



## **TOWN OF AQUINNAH**

**Participant in the Dukes County Pooled OPEB Trust**

**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

November, 2023





November 8, 2023

Ms. Jamie Vanderhoop  
Treasurer  
Town of Aquinnah  
955 State Road  
Aquinnah, MA 02535

Dear Jamie:

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 Aquinnah, a Participant in the Dukes County Pooled OPEB Trust. 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 Aquinnah as well as health plan rates provided by the Trustees of the Dukes County Pooled OPEB Trust. 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 4.54%, 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 6.5%. The long-term expected rate of return is based on the target allocations provided in the Dukes County Pooled OPEB Trust's investment policy statement and long-term expected rates of return by asset class obtained from recent surveys of capital market expectations and other reliable sources.

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 Dukes County Retirement System's 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 Aquinnah 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 Aquinnah 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 Aquinnah, other than as consulting actuary for this assignment, that would impair our independence.

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

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

Respectfully submitted,



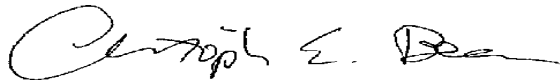
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Linda L. Bournival, FSA, EA  
Member, American Academy of Actuaries  
(603) 792-9494



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Amanda J. Makarevich, FSA  
Member, American Academy of Actuaries  
(603) 792-9494



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Christopher E. Bean, ASA  
Member, American Academy of Actuaries  
(508) 628-9022

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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 Aquinnah'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 Aquinnah. 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 Aquinnah.

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 Aquinnah Other Postemployment Benefits Program

The Town of Aquinnah 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 Cape Cod Municipal Health Group, 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	
<b>Membership Data</b>			
Active Plan Members	18	15	20.0%
Inactive Plan Members (excludes covered spouses)	6	6	0.0%
Total Plan Members	24	21	14.3%
Covered Spouses	1	-	0.0%
Covered Payroll	\$1,187,116	\$1,155,996	2.7%
<b>Net OPEB Liability</b>			
Discount Rate	4.54%	4.28%	
Total OPEB Liability (TOL)	\$3,292,091	\$3,510,886	(6.2%)
Fiduciary Net Position (FNP)	\$788,667	\$688,351	14.6%
Net OPEB Liability	\$2,503,424	\$2,822,535	(11.3%)
FNP as % of TOL	24.0%	19.6%	22.4%
<b>OPEB Expense</b>			
OPEB Expense	\$287,278	\$396,052	(27.5%)
Deferred Outflows	\$704,050	\$1,058,631	
Deferred Inflows	\$1,224,191	\$1,092,158	
Recognition Period	6.13	6.44	



## 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 \$304,000. This gain is primarily attributable to:

- ◆ a gain due to lower than expected medical and dental premiums since the prior valuation
- ◆ a loss due to new entrants with prior service
- ◆ a gain due to fewer retirements and more terminations than expected

### Changes of Assumptions

The discount rate changed from 4.28% as of June 30, 2022 to 4.54% as of June 30, 2023. In addition, many other assumptions were updated in this valuation, including the inflation rate, healthcare trend rates, and mortality improvement 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	(8,000)
◆ Increase due to change in Trend Assumption	93,000
◆ Decrease due to change in Mortality Improvement Rates	(77,000)
◆ Decrease due to change in Discount Rate	(120,000)
Total	\$ (112,000)

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, 2023, is \$3,292,091. The Total OPEB Liability as of the prior measurement date, June 30, 2022, was \$3,510,886. During the current measurement period ending June 30, 2023, the Total OPEB Liability decreased by \$218,795, or -6.2%. The development of the Total OPEB Liability for the current measurement period is shown in Section 1, Exhibit 1.2.

### Fiduciary Net Position

The Fiduciary Net Position is equal to the market value of assets and as of the current measurement date, June 30, 2023, is \$788,667. The Fiduciary Net Position as of the prior measurement date, June 30, 2022, was \$688,351. During the plan years ended June 30, 2023 and June 30, 2022, the actual rates of return were 10.59% and -9.73%, respectively. The expected long-term rate of return is 6.50%. The Fiduciary Net Position is shown in Section 1, Exhibit 1.1.

## EXECUTIVE SUMMARY

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### Employer Future Period Contributions

The Town's funding policy is to contribute \$50,000 annually to the OPEB trust with the exception of FY 2021 when no contribution was made and FY 2022 and FY 2023 when only \$25,000 was contributed due to budget cuts from the COVID-19 pandemic. The Town's funding policy will resume in FY 2024.

### 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 the first 22 periods of projected future benefit payments and the 3.65% 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 4.54%.

### OPEB Expense

The OPEB Expense for the current measurement period ending June 30, 2023, is \$287,278. Benefit changes are recognized immediately, and experience gains and losses and assumption changes developed in this valuation are recognized over 6.13 years. Investment gains and losses are recognized over 5 years. The OPEB Expense for the prior measurement period was \$396,052. 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 Dukes County Pooled OPEB Trust has established an irrevocable trust pursuant to Chapter 149 of the Acts of 2010 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 Trustees and is presented below:

Fiscal Year Ended June 30	2023	2022
<b>Trust Fund Composition at Fiscal Year-End</b>		
Fixed Income	\$135,872	\$138,996
Cash & Equivalents	422	582
Large Cap Equity	287,042	226,598
Mid Cap Equity	77,645	62,115
Small Cap Equity	77,402	61,259
International Equity	117,366	92,446
Real Estate	92,918	106,355
Total Market Value of Assets	\$788,667	\$688,351
<b>Asset Activity</b>		
Market value, beginning of year	\$688,351	\$737,101
Employer Premiums	94,775	94,487
OPEB Trust Contributions	25,000	25,000
Benefit Payments	(94,775)	(94,487)
Administrative Expenses	-	-
Investment Return	75,316	(73,750)
Market value, end of year	\$788,667	\$688,351
<b>Money-Weighted Rate of Return</b>	10.59%	-9.73%
<b>(Gain) / Loss on OPEB Plan Investments</b>		
Projected earnings	\$46,939	\$50,017
Actual earnings	75,316	(73,750)
(Gain) / Loss on OPEB plan investments	(\$28,377)	\$123,767

## 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	\$2,135,902
b. Retirees, Covered Spouses and Survivors	1,374,984
c. Total OPEB Liability at 4.28% (a. + b.)	\$3,510,886
2. Service Cost	\$137,996
3. Expected Benefit Payments	
a. Current retirees	(\$83,148)
b. Future retirees	(11,627)
c. Total (a. + b.)	(\$94,775)
4. Interest [4.28% x (1.c. + 2. + .5 x 3.c)]	\$154,144
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	(\$303,850)
7. Changes of assumptions or other inputs	(\$112,310)
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$2,041,163
b. Retirees, Covered Spouses and Survivors	1,250,928
c. Total OPEB Liability at 4.54% (a. + b.)	\$3,292,091

## SECTION 1 - PRINCIPAL VALUATION RESULTS

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

The Town's funding policy is to contribute \$50,000 annually to the OPEB trust with the exception of FY 2021 when no contribution was made and FY 2022 and FY 2023 when only \$25,000 was contributed due to budget cuts from the COVID-19 pandemic. The Town's funding policy will resume in FY 2024.

