,620	4,526,295	-	1,222,592	23,761,292
2043	23,761,292	8,779,593	4,318,434	-	1,559,512	29,781,964
2044	29,781,964	8,853,186	4,245,990	-	1,925,134	36,314,294
2045	36,314,294	9,051,682	4,289,067	-	2,321,736	43,398,645
2046	43,398,645	9,159,430	4,231,454	-	2,751,758	51,078,379
2047	51,078,379	9,322,194	4,221,420	-	3,217,726	59,396,879
2048	59,396,879	9,637,676	4,349,737	-	3,722,451	68,407,269
2049	68,407,269	1,091,049	4,461,344	-	4,003,327	69,040,301
2050	69,040,301	983,311	4,505,397	-	4,036,756	69,554,971
2051	69,554,971	1,004,931	4,682,475	-	4,062,972	69,940,399
2052	69,940,399	921,318	4,757,533	-	4,081,338	70,185,522
2053	70,185,522	828,912	4,830,031	-	4,091,098	70,275,501
2054	70,275,501	804,631	4,973,394	-	4,091,467	70,198,205
2055	70,198,205	656,409	4,996,265	-	4,081,697	69,940,046
2056	69,940,046	548,729	5,067,856	-	4,060,829	69,481,748
2057	69,481,748	328,634	5,024,949	-	4,028,015	68,813,448
2058	68,813,448	115,675	4,995,698	-	3,982,406	67,915,831

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)
2059	67,915,831	-	4,912,566	-	3,927,573	66,930,838
2060	66,930,838	-	4,724,222	-	3,874,124	66,080,740
2061	66,080,740	-	4,769,493	-	3,821,760	65,133,007
2062	65,133,007	-	4,700,974	-	3,766,951	64,198,984
2063	64,198,984	-	4,544,119	-	3,715,615	63,370,480
2064	63,370,480	-	4,472,700	-	3,668,048	62,565,828
2065	62,565,828	-	4,437,036	-	3,620,839	61,749,631
2066	61,749,631	-	4,242,091	-	3,577,715	61,085,255
2067	61,085,255	-	4,125,655	-	3,541,346	60,500,946
2068	60,500,946	-	4,053,735	-	3,508,445	59,955,656
2069	59,955,656	-	3,904,016	-	3,480,219	59,531,859
2070	59,531,859	-	3,802,519	-	3,457,836	59,187,176
2071	59,187,176	-	3,674,539	-	3,440,994	58,953,631
2072	58,953,631	-	3,539,000	-	3,431,048	58,845,679
2073	58,845,679	-	3,399,769	-	3,428,748	58,874,658
2074	58,874,658	-	3,251,428	-	3,434,937	59,058,167
2075	59,058,167	-	3,111,934	-	3,450,132	59,396,365
2076	59,396,365	-	2,947,237	-	3,475,365	59,924,493
2077	59,924,493	-	2,791,708	-	3,511,718	60,644,503
2078	60,644,503	-	2,640,928	-	3,559,442	61,563,017
2079	61,563,017	-	2,490,828	-	3,619,056	62,691,245
2080	62,691,245	-	2,348,754	-	3,691,012	64,033,503
2081	64,033,503	-	2,200,176	-	3,776,005	65,609,332
2082	65,609,332	-	2,056,064	-	3,874,878	67,428,146
2083	67,428,146	-	1,914,678	-	3,988,248	69,501,716
2084	69,501,716	-	1,775,779	-	4,116,830	71,842,767
2085	71,842,767	-	1,638,054	-	4,261,424	74,466,137
2086	74,466,137	-	1,501,554	-	4,422,922	77,387,505
2087	77,387,505	-	1,368,362	-	4,602,199	80,621,342
2088	80,621,342	-	1,235,531	-	4,800,215	84,186,026
2089	84,186,026	-	1,109,084	-	5,017,889	88,094,831
2090	88,094,831	-	982,408	-	5,256,218	92,368,641
2091	92,368,641	-	867,659	-	5,516,089	97,017,071
2092	97,017,071	-	754,836	-	5,798,379	102,060,614
2093	102,060,614	-	649,476	-	6,104,153	107,515,291
2094	107,515,291	-	555,446	-	6,434,254	113,394,099

