



## **MARTHA'S VINEYARD COMMISSION**

**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

Mr. Curt Schroeder  
Administrator and Chief Fiscal Officer  
Martha's Vineyard Commission  
PO Box 1447  
Oak Bluffs, MA 02557

Dear Curt:

We are pleased to present the enclosed report of the July 1, 2022 actuarial valuation of the retiree health care benefits for the Martha's Vineyard Commission, 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 Martha's Vineyard Commission 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 6.5%, the rate that reflects the long-term expected rate of return on OPEB plan assets. The long-term expected rate of return is based on the target allocations provided in the 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 Martha's Vineyard Commission 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 Martha's Vineyard Commission 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 Martha's Vineyard Commission, other than as consulting actuary for this assignment, that would impair our independence.

Mr. Curt Schroeder

November 8, 2023

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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,



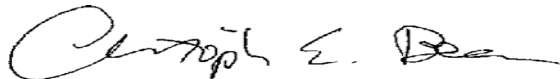
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Linda L. Bournival, FSA, EA  
Member, American Academy of Actuaries  
(603) 792-9494



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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 Martha's Vineyard Commission'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 Martha's Vineyard Commission. 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 Martha's Vineyard Commission.

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

### Martha's Vineyard Commission Other Postemployment Benefits Program

The Martha's Vineyard Commission 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 Commission 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 Commission 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	12	12	0.0%
Inactive Plan Members (excludes covered spouses)	6	6	0.0%
Total Plan Members	18	18	0.0%
Covered Spouses	2	2	0.0%
Covered Payroll	\$1,001,567	\$1,030,425	(2.8%)
<b>Net OPEB Liability</b>			
Discount Rate	6.50%	6.60%	
Total OPEB Liability (TOL)	\$1,327,945	\$1,503,555	(11.7%)
Fiduciary Net Position (FNP)	\$501,755	\$365,589	37.2%
Net OPEB Liability	\$826,190	\$1,137,966	(27.4%)
FNP as % of TOL	37.8%	24.3%	
<b>OPEB Expense</b>			
OPEB Expense	\$64,482	\$122,629	(47.4%)
Deferred Outflows	\$97,256	\$131,815	
Deferred Inflows	\$290,096	\$77,155	
Recognition Period	4.78	5.68	



## 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 \$313,000. This gain is primarily attributable to the following:

- ♦ a gain due to a lower than expected increase in medical premiums since the prior valuation
- ♦ a gain due to an employee with a high amount of service terminating or retiring without coverage

### Changes of Assumptions

The discount rate changed from 6.6% as of June 30, 2022 to 6.5% 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	(1,000)
♦ Increase due to change in Trend Assumption	43,000
♦ Decrease due to change in Mortality Improvement Rates	(25,000)
♦ Increase due to change in Discount Rate	17,000
Total	\$ 34,000

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 \$1,327,945. The Total OPEB Liability as of the prior measurement date, June 30, 2022, was \$1,503,555. During the current measurement period ending June 30, 2023, the Total OPEB Liability decreased by \$175,610, or -11.7%. 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 \$501,755. The Fiduciary Net Position as of the prior measurement date, June 30, 2022, was \$365,589. During the plan years ended June 30, 2023 and June 30, 2022, the actual rates of return were 10.74% and -9.66%, 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 commission contributed \$25,500 to the OPEB trust for fiscal year 2016 and intends to increase this amount by \$5,000 annually until the total contribution reaches \$97,799.

### Discount Rate

As of the June 30, 2023 measurement date, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 6.5%.

### OPEB Expense

The OPEB Expense for the current measurement period ending June 30, 2023, is \$64,482. Benefit changes are recognized immediately, and experience gains and losses and assumption changes developed in this valuation are recognized over 4.78 years. Investment gains and losses are recognized over 5 years. The OPEB Expense for the prior measurement period was \$122,629. 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**

Trust Fund Composition at Fiscal Year-End		
Fixed Income	\$86,443	\$73,822
Cash & Equivalents	268	309
Large Cap Equity	182,618	120,348
Mid Cap Equity	49,398	32,990
Small Cap Equity	49,244	32,535
International Equity	74,669	49,099
Real Estate	59,115	56,486
Total Market Value of Assets	\$501,755	\$365,589
Asset Activity		
Market value, beginning of year	\$365,589	\$376,958
Employer Premiums	40,508	44,383
OPEB Trust Contributions	88,250	27,250
Benefit Payments	(40,508)	(44,383)
Administrative Expenses	-	-
Investment Return	47,916	(38,619)
Market value, end of year	\$501,755	\$365,589
<b>Money-Weighted Rate of Return</b>	10.74%	-9.66%
(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$29,454	\$26,370
Actual earnings	47,916	(38,619)
(Gain) / Loss on OPEB plan investments	(\$18,462)	\$64,989

## 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	\$866,482
b. Retirees, Covered Spouses and Survivors	637,073
c. Total OPEB Liability at 6.6% (a. + b.)	\$1,503,555
2. Service Cost	\$43,887
3. Expected Benefit Payments	
a. Current retirees	(\$28,370)
b. Future retirees	(12,138)
c. Total (a. + b.)	(\$40,508)
4. Interest [6.6% x (1.c. + 2. + .5 x 3.c)]	\$100,794
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	(\$313,183)
7. Changes of assumptions or other inputs	\$33,400
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$743,416
b. Retirees, Covered Spouses and Survivors	584,529
c. Total OPEB Liability at 6.5% (a. + b.)	\$1,327,945

## SECTION 1 - PRINCIPAL VALUATION RESULTS

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

The commission contributed \$25,500 to the OPEB trust for fiscal year 2016 and intends to increase this amount by \$5,000 annually until the total contribution reaches \$97,799.