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, 2023	June 30, 2024
<b>Discount Rate</b>	<b>4.28%</b>	<b>4.54%</b>
1. Normal Cost	\$137,996	\$130,585
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$3,510,886	\$3,292,091
b. Actuarial Value of Plan Assets	\$688,351	\$788,667
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$2,822,535	\$2,503,424
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$2,822,535	\$2,503,424
b. Amortization Period in years	30	30
c. Payroll Growth Rate	3.5%	3.5%
d. Amortization Factor	26.96	26.05
e. Amortization Amount (3.a. / 3.d.)	\$104,693	\$96,101
4. Interest on 1. and 3.e.	\$10,387	\$10,292
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$253,076	\$236,978
6. Actual Employer Contribution to OPEB Trust	\$25,000	TBD
7. Expected Benefit Payments	\$94,775	
8. Total Contribution (6. + 7.)	\$119,775	

## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.1 - Plan Description

#### Plan Administration

The Town of Aquinnah 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 <sup>1</sup>	6
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	18
	<u>24</u>

<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 Cape Cod Municipal Health Group, 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 \$50,000 annually to the OPEB trust with the exception of FY 2021 when no contribution was made and FY 2022 and FY 2023 when only \$25,000 was contributed due to budget cuts from the COVID-19 pandemic. The Town's funding policy will resume in FY 2024.

## 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	\$ 3,292,091
Fiduciary net position	(788,667)
Net OPEB liability	\$ 2,503,424

Fiduciary net position as a percentage of the total OPEB liability 23.96%

#### Actuarial Assumptions

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

Inflation	2.5% per year, based on current economic data, analyses from economists and other experts, and professional judgment.
Discount rate	4.54%, 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	RP-2014 Blue Collar Mortality Table, projected with generational mortality improvement using scale MP-2020.
Healthy Retiree Mortality	RP-2014 Blue Collar Mortality Table, projected with generational mortality improvement using scale MP-2020.
Disabled Retiree Mortality	RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2020.

## 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 <sup>1</sup>	Long-Term Expected Real Rates of Return <sup>2</sup>
Large Cap Equity	35%	4.44%
Mid Cap Equity	10%	4.56%
Small Cap Equity	10%	4.56%
International Equity	15%	5.12%
Real Estate	10%	2.98%
Fixed Income	20%	1.93%
Total	100%	

<sup>1</sup> provided in the Dukes County Pooled OPEB Trust's investment policy statement.

<sup>2</sup> Obtained from recent surveys on capital market expectations and other reliable sources.

#### Discount Rate

The discount rate used to measure the total OPEB liability was 4.54%. 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 22 periods of projected future benefit payments and the 3.65% 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 4.54 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (3.54 percent) or 1-percentage point higher (5.54 percent) than the current rate:

	1% Decrease (3.54%)	Assumed Discount Rate (4.54%)	1% Increase (5.54%)
Total OPEB Liability	\$ 3,794,869	\$ 3,292,091	\$ 2,888,226
Fiduciary Net Position	(788,667)	(788,667)	(788,667)
Net OPEB Liability	\$ 3,006,202	\$ 2,503,424	\$ 2,099,559
% Change in Net OPEB Liability	20.1%		-16.1%

#### 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	\$ 2,821,778	\$ 3,292,091	\$ 3,889,290
Fiduciary Net Position	(788,667)	(788,667)	(788,667)
Net OPEB Liability	\$ 2,033,111	\$ 2,503,424	\$ 3,100,623
% Change in Net OPEB Liability	-18.8%		23.9%

## 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
<b>Total OPEB Liability</b>					
Service cost	\$ 137,996	\$ 211,534	\$ 220,029	\$ 134,342	\$ 102,736
Interest	154,144	116,721	108,914	136,394	121,678
Changes of benefit terms	-	-	-	(136,701)	-
Differences between expected and actual experience	(303,850)	-	(109,632)	-	10,988
Changes of assumptions	(112,310)	(1,172,052)	111,966	1,184,654	813,977
Benefit payments	(94,775)	(94,487)	(72,239)	(63,905)	(58,348)
<b>Net change in total OPEB liability</b>	<b>\$ (218,795)</b>	<b>\$ (938,284)</b>	<b>\$ 259,038</b>	<b>\$ 1,254,784</b>	<b>\$ 991,031</b>
<b>Total OPEB liability—beginning</b>	<b>\$ 3,510,886</b>	<b>\$ 4,449,170</b>	<b>\$ 4,190,132</b>	<b>\$ 2,935,348</b>	<b>\$ 1,944,317</b>
<b>Total OPEB liability—ending (a)</b>	<b>\$ 3,292,091</b>	<b>\$ 3,510,886</b>	<b>\$ 4,449,170</b>	<b>\$ 4,190,132</b>	<b>\$ 2,935,348</b>
<b>Plan Fiduciary Net Position</b>					
Contributions—employer	\$ 119,775	\$ 119,487	\$ 72,239	\$ 113,905	\$ 108,348
Net investment income	75,316	(73,750)	170,743	23,773	22,067
Benefit payments	(94,775)	(94,487)	(72,239)	(63,905)	(58,348)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
<b>Net change in plan fiduciary net position</b>	<b>\$ 100,316</b>	<b>\$ (48,750)</b>	<b>\$ 170,743</b>	<b>\$ 73,773</b>	<b>\$ 72,067</b>
<b>Plan fiduciary net position—beginning</b>	<b>\$ 688,351</b>	<b>\$ 737,101</b>	<b>\$ 566,358</b>	<b>\$ 492,585</b>	<b>\$ 420,518</b>
<b>Plan fiduciary net position—ending (b)</b>	<b>\$ 788,667</b>	<b>\$ 688,351</b>	<b>\$ 737,101</b>	<b>\$ 566,358</b>	<b>\$ 492,585</b>
<b>Net OPEB liability—ending (a) – (b)</b>	<b>\$ 2,503,424</b>	<b>\$ 2,822,535</b>	<b>\$ 3,712,069</b>	<b>\$ 3,623,774</b>	<b>\$ 2,442,763</b>
Plan fiduciary net position as a percentage of the total OPEB liability	23.96%	19.61%	16.57%	13.52%	16.78%
Covered payroll	\$ 1,187,116	\$ 1,155,996	\$ 1,160,182	\$ 1,113,586	\$ 899,237
Net OPEB liability as a percentage of covered payroll	210.88%	244.16%	319.96%	325.41%	271.65%
<b>Discount Rate</b>	<b>4.54%</b>	<b>4.28%</b>	<b>2.53%</b>	<b>2.49%</b>	<b>4.49%</b>

