



**COUNTY OF DUKES COUNTY**  
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, 2022**

KMS Actuarial, LLC  
52 Hunt Road  
Kingston, NH 03848

November, 2022  
REVISED





November 9, 2022

Mr. Tim McLean  
Treasurer  
County of Dukes County  
9 Airport Road, Suite 2  
Vineyard Haven, MA 02568

Dear Tim:

We are pleased to present the enclosed revised report of the July 1, 2020 actuarial valuation of the retiree health care benefits for the County of Dukes County, a Participant in the Dukes County Pooled OPEB Trust, which was revised to reflect the corrected value of the real estate Trust investment as of June 30, 2022. The valuation was prepared in accordance with and for the purpose of financial reporting and disclosures as of June 30, 2022 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, 2020 and rolled forward to the plan's measurement date of June 30, 2022.

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 County of Dukes County as well as health plan rates provided by the Trustees of the Dukes County Pooled OPEB Trust as of July 1, 2021. Although we did not audit the data used in the valuation and disclosure calculations, we believe that the information is complete and reliable.

Liabilities presented in this report are based on a discount rate of 3.78%, 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 3.54% is based on the Bond Buyer 20-Bond GO Index published on June 30, 2022. The long-term expected rate of return is 6.6%. 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.

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 report is intended for the sole use of the County of Dukes County and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

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. The undersigned credentialed actuaries 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.

KMS Actuaries is completely independent of the County of Dukes County 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 County of Dukes County, other than as consulting actuary for this assignment, that would impair our independence.

Respectfully submitted,



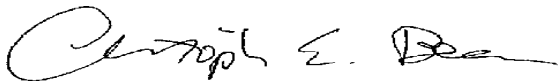
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# EXECUTIVE SUMMARY

## Purpose of Report

This report presents the results of the actuarial valuation of the County of Dukes County's retiree health care benefits as of July 1, 2020. The valuation was prepared in accordance with and for the purpose of financial reporting and disclosures as of June 30, 2022 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 County of Dukes County. 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 County of Dukes County.

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

### County of Dukes County Other Postemployment Benefits Program

The County of Dukes County 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 County 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 County and retirees.

### Summary of Principal Results

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

Disclosure Date	June 30, 2022	June 30, 2021	% Change
<b>Valuation Date</b>	<b>July 1, 2020</b>	<b>July 1, 2020</b>	
<b>Membership Data</b>			
Active Plan Members	35	36	(2.8%)
Inactive Plan Members (excludes covered spouses)	22	25	(12.0%)
Total Plan Members	57	61	(6.6%)
Covered Spouses	10	9	11.1%
Covered Payroll	\$2,678,231	\$2,704,362	(1.0%)
<b>Net OPEB Liability</b>			
Discount Rate	3.78%	2.27%	
Total OPEB Liability (TOL)	\$9,743,291	\$11,910,850	(18.2%)
Fiduciary Net Position (FNP)	\$1,523,965	\$1,681,323	(9.4%)
Net OPEB Liability	\$8,219,326	\$10,229,527	(19.7%)
FNP as % of TOL	15.6%	14.1%	
<b>OPEB Expense</b>			
OPEB Expense	\$1,194,893	\$1,651,623	(27.7%)
Deferred Outflows	\$2,692,976	\$3,596,597	
Deferred Inflows	\$3,349,382	\$1,367,139	
Recognition Period	6.35	6.35	

# 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, there is no experience gain or loss as the Total OPEB liability was developed from a roll forward of results of the most recent valuation.

## Changes of Assumptions

The discount rate changed from 2.27% as of June 30, 2021 to 3.78% as of June 30, 2022. In addition, the inflation rate was updated in this valuation. 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	(67,000)
◆ Decrease due to change in Discount Rate	(2,778,000)
Total	\$ (2,845,000)

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, 2022, is \$9,743,291. The Total OPEB Liability as of the prior measurement date, June 30, 2021, was \$11,910,850. During the current measurement period ending June 30, 2022, the Total OPEB Liability decreased by \$2,167,559, or -18.2%. 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, 2022, is \$1,523,965. The Fiduciary Net Position as of the prior measurement date, June 30, 2021, was \$1,681,323. During the plan years ended June 30, 2022 and June 30, 2021, the actual rates of return were -9.71% and 30.26%, respectively. The expected long-term rate of return is 6.60%. The Fiduciary Net Position is shown in Section 1, Exhibit 1.1.