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>6.60%</b>	<b>6.50%</b>
1. Normal Cost	\$43,887	\$47,346
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$1,503,555	\$1,327,945
b. Actuarial Value of Plan Assets	\$365,589	\$501,755
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$1,137,966	\$826,190
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$1,137,966	\$826,190
b. Amortization Period in years	30	30
c. Payroll Growth Rate	3.5%	3.5%
d. Amortization Factor	20.20	20.44
e. Amortization Amount (3.a. / 3.d.)	\$56,335	\$40,420
4. Interest on 1. and 3.e.	\$6,615	\$5,705
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$106,837	\$93,471
6. Actual Employer Contribution to OPEB Trust	\$88,250	TBD
7. Expected Benefit Payments	\$40,508	
8. Total Contribution (6. + 7.)	\$128,758	

## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.1 - Plan Description

#### Plan Administration

The Martha's Vineyard Commission 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	12
	<u>18</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 Commission 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 Commission and retirees.

#### Employer Future Period Contributions

The commission contributed \$25,500 to the OPEB trust for fiscal year 2016 and intends to increase this amount by \$5,000 annually until the total contribution reaches \$97,799.

## 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	\$ 1,327,945
Fiduciary net position	(501,755)
Net OPEB liability	\$ 826,190

Fiduciary net position as a percentage of the total OPEB liability 37.78%

#### Actuarial Assumptions

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

Inflation	2.5% per year, based on current economic data, analyses from economists and other experts, and professional judgment.
Discount rate	6.5%, 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 6.5%. The projection of cash flows used to determine the discount rate assumed that contributions from the Commission will be made in accordance with the plan's funding policy. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.



## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.2 - Net OPEB Liability

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

The following presents the net OPEB liability calculated using the current discount rate of 6.5 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (5.5 percent) or 1-percentage point higher (7.5 percent) than the current rate:

	1% Decrease (5.5%)	Assumed Discount Rate (6.5%)	1% Increase (7.5%)
Total OPEB Liability	\$ 1,515,888	\$ 1,327,945	\$ 1,173,088
Fiduciary Net Position	(501,755)	(501,755)	(501,755)
Net OPEB Liability	\$ 1,014,133	\$ 826,190	\$ 671,333
% Change in Net OPEB Liability	22.7%		-18.7%

#### 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	\$ 1,153,327	\$ 1,327,945	\$ 1,541,891
Fiduciary Net Position	(501,755)	(501,755)	(501,755)
Net OPEB Liability	\$ 651,572	\$ 826,190	\$ 1,040,136
% Change in Net OPEB Liability	-21.1%		25.9%

## 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	\$ 43,887	\$ 42,220	\$ 35,957	\$ 32,400	\$ 34,205
Interest	100,794	94,694	92,123	88,150	86,694
Changes of benefit terms	-	-	-	(25,492)	-
Differences between expected and actual experience	(313,183)	-	(38,149)	-	(160,361)
Changes of assumptions	33,400	(3,705)	61,646	87,100	110,647
Benefit payments	(40,508)	(44,383)	(33,871)	(56,127)	(43,813)
<b>Net change in total OPEB liability</b>	<b>\$ (175,610)</b>	<b>\$ 88,826</b>	<b>\$ 117,706</b>	<b>\$ 126,031</b>	<b>\$ 27,372</b>
<b>Total OPEB liability—beginning</b>	<b>\$ 1,503,555</b>	<b>\$ 1,414,729</b>	<b>\$ 1,297,023</b>	<b>\$ 1,170,992</b>	<b>\$ 1,143,620</b>
<b>Total OPEB liability—ending (a)</b>	<b>\$ 1,327,945</b>	<b>\$ 1,503,555</b>	<b>\$ 1,414,729</b>	<b>\$ 1,297,023</b>	<b>\$ 1,170,992</b>
<b>Plan Fiduciary Net Position</b>					
Contributions—employer	\$ 128,758	\$ 71,633	\$ 84,371	\$ 101,627	\$ 91,563
Net investment income	47,916	(38,619)	83,386	9,133	8,562
Benefit payments	(40,508)	(44,383)	(33,871)	(56,127)	(43,813)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
<b>Net change in plan fiduciary net position</b>	<b>\$ 136,166</b>	<b>\$ (11,369)</b>	<b>\$ 133,886</b>	<b>\$ 54,633</b>	<b>\$ 56,312</b>
<b>Plan fiduciary net position—beginning</b>	<b>\$ 365,589</b>	<b>\$ 376,958</b>	<b>\$ 243,072</b>	<b>\$ 188,439</b>	<b>\$ 132,127</b>
<b>Plan fiduciary net position—ending (b)</b>	<b>\$ 501,755</b>	<b>\$ 365,589</b>	<b>\$ 376,958</b>	<b>\$ 243,072</b>	<b>\$ 188,439</b>
<b>Net OPEB liability—ending (a) – (b)</b>	<b>\$ 826,190</b>	<b>\$ 1,137,966</b>	<b>\$ 1,037,771</b>	<b>\$ 1,053,951</b>	<b>\$ 982,553</b>
Plan fiduciary net position as a percentage of the total OPEB liability	37.78%	24.31%	26.65%	18.74%	16.09%
Covered payroll	\$ 1,001,567	\$ 1,030,425	\$ 955,990	\$ 834,942	\$ 822,894
Net OPEB liability as a percentage of covered payroll	82.49%	110.44%	108.55%	126.23%	119.40%
<b>Discount Rate</b>	<b>6.50%</b>	<b>6.60%</b>	<b>6.60%</b>	<b>7.00%</b>	<b>7.50%</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	\$ 32,922	\$ 31,656			
Interest	80,969	75,858			
Changes of benefit terms	(1,288)	-			
Differences between expected and actual experience	-	-			
Changes of assumptions	-	-			
Benefit payments	(31,291)	(49,982)			
<b>Net change in total OPEB liability</b>	<b>\$ 81,312</b>	<b>\$ 57,532</b>			
<b>Total OPEB liability—beginning</b>	<b>\$ 1,062,308</b>	<b>\$ 1,004,776</b>			
<b>Total OPEB liability—ending (a)</b>	<b>\$ 1,143,620</b>	<b>\$ 1,062,308</b>			
<b>Plan Fiduciary Net Position</b>					
Contributions—employer	\$ 61,791	\$ 49,982			
Net investment income	5,336	4,075			
Benefit payments	(31,291)	(49,982)			
Administrative expenses	-	-			
Other	-	-			
<b>Net change in plan fiduciary net position</b>	<b>\$ 35,836</b>	<b>\$ 4,075</b>			
<b>Plan fiduciary net position—beginning</b>	<b>\$ 96,291</b>	<b>\$ 92,216</b>			
<b>Plan fiduciary net position—ending (b)</b>	<b>\$ 132,127</b>	<b>\$ 96,291</b>			
<b>Net OPEB liability—ending (a) – (b)</b>	<b>\$ 1,011,493</b>	<b>\$ 966,017</b>			
Plan fiduciary net position as a percentage of the total OPEB liability	11.55%	9.06%			
Covered payroll	\$ 864,194	\$ 796,151			
Net OPEB liability as a percentage of covered payroll	117.04%	121.34%			
<b>Discount Rate</b>	<b>7.50%</b>	<b>7.50%</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 6.6% as of June 30, 2022 to 6.5% 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