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Fiscal Year Ended June 30	2018	2017
<b>Total OPEB Liability</b>		
Service cost	\$ 107,970	\$ 119,615
Interest	110,957	99,828
Changes of benefit terms	(2,425)	-
Differences between expected and actual experience	-	-
Changes of assumptions	(112,608)	(182,623)
Benefit payments	(37,875)	(47,125)
<b>Net change in total OPEB liability</b>	<b>\$ 66,019</b>	<b>\$ (10,305)</b>
<b>Total OPEB liability—beginning</b>	<b>\$ 1,878,298</b>	<b>\$ 1,888,603</b>
<b>Total OPEB liability—ending (a)</b>	<b>\$ 1,944,317</b>	<b>\$ 1,878,298</b>
<b>Plan Fiduciary Net Position</b>		
Contributions—employer	\$ 87,875	\$ 97,125
Net investment income	17,497	14,206
Benefit payments	(37,875)	(47,125)
Administrative expenses	-	-
Other	-	-
<b>Net change in plan fiduciary net position</b>	<b>\$ 67,497</b>	<b>\$ 64,206</b>
<b>Plan fiduciary net position—beginning</b>	<b>\$ 353,021</b>	<b>\$ 288,815</b>
<b>Plan fiduciary net position—ending (b)</b>	<b>\$ 420,518</b>	<b>\$ 353,021</b>
<b>Net OPEB liability—ending (a) – (b)</b>	<b>\$ 1,523,799</b>	<b>\$ 1,525,277</b>
Plan fiduciary net position as a percentage of the total OPEB liability	21.63%	18.79%
Covered payroll	\$ 970,814	\$ 928,199
Net OPEB liability as a percentage of covered payroll	156.96%	164.33%
<b>Discount Rate</b>	<b>6.03%</b>	<b>5.64%</b>

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

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

#### Notes to Schedule

##### Changes of Benefit Terms

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

##### Changes of Assumptions

The discount rate changed from 4.28% as of June 30, 2022 to 4.54% as of June 30, 2023. In addition, many other assumptions were updated in this valuation, including the inflation rate, healthcare trend rates, and mortality improvement rates.

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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### 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	10.59%	-9.73%	30.15%	4.42%	4.78%	4.39%	4.25%			

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 <sub>mw</sub> ) <sup>(c)</sup>
Beginning value - July 1, 2022	\$ 688,351	12	1.00	\$ 761,250
Monthly net external cash flows:				
July	25,000	11	0.92	27,417
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				\$ 788,667
Money-weighted rate of return:				10.59%

## 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	\$ 253,076	\$ 327,204	\$ 332,508	\$ 237,721	\$ 183,731
Contributions in relation to the actuarially determined contribution	119,775	119,487	72,239	113,905	108,348
Contribution deficiency (excess)	\$ 133,301	\$ 207,717	\$ 260,269	\$ 123,816	\$ 75,383
Covered payroll	\$ 1,187,116	\$ 1,155,996	\$ 1,160,182	\$ 1,113,586	\$ 899,237
Contributions as a percentage of covered payroll	10.09%	10.34%	6.23%	10.23%	12.05%
Discount rate	4.28%	2.53%	2.49%	4.49%	6.03%
Inflation	2.50%	2.40%	2.20%	2.40%	2.60%

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

### Exhibit 3.3 - Schedule of Employer Contributions, continued

Fiscal Year Ended June 30	2018	2017
Actuarially determined contribution	\$ 180,836	\$ 156,908
Contributions in relation to the actuarially determined contribution	87,875	97,125
Contribution deficiency (excess)	\$ 92,961	\$ 59,783
Covered payroll	\$ 970,814	\$ 928,199
Contributions as a percentage of covered payroll	9.05%	10.46%
Discount rate	5.64%	6.10%
Inflation	3.00%	3.00%

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	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, 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	\$ -	\$ -	\$ -	\$ -	\$ -
2019	10,988	-	8,480	2,508	-
2020	-	-	-	-	-
2021	-	109,632	(51,072)	-	58,560
2022	-	-	-	-	-
2023	-	303,850	(49,568)	-	254,282
Total				<u>\$ 2,508</u>	<u>\$ 312,842</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	\$ -	\$ 112,608	\$ (103,308)	\$ -	\$ 9,300
2019	813,977	-	628,070	185,907	-
2020	1,184,654	-	731,268	453,386	-
2021	111,966	-	52,158	59,808	-
2022	-	1,172,052	(363,992)	-	808,060
2023	-	112,310	(18,321)	-	93,989
Total				<u>\$ 699,101</u>	<u>\$ 911,349</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	\$ 10,855	\$ -	\$ 10,855	\$ -	\$ -	
2019	12,578	-	12,578	-	-	
2020	16,598	-	13,279	3,319	-	
2021	-	131,098	(78,660)	-	52,438	
2022	123,767	-	49,506	74,261	-	
2023	-	28,377	(5,676)	-	22,701	
Subtotal				\$ 77,580	\$ 75,139	
Net				\$ 2,441	\$ -	

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	\$	47,481
2025	\$	(12,741)
2026	\$	(142,692)
2027	\$	(255,398)
2028	\$	(147,965)
Thereafter		(8,826)
<b>Deferred Outflows</b>	<b>\$</b>	<b>704,050</b>
<b>Deferred Inflows</b>	<b>\$</b>	<b>1,224,191</b>