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)
2095	113,394,099	-	467,444	-	6,789,623	119,716,278
2096	119,716,278	-	389,302	-	7,171,298	126,498,274
2097	126,498,274	-	319,507	-	7,580,311	133,759,078
2098	133,759,078	-	259,387	-	8,017,763	141,517,454
2099	141,517,454	-	207,008	-	8,484,837	149,795,283
2100	149,795,283	-	163,382	-	8,982,816	158,614,717
2101	158,614,717	-	127,040	-	9,513,072	168,000,749
2102	168,000,749	-	97,241	-	10,077,128	177,980,636
2103	177,980,636	-	73,200	-	10,676,642	188,584,078
2104	188,584,078	-	54,139	-	11,313,421	199,843,360
2105	199,843,360	-	39,304	-	11,989,423	211,793,479
2106	211,793,479	-	27,980	-	12,706,769	224,472,268
2107	224,472,268	-	19,513	-	13,467,751	237,920,506
2108	237,920,506	-	13,316	-	14,274,831	252,182,021
2109	252,182,021	-	8,880	-	15,130,655	267,303,796
2110	267,303,796	-	5,783	-	16,038,054	283,336,067
2111	283,336,067	-	3,673	-	17,000,054	300,332,448
2112	300,332,448	-	2,273	-	18,019,879	318,350,054
2113	318,350,054	-	1,369	-	19,100,962	337,449,647
2114	337,449,647	-	803	-	20,246,955	357,695,799
2115	357,695,799	-	457	-	21,461,734	379,157,076
2116	379,157,076	-	253	-	22,749,417	401,906,240
2117	401,906,240	-	137	-	24,114,370	426,020,473
2118	426,020,473	-	72	-	25,561,226	451,581,627
2119	451,581,627	-	36	-	27,094,897	478,676,488
2120	478,676,488	-	18	-	28,720,589	507,397,059
2121	507,397,059	-	9	-	30,443,823	537,840,873
2122	537,840,873	-	4	-	32,270,452	570,111,321
2123	570,111,321	-	2	-	34,206,679	604,317,998
2124	604,317,998	-	1	-	36,259,080	640,577,077
2125	640,577,077	-	-	-	38,434,625	679,011,702

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

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) = 5.59%
2024	3,036,428	1,610,576	1,610,576	-	1,564,330	-	1,567,344
2025	3,369,915	1,697,606	1,697,606	-	1,555,529	-	1,564,539
2026	3,624,813	1,774,644	1,774,644	-	1,534,075	-	1,548,913
2027	3,797,723	1,847,626	1,847,626	-	1,506,758	-	1,527,201
2028	3,880,356	1,995,641	1,995,641	-	1,535,345	-	1,562,180
2029	3,867,290	2,172,363	2,172,363	-	1,576,704	-	1,610,450
2030	3,743,766	2,334,628	2,334,628	-	1,598,562	-	1,639,075
2031	3,493,670	2,544,280	2,544,280	-	1,643,505	-	1,691,658
2032	3,104,518	2,847,221	2,847,221	-	1,735,087	-	1,792,813
2033	2,562,294	3,121,188	-	3,121,188	-	2,220,299	1,861,230
2034	1,849,265	3,418,271	-	3,418,271	-	2,346,004	1,930,425
2035	950,118	3,744,131	-	3,744,131	-	2,479,157	2,002,460
2036	-	3,899,541	-	3,899,541	-	2,491,134	1,975,117
2037	-	4,054,557	-	4,054,557	-	2,498,951	1,944,863
2038	-	4,302,892	-	4,302,892	-	2,558,618	1,954,665
2039	4,024,123	4,351,263	-	4,351,263	-	2,496,267	1,871,947
2040	8,380,740	4,334,042	4,334,042	-	1,657,091	-	1,765,784
2041	13,098,757	4,447,796	4,447,796	-	1,604,325	-	1,716,152
2042	18,214,376	4,526,295	4,526,295	-	1,540,226	-	1,653,941
2043	23,761,292	4,318,434	4,318,434	-	1,386,315	-	1,494,410
2044	29,781,964	4,245,990	4,245,990	-	1,285,905	-	1,391,518
2045	36,314,294	4,289,067	4,289,067	-	1,225,425	-	1,331,187
2046	43,398,645	4,231,454	4,231,454	-	1,140,532	-	1,243,748
2047	51,078,379	4,221,420	4,221,420	-	1,073,423	-	1,175,080
2048	59,396,879	4,349,737	4,349,737	-	1,043,444	-	1,146,670
2049	68,407,269	4,461,344	4,461,344	-	1,009,639	-	1,113,800
2050	69,040,301	4,505,397	4,505,397	-	961,895	-	1,065,224
2051	69,554,971	4,682,475	4,682,475	-	943,114	-	1,048,455
2052	69,940,399	4,757,533	4,757,533	-	903,992	-	1,008,840
2053	70,185,522	4,830,031	4,830,031	-	865,819	-	969,967
2054	70,275,501	4,973,394	4,973,394	-	841,054	-	945,859
2055	70,198,205	4,996,265	4,996,265	-	797,096	-	899,881