### 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	10.74%	-9.66%	30.25%	4.85%	6.27%	4.30%	4.42%			

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	\$ 365,589	12	1.00	\$ 404,854
Monthly net external cash flows:				
July	88,250	11	0.92	96,901
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				\$ 501,755
Money-weighted rate of return:				10.74%

## 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	\$ 106,837	\$ 99,772	\$ 96,906	\$ 92,675	\$ 96,319
Contributions in relation to the actuarially determined contribution	128,758	71,633	84,371	101,627	91,563
Contribution deficiency (excess)	\$ (21,921)	\$ 28,139	\$ 12,535	\$ (8,952)	\$ 4,756
Covered payroll	\$ 1,001,567	\$ 1,030,425	\$ 955,990	\$ 834,942	\$ 822,894
Contributions as a percentage of covered payroll	12.86%	6.95%	8.83%	12.17%	11.13%
Discount rate	6.60%	6.60%	7.00%	7.50%	7.50%
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	\$ 89,086	\$ 87,727			
Contributions in relation to the actuarially determined contribution	61,791	49,982			
Contribution deficiency (excess)	\$ 27,295	\$ 37,745			
Covered payroll	\$ 864,194	\$ 796,151			
Contributions as a percentage of covered payroll	7.15%	6.28%			
Discount rate	7.50%	6.80%			
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	-	160,361	(138,720)	-	21,641
2020	-	-	-	-	-
2021	-	38,149	(20,148)	-	18,001
2022	-	-	-	-	-
2023	-	313,183	(65,519)	-	247,664
Total				<u>\$ -</u>	<u>\$ 287,306</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	110,647	-	95,715	14,932	-
2020	87,100	-	60,276	26,824	-
2021	61,646	-	32,559	29,087	-
2022	-	3,705	(1,304)	-	2,401
2023	33,400	-	6,987	26,413	-
Total				<u>\$ 97,256</u>	<u>\$ 2,401</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	\$ 3,030	\$ -	\$ 3,030	\$ -	\$ -	
2019	1,672	-	1,672	-	-	
2020	5,000	-	4,000	1,000	-	
2021	-	64,033	(38,421)	-	25,612	
2022	64,989	-	25,996	38,993	-	
2023	-	18,462	(3,692)	-	14,770	
Subtotal				\$ 39,993	\$ 40,382	
Net				\$ -	\$ 389	

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	\$	(49,187)
2025	\$	(46,792)
2026	\$	(47,068)
2027	\$	(49,793)
2028	\$	-
Thereafter		-
<b>Deferred Outflows</b>	<b>\$</b>	<b>97,256</b>
<b>Deferred Inflows</b>	<b>\$</b>	<b>290,096</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	\$ 43,887
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	1,503,555
b. Service cost, beginning of year	43,887
c. Benefit payments	(40,508)
d. Interest on total OPEB liability = 6.6% times (a. + b. + .5 times c.)	100,794
3. Differences between expected and actual experience	(99,979)
4. Changes of benefit terms	-
5. Changes of assumptions	51,400
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	365,589
b. Contributions - Employer	128,758
c. Benefit payments	(40,508)
d. Administrative expenses and other	-
e. Total projected earnings	(29,454)
7. Differences between projected and actual earnings on OPEB plan investments	(2,166)
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense	\$ 64,482

## SECTION 5 - SUMMARY OF PLAN PROVISIONS

**Eligibility for Postemployment Benefits** Employees of the Commission and their dependents are eligible for postemployment medical and dental 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.