## 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, 2023 is presented below:

#### Fiscal Year Ended June 30, 2023

Measurement Date	6/30/2023
1. Service cost	\$ 137,996
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	3,510,886
b. Service cost, beginning of year	137,996
c. Benefit payments	(94,775)
d. Interest on total OPEB liability = 4.28% times (a. + b. + .5 times c.)	154,144
3. Differences between expected and actual experience	(64,896)
4. Changes of benefit terms	-
5. Changes of assumptions	108,282
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	688,351
b. Contributions - Employer	119,775
c. Benefit payments	(94,775)
d. Administrative expenses and other	-
e. Total projected earnings	(46,939)
7. Differences between projected and actual earnings on OPEB plan investments	(1,309)
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense	\$ 287,278

## 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 Dukes County Retirement System.

**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:

<b>Non-Medicare Plans - July 1, 2023</b>	<b>Individual</b>	<b>Family</b>
Blue Care Elect Preferred PPO	\$1,238.00	\$3,098.00
Network Blue NE HMO	\$947.00	\$2,541.00
Harvard Pilgrim PPO	\$1,022.00	\$2,703.00
Harvard Pilgrim HMO	\$931.00	\$2,491.00
Blue Care Elect Preferred PPO (PPO "Saver")	\$1,012.00	\$2,537.00
Master Health Plus	\$1,827.00	\$4,566.00
Network Blue NE HMO (HMO "Saver")	\$777.00	\$2,086.00
Harvard Pilgrim HSAQ PPO	\$794.00	\$2,134.00
Harvard Pilgrim HSAQ HMO	\$720.00	\$1,939.00

<b>Medicare Plans - January 1, 2023</b>	
BCBS Medex	\$380.00
HPHC Medicare Enhance	\$380.00
Tufts Medicare Supplement with PDP Plus	\$460.00
Medicare HMO Blue	\$410.03
Managed Blue for Seniors	\$377.64
Tufts Medicare Preferred HMO	\$371.00

## 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.

**Dental Coverage** Dental coverage is provided. The total monthly costs are \$42.00 and \$109.00 for individual and family plans, respectively. Retirees contribute 25% of the monthly premiums.

**Life Insurance Coverage** Retirees are eligible for a \$5,000 life insurance benefit. The total monthly cost is \$6.76. Retirees contribute \$1.69 towards the monthly premiums.

## SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

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<b>Valuation Date</b>	July 1, 2022
<b>Disclosure Date</b>	June 30, 2023
<b>GASB 75 Reporting Date</b>	June 30, 2023
<b>Long-Term Expected Rate of Return</b>	<p>6.5%, net of investment expenses and including inflation at 2.5%. Previously, 6.6%.</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>
<b>Municipal Bond Rate</b>	3.65%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2023.
<b>Discount Rate (GASB)</b>	<p>4.54%, compounded annually, for the measurement as of June 30, 2023.</p> <p>4.28%, 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>
<b>Discount Rate (ADEC)</b>	4.28%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2023.
<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%

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.

### 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 - 85% of eligible retired employees will elect to participate.

Dental - 80% 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.

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

For current retirees, the actual census information is used.

## SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

### Medical Per Capita Costs

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

Age	Medicare-Eligible		Medicare-Ineligible	
	Male	Female	Male	Female
Under 20	\$5,216	\$6,124	\$5,216	\$6,124
20-24	4,110	6,520	4,110	6,520
25-29	4,277	9,619	4,277	9,619
30-34	5,373	12,154	5,373	12,154
35-39	6,739	12,519	6,739	12,519
40-44	8,398	12,822	8,398	12,822
45-49	10,600	14,074	10,600	14,074
50-54	13,969	16,557	13,969	16,557
55-59	18,153	19,144	18,153	19,144
60-64	23,296	22,785	23,296	22,785
65-69	3,611	3,517	29,065	27,313
70-74	4,327	4,148	34,824	32,206
75-79	5,110	4,813	41,136	37,401
80-84	5,874	5,520	47,281	42,878
85-89	6,543	6,171	54,114	48,950
90-94	7,123	6,585	54,114	48,950
95+	7,571	6,369	54,114	48,950

### Retiree Contributions

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

Plan	Contribution
Non-Medicare	\$ 3,985
Medicare	1,097

### 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 May 31, 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 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 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 Employees

#### Retirement Rates

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

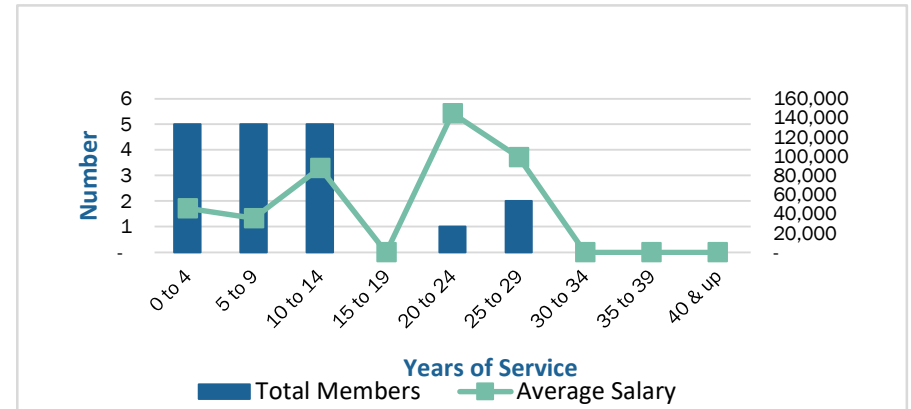
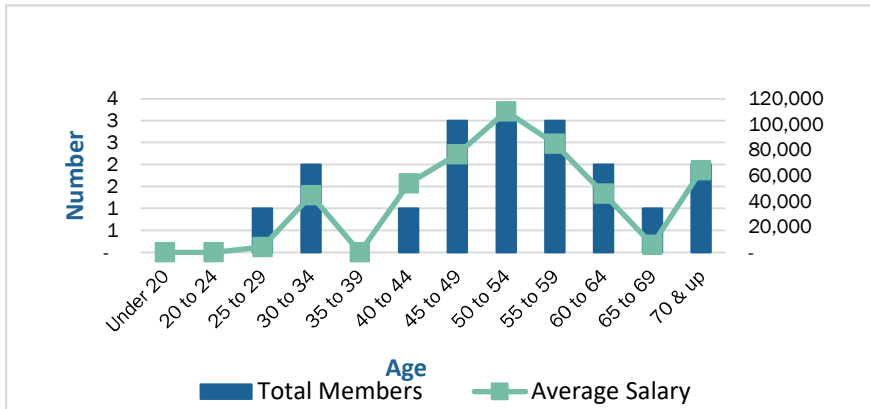
General Employees			Public Safety	
Age	Male	Female	Age	All
45	0.00%	0.00%	45	1.00%
50	1.00%	1.50%	50	2.00%
55	2.00%	5.50%	55	15.00%
60	12.00%	5.00%	60	20.00%
62	30.00%	15.00%	62	25.00%
65	40.00%	15.00%	65	100.00%
69	30.00%	20.00%		
70	100.00%	100.00%		