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

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) = 5.59%
2056	69,940,046	5,067,856	5,067,856	-	762,753	-	864,431
2057	69,481,748	5,024,949	5,024,949	-	713,486	-	811,716
2058	68,813,448	4,995,698	4,995,698	-	669,181	-	764,249
2059	67,915,831	4,912,566	4,912,566	-	620,798	-	711,727
2060	66,930,838	4,724,222	4,724,222	-	563,205	-	648,189
2061	66,080,740	4,769,493	4,769,493	-	536,417	-	619,741
2062	65,133,007	4,700,974	4,700,974	-	498,783	-	578,485
2063	64,198,984	4,544,119	4,544,119	-	454,850	-	529,566
2064	63,370,480	4,472,700	4,472,700	-	422,359	-	493,636
2065	62,565,828	4,437,036	4,437,036	-	395,275	-	463,763
2066	61,749,631	4,242,091	4,242,091	-	356,517	-	419,903
2067	61,085,255	4,125,655	4,125,655	-	327,105	-	386,748
2068	60,500,946	4,053,735	4,053,735	-	303,211	-	359,880
2069	59,955,656	3,904,016	3,904,016	-	275,483	-	328,231
2070	59,531,859	3,802,519	3,802,519	-	253,133	-	302,765
2071	59,187,176	3,674,539	3,674,539	-	230,767	-	277,079
2072	58,953,631	3,539,000	3,539,000	-	209,675	-	252,725
2073	58,845,679	3,399,769	3,399,769	-	190,024	-	229,923
2074	58,874,658	3,251,428	3,251,428	-	171,446	-	208,245
2075	59,058,167	3,111,934	3,111,934	-	154,803	-	188,754
2076	59,396,365	2,947,237	2,947,237	-	138,311	-	169,296
2077	59,924,493	2,791,708	2,791,708	-	123,597	-	151,869
2078	60,644,503	2,640,928	2,640,928	-	110,303	-	136,057
2079	61,563,017	2,490,828	2,490,828	-	98,145	-	121,528
2080	62,691,245	2,348,754	2,348,754	-	87,308	-	108,526
2081	64,033,503	2,200,176	2,200,176	-	77,156	-	96,277
2082	65,609,332	2,056,064	2,056,064	-	68,021	-	85,205
2083	67,428,146	1,914,678	1,914,678	-	59,758	-	75,144
2084	69,501,716	1,775,779	1,775,779	-	52,286	-	66,001
2085	71,842,767	1,638,054	1,638,054	-	45,501	-	57,658
2086	74,466,137	1,501,554	1,501,554	-	39,348	-	50,054
2087	77,387,505	1,368,362	1,368,362	-	33,828	-	43,198