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

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

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

Non-Medicare Plans - July 1, 2023	Individual	Family
Blue 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

Medicare Plans - January 1, 2023	
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

**Participant Contributions** Retired employees contribute 25% of the health plan premium.

**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

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### 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

Life insurance coverage is not offered to retirees.

## 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>6.5%, compounded annually, for the measurement as of June 30, 2023.</p> <p>6.6%, 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>	6.6%, 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 - Not offered to retired employees.

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.

50% 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 Commission 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 Employees

#### Pre-Retirement Mortality

Pre-retirement mortality rates for General 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 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 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 employees are as follows:

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

#### Disability Rates

Disability rates for General employees are as follows:

General Employees	
Age	Rate
25	0.02%
30	0.03%
35	0.06%
40	0.10%
45	0.15%
50	0.19%
55	0.24%
60	0.28%

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

## SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

### General Employees

#### Retirement Rates

Retirement rates for General employees are as follows:

General Employees		
Age	Male	Female
45	0.00%	0.00%
50	1.00%	1.50%
55	2.00%	5.50%
60	12.00%	5.00%
62	30.00%	15.00%
65	40.00%	15.00%
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

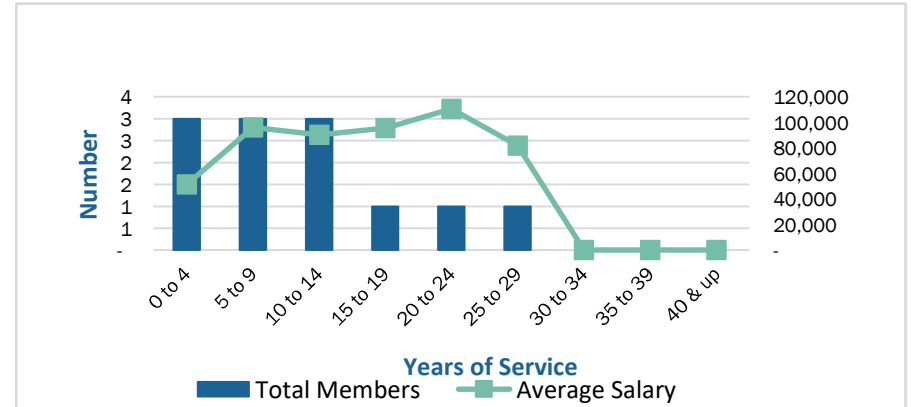
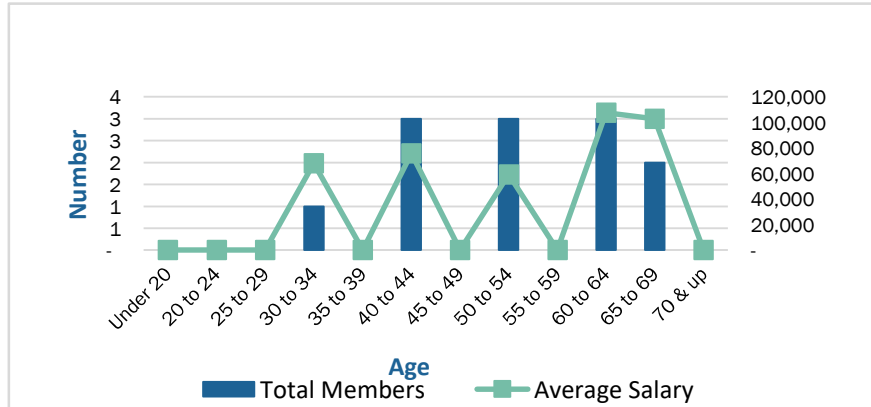
Age	Years of Service									Total	Total Salary	Average Salary
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up			
Under 20	-	-	-	-	-	-	-	-	-	-	-	-
20 to 24	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	-	-	-	-	-	-	-	-	-	-	-
30 to 34	-	1	-	-	-	-	-	-	-	1	67,979	67,979
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	1	1	1	-	-	-	-	-	-	3	227,494	75,831
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-
50 to 54	2	-	-	1	-	-	-	-	-	3	178,177	59,392
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-
60 to 64	-	1	1	-	-	1	-	-	-	3	322,507	107,502
65 to 69	-	-	1	-	1	-	-	-	-	2	205,409	102,705
70 & up	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>12</b>	<b>1,001,567</b>	<b>83,464</b>
<b>Total Salary</b>	<b>154,746</b>	<b>287,848</b>	<b>270,992</b>	<b>95,678</b>	<b>110,561</b>	<b>81,743</b>	<b>-</b>	<b>-</b>	<b>-</b>			
<b>Average Salary</b>	<b>51,582</b>	<b>95,949</b>	<b>90,331</b>	<b>95,678</b>	<b>110,561</b>	<b>81,743</b>	<b>-</b>	<b>-</b>	<b>-</b>			

Average Age:

53.4

Average Service:

10.5



## 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	0	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	2	0	2
70 to 74	0	0	0	0	0	2	0	2
75 to 79	0	0	0	0	0	2	0	2
80 to 84	0	0	0	0	0	0	0	0
85 to 89	0	0	0	0	0	0	0	0
90+	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	6	0	6
Covered Spouses	0	0	0	0	0	2	0	2