## SECTION 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	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	1	-	-	-	-	-	-	-	-	1	4,003	4,003
30 to 34	-	1	1	-	-	-	-	-	-	2	89,145	44,572
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	1	-	-	-	-	-	-	-	-	1	53,853	53,853
45 to 49	-	1	2	-	-	-	-	-	-	3	229,447	76,482
50 to 54	-	1	1	-	-	1	-	-	-	3	330,607	110,202
55 to 59	-	1	1	-	1	-	-	-	-	3	254,267	84,756
60 to 64	1	-	-	-	-	1	-	-	-	2	91,662	45,831
65 to 69	-	1	-	-	-	-	-	-	-	1	5,720	5,720
70 & up	2	-	-	-	-	-	-	-	-	2	128,412	64,206
<b>Total</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>-</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>18</b>	<b>1,187,116</b>	<b>65,951</b>
<b>Total Salary</b>	<b>228,643</b>	<b>177,162</b>	<b>438,426</b>	<b>-</b>	<b>144,902</b>	<b>197,983</b>	<b>-</b>	<b>-</b>	<b>-</b>			
<b>Average Salary</b>	<b>45,729</b>	<b>35,432</b>	<b>87,685</b>	<b>-</b>	<b>144,902</b>	<b>98,991</b>	<b>-</b>	<b>-</b>	<b>-</b>			

Average Age: 52.5      Average Service: 10.3



## SECTION 7 - PLAN MEMBER INFORMATION

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

Non-Medicare Plans						Medicare Plans		Total
Age	Blue Care Elect Preferred PPO	Network Blue NE HMO	Harvard Pilgrim PPO	Harvard Pilgrim HMO	Blue Care Elect Preferred PPO (PPO "Saver")	BCBS Medex	HPHC Medicare Enhance	
Under 40	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	0	0
55 to 59	0	1	0	0	0	0	0	1
60 to 64	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0
70 to 74	0	0	0	0	0	1	0	1
75 to 79	1	0	0	0	0	1	0	2
80 to 84	0	0	0	0	0	0	0	0
85 to 89	0	0	0	0	0	1	0	1
90+	0	0	0	0	0	0	0	0
Total	1	1	0	0	0	3	0	5
Covered Spouses	0	1	0	0	0	0	0	1

Average Age: 73.6

In addition, there is 1 retiree, survivor or covered spouse that is not covered under any medical plan but is covered under either a life insurance policy or a dental plan which the Town contributes to and/or receives a reimbursement for a Medicare late-enrollment penalty.

## SECTION 8 - GLOSSARY OF TERMS

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**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.



## 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.

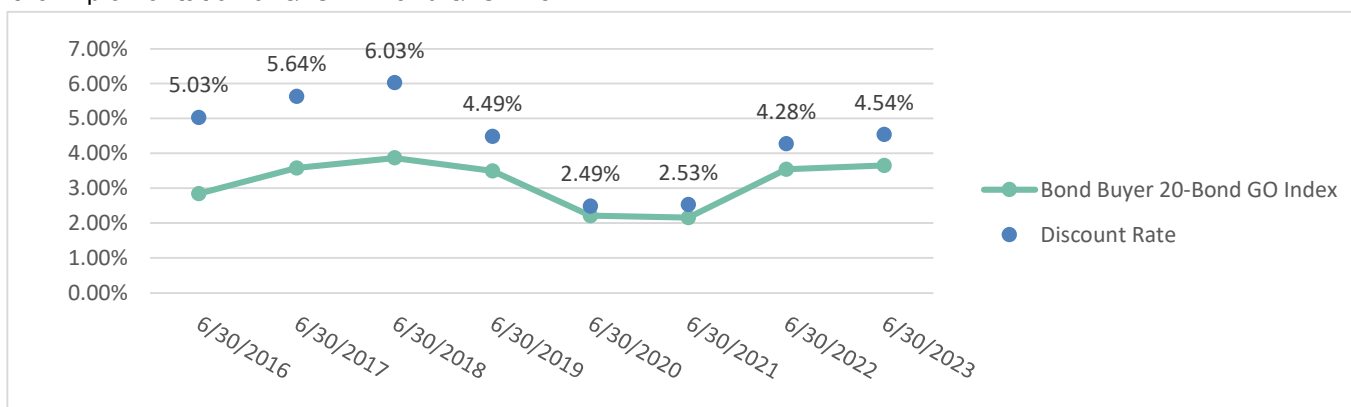
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. 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 4.54%, a long-term investment return rate of 6.5% 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 the first 22 periods of projected future benefit payments and the 3.65% 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 4.54%.