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

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) = 5.59%
2088	80,621,342	1,235,531	1,235,531	-	28,815	-	36,939
2089	84,186,026	1,109,084	1,109,084	-	24,402	-	31,402
2090	88,094,831	982,408	982,408	-	20,392	-	26,342
2091	92,368,641	867,659	867,659	-	16,990	-	22,033
2092	97,017,071	754,836	754,836	-	13,944	-	18,153
2093	102,060,614	649,476	649,476	-	11,319	-	14,792
2094	107,515,291	555,446	555,446	-	9,132	-	11,980
2095	113,394,099	467,444	467,444	-	7,250	-	9,548
2096	119,716,278	389,302	389,302	-	5,697	-	7,531
2097	126,498,274	319,507	319,507	-	4,411	-	5,853
2098	133,759,078	259,387	259,387	-	3,378	-	4,500
2099	141,517,454	207,008	207,008	-	2,543	-	3,401
2100	149,795,283	163,382	163,382	-	1,894	-	2,542
2101	158,614,717	127,040	127,040	-	1,389	-	1,872
2102	168,000,749	97,241	97,241	-	1,003	-	1,357
2103	177,980,636	73,200	73,200	-	712	-	967
2104	188,584,078	54,139	54,139	-	497	-	678
2105	199,843,360	39,304	39,304	-	340	-	466
2106	211,793,479	27,980	27,980	-	229	-	314
2107	224,472,268	19,513	19,513	-	150	-	207
2108	237,920,506	13,316	13,316	-	97	-	134
2109	252,182,021	8,880	8,880	-	61	-	85
2110	267,303,796	5,783	5,783	-	37	-	52
2111	283,336,067	3,673	3,673	-	22	-	31
2112	300,332,448	2,273	2,273	-	13	-	18
2113	318,350,054	1,369	1,369	-	7	-	11
2114	337,449,647	803	803	-	4	-	6
2115	357,695,799	457	457	-	2	-	3
2116	379,157,076	253	253	-	1	-	2
2117	401,906,240	137	137	-	1	-	1
2118	426,020,473	72	72	-	-	-	-
2119	451,581,627	36	36	-	-	-	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

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) = 5.59%
2120	478,676,488	18	18	-	-	-	-
2121	507,397,059	9	9	-	-	-	-
2122	537,840,873	4	4	-	-	-	-
2123	570,111,321	2	2	-	-	-	-
2124	604,317,998	1	1	-	-	-	-
2125	640,577,077	-	-	-	-	-	-

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

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	2,242,713	6.55	342,399	188,319	-	-	-	-	-	-	-	-
2019	-	6.55	-	-	-	-	-	-	-	-	-	-
2020	(3,592,503)	6.70	(536,194)	(536,194)	(536,194)	(375,339)	-	-	-	-	-	-
2021	6,649,997	7.38	901,084	901,084	901,084	901,084	901,084	342,409	-	-	-	-
2022	-	7.38	-	-	-	-	-	-	-	-	-	-
2023	(2,082,982)	7.19	(289,705)	(289,705)	(289,705)	(289,705)	(289,705)	(289,705)	(289,705)	(55,047)	-	-
Net Increase (Decrease) in OPEB Expense			417,584	263,504	75,185	236,040	611,379	52,704	(289,705)	(55,047)	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	-	6.55	-	-	-	-	-	-	-	-	-	-
2019	(6,007,783)	6.55	(917,218)	(917,218)	(504,468)	-	-	-	-	-	-	-
2020	83,922	6.70	12,525	12,525	12,525	8,765	-	-	-	-	-	-
2021	8,145,723	7.38	1,103,757	1,103,757	1,103,757	1,103,757	1,103,757	419,424	-	-	-	-
2022	(3,204,882)	7.38	(434,266)	(434,266)	(434,266)	(434,266)	(434,266)	(434,266)	(165,020)	-	-	-
2023	4,480,246	7.19	623,122	623,122	623,122	623,122	623,122	623,122	623,122	118,392	-	-
Net Increase (Decrease) in OPEB Expense			387,920	387,920	800,670	1,301,378	1,292,613	608,280	458,102	118,392	-	-

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

Year	Differences between Projected and Actual Earnings on OPEB Plan Investments	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	(20,881)	5	-	-	-	-	-	-	-	-	-	-
2019	17,734	5	3,546	-	-	-	-	-	-	-	-	-
2020	89,861	5	17,972	17,973	-	-	-	-	-	-	-	-
2021	(463,399)	5	(92,680)	(92,680)	(92,679)	-	-	-	-	-	-	-
2022	595,186	5	119,037	119,037	119,037	119,038	-	-	-	-	-	-
2023	(35,479)	5	(7,096)	(7,096)	(7,096)	(7,096)	(7,095)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			40,779	37,234	19,262	111,942	(7,095)	-	-	-	-	-