Average Age: 72.1

## 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.

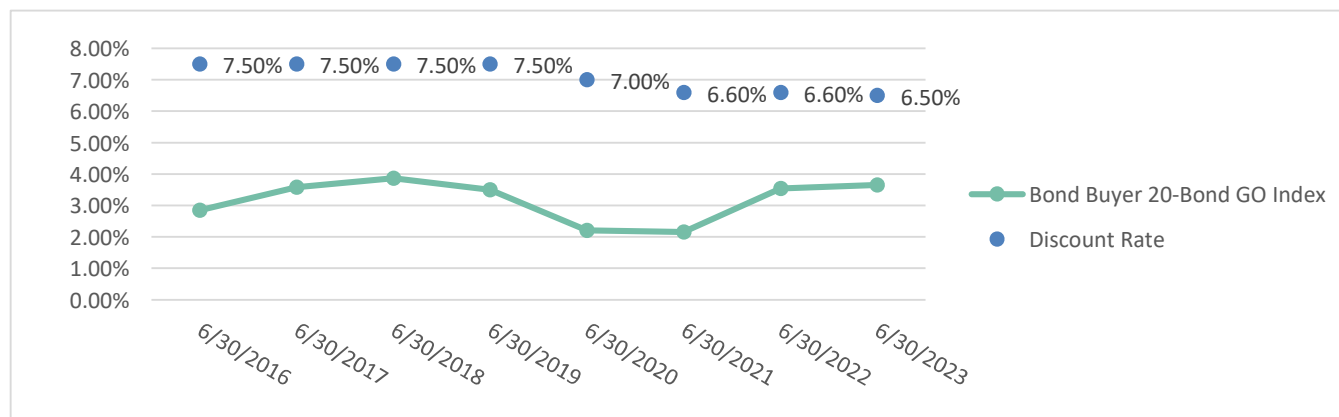
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. 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 6.5%, 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 available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 6.5%.

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



## APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 4.28%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2023	1,069,817	-	1,069,817	40,508	88,250	-	128,758
2024	912,023	195,238	1,107,261	49,946	65,500	8,348	107,098
2025	822,474	323,541	1,146,015	61,010	70,500	13,834	117,676
2026	740,927	445,199	1,186,126	50,821	75,500	19,037	107,284
2027	675,718	551,922	1,227,640	61,958	80,500	23,600	118,858
2028	566,643	703,964	1,270,607	74,109	85,500	30,101	129,508
2029	487,474	827,604	1,315,078	77,220	90,500	35,388	132,332
2030	444,892	916,214	1,361,106	83,980	95,500	39,177	140,303
2031	414,420	994,325	1,408,745	96,106	97,799	42,517	151,388
2032	347,314	1,110,737	1,458,051	98,123	97,799	47,495	148,427
2033	331,309	1,177,774	1,509,083	112,801	97,799	50,361	160,239
2034	311,125	1,250,776	1,561,901	121,451	97,799	53,483	165,767
2035	288,402	1,328,166	1,616,568	112,369	97,799	56,792	153,376
2036	270,745	1,402,403	1,673,148	121,776	97,799	59,966	159,609
2037	254,837	1,476,871	1,731,708	119,496	97,799	63,150	154,145
2038	239,166	1,553,152	1,792,318	127,542	97,799	66,412	158,929
2039	226,364	1,628,685	1,855,049	132,353	97,799	69,642	160,510
2040	206,997	1,712,979	1,919,976	138,055	97,799	73,246	162,608
2041	178,743	1,808,432	1,987,175	155,615	97,799	77,328	176,086
2042	155,358	1,901,368	2,056,726	173,398	97,799	81,302	189,895
2043	123,911	2,004,800	2,128,711	191,201	97,799	85,725	203,275
2044	103,230	2,099,986	2,203,216	200,618	97,799	89,795	208,622
2045	90,199	2,190,130	2,280,329	168,899	97,799	93,649	173,049
2046	74,103	2,286,038	2,360,141	163,072	97,799	97,750	163,121
2047	65,330	2,377,416	2,442,746	163,237	97,799	101,657	159,379
2048	60,372	2,467,870	2,528,242	135,949	97,799	105,525	128,223
2049	56,546	2,560,184	2,616,730	129,486	97,799	109,473	117,812
2050	47,928	2,660,388	2,708,316	130,551	97,799	113,757	114,593
2051	35,971	2,767,136	2,803,107	129,892	97,799	118,322	109,369
2052	30,484	2,870,732	2,901,216	128,535	97,799	122,751	103,583
2053	25,444	2,977,315	3,002,759	113,845	97,799	127,309	84,335
2054	22,014	3,085,842	3,107,856	109,615	97,799	131,950	75,464

## 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) * 4.28%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2055	17,913	3,198,718	3,216,631	109,851	97,799	136,776	70,874
2056	14,571	3,314,642	3,329,213	105,616	97,799	141,733	61,682
2057	11,101	3,434,634	3,445,735	101,727	97,799	146,864	52,662
2058	9,022	3,557,314	3,566,336	100,569	97,799	152,109	46,259
2059	-	3,691,158	3,691,158	96,670	97,799	157,833	36,636
2060	-	3,820,349	3,820,349	97,773	97,799	163,357	32,215
2061	-	3,954,061	3,954,061	94,716	97,799	169,074	23,441
2062	-	4,092,453	4,092,453	91,460	97,799	174,992	14,267
2063	-	4,235,689	4,235,689	90,931	97,799	181,117	7,613
2064	-	4,383,938	4,383,938	87,743	97,799	187,456	-
2065	-	4,537,376	4,537,376	87,859	97,799	194,017	-
2066	-	4,696,184	4,696,184	85,255	97,799	200,807	-
2067	-	4,860,550	4,860,550	81,973	97,799	207,835	-
2068	-	5,030,669	5,030,669	81,880	97,799	215,110	-
2069	-	5,206,742	5,206,742	78,727	97,799	222,638	-
2070	-	5,388,978	5,388,978	77,559	97,799	230,431	-
2071	-	5,577,592	5,577,592	73,957	97,799	238,496	-
2072	-	5,772,808	5,772,808	69,446	97,799	246,843	-
2073	-	5,974,856	5,974,856	67,499	97,799	255,483	-
2074	-	6,183,976	6,183,976	62,952	97,799	264,425	-
2075	-	6,400,415	6,400,415	59,393	97,799	273,680	-
2076	-	6,624,430	6,624,430	54,403	97,799	283,258	-
2077	-	6,856,285	6,856,285	49,061	97,799	293,172	-
2078	-	7,096,255	7,096,255	44,341	97,799	303,433	-
2079	-	7,344,624	7,344,624	39,134	97,799	314,054	-
2080	-	7,601,686	7,601,686	34,499	97,799	325,045	-
2081	-	7,867,745	7,867,745	29,866	97,799	336,422	-
2082	-	8,143,116	8,143,116	25,528	97,799	348,197	-
2083	-	8,428,125	8,428,125	21,179	97,799	360,384	-
2084	-	8,723,109	8,723,109	17,579	97,799	372,997	-
2085	-	9,028,418	9,028,418	14,379	97,799	386,052	-
2086	-	9,344,413	9,344,413	11,583	97,799	399,564	-