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

Projected Payroll			Projected Contributions				
Year	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) * 10.52%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2023	1,199,124	-	1,199,124	94,775	25,000	-	119,775
2024	1,131,321	109,772	1,241,093	110,898	50,000	11,550	149,348
2025	1,076,960	207,571	1,284,531	128,356	50,000	21,840	156,516
2026	1,015,520	313,970	1,329,490	147,311	50,000	33,035	164,276
2027	922,250	453,772	1,376,022	164,086	50,000	47,745	166,341
2028	831,374	592,809	1,424,183	186,303	50,000	62,374	173,929
2029	767,010	707,019	1,474,029	203,338	50,000	74,391	178,947
2030	641,339	884,281	1,525,620	214,804	50,000	93,042	171,762
2031	569,170	1,009,847	1,579,017	190,559	50,000	106,254	134,305
2032	484,836	1,149,447	1,634,283	226,646	50,000	120,942	155,704
2033	424,750	1,266,733	1,691,483	237,814	50,000	133,283	154,531
2034	377,271	1,373,414	1,750,685	240,850	50,000	144,507	146,343
2035	335,339	1,476,620	1,811,959	261,307	50,000	155,366	155,941
2036	297,073	1,578,305	1,875,378	260,983	50,000	166,066	144,917
2037	251,488	1,689,528	1,941,016	252,741	50,000	177,768	124,973
2038	206,871	1,802,081	2,008,952	269,880	50,000	189,611	130,269
2039	182,375	1,896,890	2,079,265	242,505	50,000	199,586	92,919
2040	144,068	2,007,971	2,152,039	212,071	50,000	211,274	50,797
2041	137,643	2,089,717	2,227,360	210,622	50,000	219,875	40,747
2042	125,565	2,179,753	2,305,318	194,392	50,000	229,348	15,044
2043	118,384	2,267,620	2,386,004	197,307	50,000	238,594	8,713
2044	112,481	2,357,033	2,469,514	192,137	50,000	248,001	-
2045	106,854	2,449,093	2,555,947	189,634	50,000	257,688	-
2046	97,471	2,547,934	2,645,405	199,338	50,000	268,088	-
2047	90,847	2,647,147	2,737,994	205,375	50,000	278,527	-
2048	87,104	2,746,720	2,833,824	209,295	50,000	289,003	-
2049	83,700	2,849,308	2,933,008	217,025	50,000	299,797	-
2050	81,035	2,954,628	3,035,663	222,447	50,000	310,879	-
2051	75,303	3,066,608	3,141,911	236,433	50,000	322,661	-
2052	73,232	3,178,646	3,251,878	250,897	50,000	334,450	-
2053	65,745	3,299,949	3,365,694	242,115	50,000	347,213	-
2054	57,957	3,425,536	3,483,493	251,401	50,000	360,427	-

## APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Projected Payroll				Projected Contributions			
Year	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) * 10.52%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2055	52,537	3,552,878	3,605,415	259,915	50,000	373,825	-
2056	45,145	3,686,460	3,731,605	217,140	50,000	387,881	-
2057	40,163	3,822,048	3,862,211	218,166	50,000	402,147	-
2058	33,807	3,963,581	3,997,388	218,058	50,000	417,039	-
2059	28,016	4,109,281	4,137,297	216,919	50,000	432,369	-
2060	21,994	4,260,108	4,282,102	215,420	50,000	448,239	-
2061	18,302	4,413,674	4,431,976	217,728	50,000	464,396	-
2062	4,002	4,583,093	4,587,095	202,231	50,000	482,222	-
2063	3,464	4,744,179	4,747,643	194,793	50,000	499,171	-
2064	2,820	4,910,991	4,913,811	187,504	50,000	516,723	-
2065	2,295	5,083,499	5,085,794	179,605	50,000	534,874	-
2066	1,749	5,262,048	5,263,797	174,418	50,000	553,660	-
2067	1,423	5,446,607	5,448,030	167,225	50,000	573,079	-
2068	-	5,638,711	5,638,711	158,841	50,000	593,292	-
2069	-	5,836,066	5,836,066	149,525	50,000	614,057	-
2070	-	6,040,328	6,040,328	138,674	50,000	635,549	-
2071	-	6,251,739	6,251,739	134,218	50,000	657,793	-
2072	-	6,470,550	6,470,550	125,666	50,000	680,816	-
2073	-	6,697,019	6,697,019	119,377	50,000	704,645	-
2074	-	6,931,415	6,931,415	111,790	50,000	729,307	-
2075	-	7,174,015	7,174,015	104,050	50,000	754,833	-
2076	-	7,425,106	7,425,106	102,222	50,000	781,252	-
2077	-	7,684,985	7,684,985	97,095	50,000	808,596	-
2078	-	7,953,959	7,953,959	92,905	50,000	836,897	-
2079	-	8,232,348	8,232,348	87,758	50,000	866,188	-
2080	-	8,520,480	8,520,480	82,185	50,000	896,505	-
2081	-	8,818,697	8,818,697	79,769	50,000	927,883	-
2082	-	9,127,351	9,127,351	75,605	50,000	960,358	-
2083	-	9,446,808	9,446,808	70,979	50,000	993,971	-
2084	-	9,777,446	9,777,446	65,799	50,000	1,028,760	-
2085	-	10,119,657	10,119,657	60,058	50,000	1,064,766	-
2086	-	10,473,845	10,473,845	53,185	50,000	1,102,033	-

## 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) * 10.52%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2087	-	10,840,430	10,840,430	48,375	50,000	1,140,604	-
2088	-	11,219,845	11,219,845	42,865	50,000	1,180,526	-
2089	-	11,612,540	11,612,540	37,777	50,000	1,221,844	-
2090	-	12,018,979	12,018,979	32,636	50,000	1,264,609	-
2091	-	12,439,643	12,439,643	27,787	50,000	1,308,870	-
2092	-	12,875,031	12,875,031	22,994	50,000	1,354,680	-
2093	-	13,325,657	13,325,657	18,944	50,000	1,402,094	-
2094	-	13,792,055	13,792,055	15,355	50,000	1,451,168	-
2095	-	14,274,777	14,274,777	12,240	50,000	1,501,958	-
2096	-	14,774,394	14,774,394	9,586	50,000	1,554,527	-
2097	-	15,291,498	15,291,498	7,371	50,000	1,608,935	-
2098	-	15,826,700	15,826,700	5,562	50,000	1,665,248	-
2099	-	16,380,635	16,380,635	4,115	50,000	1,723,532	-
2100	-	16,953,957	16,953,957	2,984	50,000	1,783,855	-
2101	-	17,547,345	17,547,345	2,118	50,000	1,846,290	-
2102	-	18,161,502	18,161,502	1,470	50,000	1,910,910	-
2103	-	18,797,155	18,797,155	996	50,000	1,977,792	-
2104	-	19,455,055	19,455,055	657	50,000	2,047,015	-
2105	-	20,135,982	20,135,982	423	50,000	2,118,661	-
2106	-	20,840,741	20,840,741	265	50,000	2,192,814	-
2107	-	21,570,167	21,570,167	161	50,000	2,269,562	-
2108	-	22,325,123	22,325,123	95	50,000	2,348,997	-
2109	-	23,106,502	23,106,502	54	50,000	2,431,212	-
2110	-	23,915,230	23,915,230	30	50,000	2,516,304	-
2111	-	24,752,263	24,752,263	16	50,000	2,604,375	-
2112	-	25,618,592	25,618,592	8	50,000	2,695,528	-
2113	-	26,515,243	26,515,243	4	50,000	2,789,871	-
2114	-	27,443,277	27,443,277	2	50,000	2,887,517	-
2115	-	28,403,792	28,403,792	1	50,000	2,988,580	-
2116	-	29,397,925	29,397,925	1	50,000	3,093,180	-
2117	-	30,426,852	30,426,852	-	50,000	3,201,442	-