## 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) * 4.28%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2087	-	9,671,467	9,671,467	9,177	97,799	413,549	-
2088	-	10,009,968	10,009,968	7,142	97,799	428,023	-
2089	-	10,360,317	10,360,317	5,453	97,799	443,004	-
2090	-	10,722,928	10,722,928	4,080	97,799	458,509	-
2091	-	11,098,230	11,098,230	2,987	97,799	474,556	-
2092	-	11,486,668	11,486,668	2,138	97,799	491,166	-
2093	-	11,888,701	11,888,701	1,494	97,799	508,357	-
2094	-	12,304,806	12,304,806	1,017	97,799	526,149	-
2095	-	12,735,474	12,735,474	673	97,799	544,564	-
2096	-	13,181,216	13,181,216	433	97,799	563,624	-
2097	-	13,642,559	13,642,559	271	97,799	583,351	-
2098	-	14,120,049	14,120,049	164	97,799	603,768	-
2099	-	14,614,251	14,614,251	96	97,799	624,900	-
2100	-	15,125,750	15,125,750	55	97,799	646,772	-
2101	-	15,655,151	15,655,151	30	97,799	669,409	-
2102	-	16,203,081	16,203,081	16	97,799	692,838	-
2103	-	16,770,189	16,770,189	9	97,799	717,087	-
2104	-	17,357,146	17,357,146	4	97,799	742,185	-
2105	-	17,964,646	17,964,646	2	97,799	768,162	-
2106	-	18,593,409	18,593,409	1	97,799	795,048	-
2107	-	19,244,178	19,244,178	1	97,799	822,874	-
2108	-	19,917,724	19,917,724	-	97,799	851,675	-

## 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	365,589	128,758	40,508	-	47,916	501,755
2024	501,755	107,098	49,946	-	34,472	593,379
2025	593,379	117,676	61,010	-	40,411	690,456
2026	690,456	107,284	50,821	-	46,715	793,634
2027	793,634	118,858	61,958	-	53,435	903,969
2028	903,969	129,508	74,109	-	60,558	1,019,926
2029	1,019,926	132,332	77,220	-	68,086	1,143,124
2030	1,143,124	140,303	83,980	-	76,134	1,275,581
2031	1,275,581	151,388	96,106	-	84,709	1,415,572
2032	1,415,572	148,427	98,123	-	93,647	1,559,523
2033	1,559,523	160,239	112,801	-	102,911	1,709,872
2034	1,709,872	165,767	121,451	-	112,582	1,866,770
2035	1,866,770	153,376	112,369	-	122,673	2,030,450
2036	2,030,450	159,609	121,776	-	133,209	2,201,492
2037	2,201,492	154,145	119,496	-	144,223	2,380,364
2038	2,380,364	158,929	127,542	-	155,744	2,567,495
2039	2,567,495	160,510	132,353	-	167,802	2,763,454
2040	2,763,454	162,608	138,055	-	180,422	2,968,429
2041	2,968,429	176,086	155,615	-	193,613	3,182,513
2042	3,182,513	189,895	173,398	-	207,399	3,406,409
2043	3,406,409	203,275	191,201	-	221,809	3,640,292
2044	3,640,292	208,622	200,618	-	236,879	3,885,175
2045	3,885,175	173,049	168,899	-	252,671	4,141,996
2046	4,141,996	163,121	163,072	-	269,231	4,411,276
2047	4,411,276	159,379	163,237	-	286,608	4,694,026
2048	4,694,026	128,223	135,949	-	304,861	4,991,161
2049	4,991,161	117,812	129,486	-	324,046	5,303,533
2050	5,303,533	114,593	130,551	-	344,211	5,631,786
2051	5,631,786	109,369	129,892	-	365,399	5,976,662
2052	5,976,662	103,583	128,535	-	387,672	6,339,382
2053	6,339,382	84,335	113,845	-	411,101	6,720,973
2054	6,720,973	75,464	109,615	-	435,753	7,122,575
2055	7,122,575	70,874	109,851	-	461,701	7,545,299
2056	7,545,299	61,682	105,616	-	489,017	7,990,382

## 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	7,990,382	52,662	101,727	-	517,780	8,459,097
2058	8,459,097	46,259	100,569	-	548,076	8,952,863
2059	8,952,863	36,636	96,670	-	579,985	9,472,814
2060	9,472,814	32,215	97,773	-	613,602	10,020,858
2061	10,020,858	23,441	94,716	-	649,039	10,598,622
2062	10,598,622	14,267	91,460	-	686,402	11,207,831
2063	11,207,831	7,613	90,931	-	725,801	11,850,314
2064	11,850,314	-	87,743	-	767,419	12,529,990
2065	12,529,990	-	87,859	-	811,594	13,253,725
2066	13,253,725	-	85,255	-	858,721	14,027,191
2067	14,027,191	-	81,973	-	909,103	14,854,321
2068	14,854,321	-	81,880	-	962,870	15,735,311
2069	15,735,311	-	78,727	-	1,020,237	16,676,821
2070	16,676,821	-	77,559	-	1,081,473	17,680,735
2071	17,680,735	-	73,957	-	1,146,844	18,753,622
2072	18,753,622	-	69,446	-	1,216,728	19,900,904
2073	19,900,904	-	67,499	-	1,291,365	21,124,770
2074	21,124,770	-	62,952	-	1,371,064	22,432,882
2075	22,432,882	-	59,393	-	1,456,207	23,829,696
2076	23,829,696	-	54,403	-	1,547,162	25,322,455
2077	25,322,455	-	49,061	-	1,644,365	26,917,759
2078	26,917,759	-	44,341	-	1,748,213	28,621,631
2079	28,621,631	-	39,134	-	1,859,134	30,441,631
2080	30,441,631	-	34,499	-	1,977,585	32,384,717
2081	32,384,717	-	29,866	-	2,104,036	34,458,887
2082	34,458,887	-	25,528	-	2,238,998	36,672,357
2083	36,672,357	-	21,179	-	2,383,015	39,034,193
2084	39,034,193	-	17,579	-	2,536,651	41,553,265
2085	41,553,265	-	14,379	-	2,700,495	44,239,381
2086	44,239,381	-	11,583	-	2,875,183	47,102,981
2087	47,102,981	-	9,177	-	3,061,396	50,155,200
2088	50,155,200	-	7,142	-	3,259,856	53,407,914
2089	53,407,914	-	5,453	-	3,471,337	56,873,798
2090	56,873,798	-	4,080	-	3,696,664	60,566,382

## 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	60,566,382	-	2,987	-	3,936,718	64,500,113
2092	64,500,113	-	2,138	-	4,192,438	68,690,413
2093	68,690,413	-	1,494	-	4,464,828	73,153,747
2094	73,153,747	-	1,017	-	4,754,961	77,907,691
2095	77,907,691	-	673	-	5,063,978	82,970,996
2096	82,970,996	-	433	-	5,393,101	88,363,664
2097	88,363,664	-	271	-	5,743,629	94,107,022
2098	94,107,022	-	164	-	6,116,951	100,223,809
2099	100,223,809	-	96	-	6,514,544	106,738,257
2100	106,738,257	-	55	-	6,937,985	113,676,187
2101	113,676,187	-	30	-	7,388,951	121,065,108
2102	121,065,108	-	16	-	7,869,232	128,934,324
2103	128,934,324	-	9	-	8,380,731	137,315,046
2104	137,315,046	-	4	-	8,925,478	146,240,520
2105	146,240,520	-	2	-	9,505,634	155,746,152
2106	155,746,152	-	1	-	10,123,500	165,869,651
2107	165,869,651	-	1	-	10,781,527	176,651,177
2108	176,651,177	-	-	-	11,482,327	188,133,504

## 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) = 6.5%
2024	501,755	49,946	49,946	-	48,398	-	48,398
2025	593,379	61,010	61,010	-	55,511	-	55,511
2026	690,456	50,821	50,821	-	43,418	-	43,418
2027	793,634	61,958	61,958	-	49,702	-	49,702
2028	903,969	74,109	74,109	-	55,821	-	55,821
2029	1,019,926	77,220	77,220	-	54,614	-	54,614
2030	1,143,124	83,980	83,980	-	55,770	-	55,770
2031	1,275,581	96,106	96,106	-	59,928	-	59,928
2032	1,415,572	98,123	98,123	-	57,451	-	57,451
2033	1,559,523	112,801	112,801	-	62,014	-	62,014
2034	1,709,872	121,451	121,451	-	62,695	-	62,695
2035	1,866,770	112,369	112,369	-	54,466	-	54,466
2036	2,030,450	121,776	121,776	-	55,423	-	55,423
2037	2,201,492	119,496	119,496	-	51,066	-	51,066
2038	2,380,364	127,542	127,542	-	51,178	-	51,178
2039	2,567,495	132,353	132,353	-	49,867	-	49,867
2040	2,763,454	138,055	138,055	-	48,841	-	48,841
2041	2,968,429	155,615	155,615	-	51,693	-	51,693
2042	3,182,513	173,398	173,398	-	54,085	-	54,085
2043	3,406,409	191,201	191,201	-	55,998	-	55,998
2044	3,640,292	200,618	200,618	-	55,170	-	55,170
2045	3,885,175	168,899	168,899	-	43,612	-	43,612
2046	4,141,996	163,072	163,072	-	39,538	-	39,538
2047	4,411,276	163,237	163,237	-	37,162	-	37,162
2048	4,694,026	135,949	135,949	-	29,061	-	29,061
2049	4,991,161	129,486	129,486	-	25,990	-	25,990
2050	5,303,533	130,551	130,551	-	24,605	-	24,605
2051	5,631,786	129,892	129,892	-	22,986	-	22,986
2052	5,976,662	128,535	128,535	-	21,358	-	21,358
2053	6,339,382	113,845	113,845	-	17,762	-	17,762
2054	6,720,973	109,615	109,615	-	16,059	-	16,059
2055	7,122,575	109,851	109,851	-	15,111	-	15,111