## 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	688,351	119,775	94,775	-	75,316	788,667
2024	788,667	149,348	110,898	-	52,513	879,630
2025	879,630	156,516	128,356	-	58,091	965,881
2026	965,881	164,276	147,311	-	63,334	1,046,180
2027	1,046,180	166,341	164,086	-	68,075	1,116,510
2028	1,116,510	173,929	186,303	-	72,171	1,176,307
2029	1,176,307	178,947	203,338	-	75,667	1,227,583
2030	1,227,583	171,762	214,804	-	78,394	1,262,935
2031	1,262,935	134,305	190,559	-	80,263	1,286,944
2032	1,286,944	155,704	226,646	-	81,346	1,297,348
2033	1,297,348	154,531	237,814	-	81,621	1,295,686
2034	1,295,686	146,343	240,850	-	81,148	1,282,327
2035	1,282,327	155,941	261,307	-	79,927	1,256,888
2036	1,256,888	144,917	260,983	-	77,926	1,218,748
2037	1,218,748	124,973	252,741	-	75,066	1,166,046
2038	1,166,046	130,269	269,880	-	71,256	1,097,691
2039	1,097,691	92,919	242,505	-	66,488	1,014,593
2040	1,014,593	50,797	212,071	-	60,707	914,026
2041	914,026	40,747	210,622	-	53,891	798,042
2042	798,042	15,044	194,392	-	46,044	664,738
2043	664,738	8,713	197,307	-	37,079	513,223
2044	513,223	-	192,137	-	27,115	348,201
2045	348,201	-	189,634	-	16,470	175,037
2046	175,037	-	199,338	-	4,899	-
2047	-	-	205,375	-	-	-
2048	-	-	209,295	-	-	-
2049	-	-	217,025	-	-	-
2050	-	-	222,447	-	-	-
2051	-	-	236,433	-	-	-
2052	-	-	250,897	-	-	-
2053	-	-	242,115	-	-	-
2054	-	-	251,401	-	-	-
2055	-	-	259,915	-	-	-
2056	-	-	217,140	-	-	-

## 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)
2057	-	-	218,166	-	-	-
2058	-	-	218,058	-	-	-
2059	-	-	216,919	-	-	-
2060	-	-	215,420	-	-	-
2061	-	-	217,728	-	-	-
2062	-	-	202,231	-	-	-
2063	-	-	194,793	-	-	-
2064	-	-	187,504	-	-	-
2065	-	-	179,605	-	-	-
2066	-	-	174,418	-	-	-
2067	-	-	167,225	-	-	-
2068	-	-	158,841	-	-	-
2069	-	-	149,525	-	-	-
2070	-	-	138,674	-	-	-
2071	-	-	134,218	-	-	-
2072	-	-	125,666	-	-	-
2073	-	-	119,377	-	-	-
2074	-	-	111,790	-	-	-
2075	-	-	104,050	-	-	-
2076	-	-	102,222	-	-	-
2077	-	-	97,095	-	-	-
2078	-	-	92,905	-	-	-
2079	-	-	87,758	-	-	-
2080	-	-	82,185	-	-	-
2081	-	-	79,769	-	-	-
2082	-	-	75,605	-	-	-
2083	-	-	70,979	-	-	-
2084	-	-	65,799	-	-	-
2085	-	-	60,058	-	-	-
2086	-	-	53,185	-	-	-
2087	-	-	48,375	-	-	-
2088	-	-	42,865	-	-	-
2089	-	-	37,777	-	-	-
2090	-	-	32,636	-	-	-

## 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)
2091	-	-	27,787	-	-	-
2092	-	-	22,994	-	-	-
2093	-	-	18,944	-	-	-
2094	-	-	15,355	-	-	-
2095	-	-	12,240	-	-	-
2096	-	-	9,586	-	-	-
2097	-	-	7,371	-	-	-
2098	-	-	5,562	-	-	-
2099	-	-	4,115	-	-	-
2100	-	-	2,984	-	-	-
2101	-	-	2,118	-	-	-
2102	-	-	1,470	-	-	-
2103	-	-	996	-	-	-
2104	-	-	657	-	-	-
2105	-	-	423	-	-	-
2106	-	-	265	-	-	-
2107	-	-	161	-	-	-
2108	-	-	95	-	-	-
2109	-	-	54	-	-	-
2110	-	-	30	-	-	-
2111	-	-	16	-	-	-
2112	-	-	8	-	-	-
2113	-	-	4	-	-	-
2114	-	-	2	-	-	-
2115	-	-	1	-	-	-
2116	-	-	1	-	-	-
2117	-	-	-	-	-	-

## 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) = 4.54%
2024	788,667	110,898	110,898	-	107,461	-	108,465
2025	879,630	128,356	128,356	-	116,786	-	120,091
2026	965,881	147,311	147,311	-	125,852	-	131,843
2027	1,046,180	164,086	164,086	-	131,628	-	140,483
2028	1,116,510	186,303	186,303	-	140,329	-	152,582
2029	1,176,307	203,338	203,338	-	143,812	-	159,305
2030	1,227,583	214,804	214,804	-	142,649	-	160,984
2031	1,262,935	190,559	190,559	-	118,825	-	136,615
2032	1,286,944	226,646	226,646	-	132,702	-	155,435
2033	1,297,348	237,814	237,814	-	130,742	-	156,015
2034	1,295,686	240,850	240,850	-	124,330	-	151,149
2035	1,282,327	261,307	261,307	-	126,657	-	156,870
2036	1,256,888	260,983	260,983	-	118,780	-	149,875
2037	1,218,748	252,741	252,741	-	108,008	-	138,842
2038	1,166,046	269,880	269,880	-	108,293	-	141,823
2039	1,097,691	242,505	242,505	-	91,370	-	121,906
2040	1,014,593	212,071	212,071	-	75,026	-	101,980
2041	914,026	210,622	210,622	-	69,966	-	96,888
2042	798,042	194,392	194,392	-	60,633	-	85,541
2043	664,738	197,307	197,307	-	57,786	-	83,055
2044	513,223	192,137	192,137	-	52,838	-	77,368
2045	348,201	189,634	189,634	-	48,967	-	73,046
2046	175,037	199,338	-	199,338	-	88,978	73,452
2047	-	205,375	-	205,375	-	88,444	72,392
2048	-	209,295	-	209,295	-	86,958	70,571
2049	-	217,025	-	217,025	-	86,995	70,002
2050	-	222,447	-	222,447	-	86,028	68,636
2051	-	236,433	-	236,433	-	88,217	69,786
2052	-	250,897	-	250,897	-	90,317	70,841
2053	-	242,115	-	242,115	-	84,087	65,394
2054	-	251,401	-	251,401	-	84,237	64,955
2055	-	259,915	-	259,915	-	84,023	64,240