## 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) = 6.5%
2056	7,545,299	105,616	105,616	-	13,642	-	13,642
2057	7,990,382	101,727	101,727	-	12,337	-	12,337
2058	8,459,097	100,569	100,569	-	11,453	-	11,453
2059	8,952,863	96,670	96,670	-	10,337	-	10,337
2060	9,472,814	97,773	97,773	-	9,817	-	9,817
2061	10,020,858	94,716	94,716	-	8,929	-	8,929
2062	10,598,622	91,460	91,460	-	8,096	-	8,096
2063	11,207,831	90,931	90,931	-	7,558	-	7,558
2064	11,850,314	87,743	87,743	-	6,848	-	6,848
2065	12,529,990	87,859	87,859	-	6,438	-	6,438
2066	13,253,725	85,255	85,255	-	5,866	-	5,866
2067	14,027,191	81,973	81,973	-	5,296	-	5,296
2068	14,854,321	81,880	81,880	-	4,967	-	4,967
2069	15,735,311	78,727	78,727	-	4,485	-	4,485
2070	16,676,821	77,559	77,559	-	4,148	-	4,148
2071	17,680,735	73,957	73,957	-	3,714	-	3,714
2072	18,753,622	69,446	69,446	-	3,275	-	3,275
2073	19,900,904	67,499	67,499	-	2,989	-	2,989
2074	21,124,770	62,952	62,952	-	2,617	-	2,617
2075	22,432,882	59,393	59,393	-	2,319	-	2,319
2076	23,829,696	54,403	54,403	-	1,994	-	1,994
2077	25,322,455	49,061	49,061	-	1,689	-	1,689
2078	26,917,759	44,341	44,341	-	1,433	-	1,433
2079	28,621,631	39,134	39,134	-	1,188	-	1,188
2080	30,441,631	34,499	34,499	-	983	-	983
2081	32,384,717	29,866	29,866	-	799	-	799
2082	34,458,887	25,528	25,528	-	641	-	641
2083	36,672,357	21,179	21,179	-	500	-	500
2084	39,034,193	17,579	17,579	-	389	-	389
2085	41,553,265	14,379	14,379	-	299	-	299
2086	44,239,381	11,583	11,583	-	226	-	226
2087	47,102,981	9,177	9,177	-	168	-	168

## 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) = 6.5%
2088	50,155,200	7,142	7,142	-	123	-	123
2089	53,407,914	5,453	5,453	-	88	-	88
2090	56,873,798	4,080	4,080	-	62	-	62
2091	60,566,382	2,987	2,987	-	43	-	43
2092	64,500,113	2,138	2,138	-	29	-	29
2093	68,690,413	1,494	1,494	-	19	-	19
2094	73,153,747	1,017	1,017	-	12	-	12
2095	77,907,691	673	673	-	7	-	7
2096	82,970,996	433	433	-	5	-	5
2097	88,363,664	271	271	-	3	-	3
2098	94,107,022	164	164	-	2	-	2
2099	100,223,809	96	96	-	1	-	1
2100	106,738,257	55	55	-	-	-	-
2101	113,676,187	30	30	-	-	-	-
2102	121,065,108	16	16	-	-	-	-
2103	128,934,324	9	9	-	-	-	-
2104	137,315,046	4	4	-	-	-	-
2105	146,240,520	2	2	-	-	-	-
2106	155,746,152	1	1	-	-	-	-
2107	165,869,651	1	1	-	-	-	-
2108	176,651,177	-	-	-	-	-	-

## 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	-	4.82	-	-	-	-	-	-	-	-	-	-
2019	(160,361)	5.78	(27,744)	(21,641)	-	-	-	-	-	-	-	-
2020	-	5.78	-	-	-	-	-	-	-	-	-	-
2021	(38,149)	5.68	(6,716)	(6,716)	(6,716)	(4,569)	-	-	-	-	-	-
2022	-	5.68	-	-	-	-	-	-	-	-	-	-
2023	(313,183)	4.78	(65,519)	(65,519)	(65,519)	(65,519)	(51,107)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(99,979)	(93,876)	(72,235)	(70,088)	(51,107)	-	-	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	-	4.82	-	-	-	-	-	-	-	-	-	-
2019	110,647	5.78	19,143	14,932	-	-	-	-	-	-	-	-
2020	87,100	5.78	15,069	15,069	11,755	-	-	-	-	-	-	-
2021	61,646	5.68	10,853	10,853	10,853	7,381	-	-	-	-	-	-
2022	(3,705)	5.68	(652)	(652)	(652)	(652)	(445)	-	-	-	-	-
2023	33,400	4.78	6,987	6,987	6,987	6,987	5,452	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			51,400	47,189	28,943	13,716	5,007	-	-	-	-	-

## 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	3,030	5	-	-	-	-	-	-	-	-	-	-
2019	1,672	5	335	-	-	-	-	-	-	-	-	-
2020	5,000	5	1,000	1,000	-	-	-	-	-	-	-	-
2021	(64,033)	5	(12,807)	(12,806)	(12,806)	-	-	-	-	-	-	-
2022	64,989	5	12,998	12,998	12,998	12,997	-	-	-	-	-	-
2023	(18,462)	5	(3,692)	(3,692)	(3,692)	(3,693)	(3,693)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(2,166)	(2,500)	(3,500)	9,304	(3,693)	-	-	-	-	-