## 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) = 4.54%
2056	-	217,140	-	217,140	-	67,723	51,339
2057	-	218,166	-	218,166	-	65,647	49,343
2058	-	218,058	-	218,058	-	63,304	47,178
2059	-	216,919	-	216,919	-	60,756	44,894
2060	-	215,420	-	215,420	-	58,211	42,649
2061	-	217,728	-	217,728	-	56,763	41,235
2062	-	202,231	-	202,231	-	50,866	36,638
2063	-	194,793	-	194,793	-	47,270	33,759
2064	-	187,504	-	187,504	-	43,899	31,085
2065	-	179,605	-	179,605	-	40,569	28,483
2066	-	174,418	-	174,418	-	38,010	26,460
2067	-	167,225	-	167,225	-	35,159	24,268
2068	-	158,841	-	158,841	-	32,220	22,051
2069	-	149,525	-	149,525	-	29,262	19,856
2070	-	138,674	-	138,674	-	26,183	17,616
2071	-	134,218	-	134,218	-	24,449	16,310
2072	-	125,666	-	125,666	-	22,085	14,608
2073	-	119,377	-	119,377	-	20,241	13,275
2074	-	111,790	-	111,790	-	18,287	11,891
2075	-	104,050	-	104,050	-	16,422	10,588
2076	-	102,222	-	102,222	-	15,565	9,950
2077	-	97,095	-	97,095	-	14,264	9,041
2078	-	92,905	-	92,905	-	13,168	8,275
2079	-	87,758	-	87,758	-	12,000	7,478
2080	-	82,185	-	82,185	-	10,842	6,699
2081	-	79,769	-	79,769	-	10,153	6,220
2082	-	75,605	-	75,605	-	9,284	5,639
2083	-	70,979	-	70,979	-	8,409	5,064
2084	-	65,799	-	65,799	-	7,521	4,491
2085	-	60,058	-	60,058	-	6,623	3,921
2086	-	53,185	-	53,185	-	5,659	3,322
2087	-	48,375	-	48,375	-	4,966	2,890

## 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) = 4.54%
2088	-	42,865	-	42,865	-	4,245	2,450
2089	-	37,777	-	37,777	-	3,609	2,065
2090	-	32,636	-	32,636	-	3,008	1,707
2091	-	27,787	-	27,787	-	2,471	1,390
2092	-	22,994	-	22,994	-	1,973	1,100
2093	-	18,944	-	18,944	-	1,568	867
2094	-	15,355	-	15,355	-	1,226	672
2095	-	12,240	-	12,240	-	943	513
2096	-	9,586	-	9,586	-	713	384
2097	-	7,371	-	7,371	-	529	283
2098	-	5,562	-	5,562	-	385	204
2099	-	4,115	-	4,115	-	275	144
2100	-	2,984	-	2,984	-	192	100
2101	-	2,118	-	2,118	-	132	68
2102	-	1,470	-	1,470	-	88	45
2103	-	996	-	996	-	58	29
2104	-	657	-	657	-	37	18
2105	-	423	-	423	-	23	11
2106	-	265	-	265	-	14	7
2107	-	161	-	161	-	8	4
2108	-	95	-	95	-	5	2
2109	-	54	-	54	-	3	1
2110	-	30	-	30	-	1	1
2111	-	16	-	16	-	1	-
2112	-	8	-	8	-	-	-
2113	-	4	-	4	-	-	-
2114	-	2	-	2	-	-	-
2115	-	1	-	1	-	-	-
2116	-	1	-	1	-	-	-
2117	-	-	-	-	-	-	-

## 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	-	6.54	-	-	-	-	-	-	-	-	-	-
2019	10,988	6.48	1,696	1,696	812	-	-	-	-	-	-	-
2020	-	6.48	-	-	-	-	-	-	-	-	-	-
2021	(109,632)	6.44	(17,024)	(17,024)	(17,024)	(17,024)	(7,488)	-	-	-	-	-
2022	-	6.44	-	-	-	-	-	-	-	-	-	-
2023	(303,850)	6.13	(49,568)	(49,568)	(49,568)	(49,568)	(49,568)	(49,568)	(6,442)	-	-	-
Net Increase (Decrease) in OPEB Expense			(64,896)	(64,896)	(65,780)	(66,592)	(57,056)	(49,568)	(6,442)	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	(112,608)	6.54	(17,218)	(9,300)	-	-	-	-	-	-	-	-
2019	813,977	6.48	125,614	125,614	60,293	-	-	-	-	-	-	-
2020	1,184,654	6.48	182,817	182,817	182,817	87,752	-	-	-	-	-	-
2021	111,966	6.44	17,386	17,386	17,386	17,386	7,650	-	-	-	-	-
2022	(1,172,052)	6.44	(181,996)	(181,996)	(181,996)	(181,996)	(181,996)	(80,076)	-	-	-	-
2023	(112,310)	6.13	(18,321)	(18,321)	(18,321)	(18,321)	(18,321)	(18,321)	(2,384)	-	-	-
Net Increase (Decrease) in OPEB Expense			108,282	116,200	60,179	(95,179)	(192,667)	(98,397)	(2,384)	-	-	-

## 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	10,855	5	-	-	-	-	-	-	-	-	-	-
2019	12,578	5	2,515	-	-	-	-	-	-	-	-	-
2020	16,598	5	3,319	3,319	-	-	-	-	-	-	-	-
2021	(131,098)	5	(26,220)	(26,219)	(26,219)	-	-	-	-	-	-	-
2022	123,767	5	24,753	24,753	24,754	24,754	-	-	-	-	-	-
2023	(28,377)	5	(5,676)	(5,676)	(5,675)	(5,675)	(5,675)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(1,309)	(3,823)	(7,140)	19,079	(5,675)	-	-	-	-	-