## Employer Future Period Contributions

The County will seek to make a minimum contribution of \$59,000 annually. As the COVID economic recovery continues, there is a possibility that the County may make additional contributions to OPEB.

## EXECUTIVE SUMMARY

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### Discount Rate

As of the June 30, 2022 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 12 periods of projected future benefit payments and the 3.54% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 3.78%.

### OPEB Expense

The OPEB Expense for the current measurement period ending June 30, 2022, is \$1,194,893. Benefit changes are recognized immediately, and experience gains and losses and assumption changes developed in this valuation are recognized over 6.35 years. Investment gains and losses are recognized over 5 years. The OPEB Expense for the prior measurement period was \$1,651,623. 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 do not reflect the potential impacts of the COVID-19 pandemic on the OPEB program. Especially in the short range, the pandemic is likely to materially affect 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, employer contributions to the trust 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	2022	2021
<b>Trust Fund Composition at Fiscal Year-End</b>		
Fixed Income	\$307,729	\$343,864
Cash & Equivalents	1,288	6,633
Large Cap Equity	501,674	598,968
Mid Cap Equity	137,519	168,862
Small Cap Equity	135,624	167,439
International Equity	204,669	246,974
Real Estate	235,462	148,583
Total Market Value of Assets	\$1,523,965	\$1,681,323
<b>Asset Activity</b>		
Market value, beginning of year	\$1,681,323	\$1,222,654
Employer Premiums	313,230	283,395
OPEB Trust Contributions	6,000	84,871
Benefit Payments	(313,230)	(283,395)
Administrative Expenses	-	-
Investment Return	(163,358)	373,798
Market value, end of year	\$1,523,965	\$1,681,323
<b>Money-Weighted Rate of Return</b>	-9.71%	30.26%
<b>(Gain) / Loss on OPEB Plan Investments</b>		
Projected earnings	\$111,010	\$86,513
Actual earnings	(163,358)	373,798
(Gain) / Loss on OPEB plan investments	\$274,368	(\$287,285)

## 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, 2022 measurement date was developed from an actuarial valuation as of July 1, 2020 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, 2021 to the end of the measurement period, June 30, 2022 is shown below:

Measurement Date	June 30, 2022
<b>1. Total OPEB Liability, beginning of year:</b>	
a. Actives	\$5,160,310
b. Retirees, Covered Spouses and Survivors	6,750,540
c. Total OPEB Liability at 2.27% (a. + b.)	\$11,910,850
<b>2. Service Cost</b>	<b>\$708,275</b>
<b>3. Expected Benefit Payments</b>	
a. Current retirees	(\$285,668)
b. Future retirees	(27,562)
c. Total (a. + b.)	(\$313,230)
<b>4. Interest [2.27% x (1.c. + 2. + .5 x 3.c)]</b>	<b>\$282,899</b>
<b>5. Changes of benefit terms</b>	<b>\$0</b>
<b>6. Differences between expected and actual experience</b>	<b>\$0</b>
<b>7. Changes of assumptions or other inputs</b>	<b>(\$2,845,503)</b>
<b>8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)</b>	
a. Actives	\$4,316,685
b. Retirees, Covered Spouses and Survivors	5,426,606
c. Total OPEB Liability at 3.78% (a. + b.)	\$9,743,291

## SECTION 1 - PRINCIPAL VALUATION RESULTS

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

The County will seek to make a minimum contribution of \$59,000 annually. As the COVID economic recovery continues, there is a possibility that the County may make additional contributions to OPEB.

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, 2022	June 30, 2023
<b>Discount Rate</b>	<b>2.27%</b>	<b>3.78%</b>
<b>1. Normal Cost</b>	<b>\$708,275</b>	<b>\$486,214</b>
<b>2. Unfunded Actuarial Accrued Liability</b>		
a. Actuarial Accrued Liability	\$11,910,850	\$9,743,291
b. Actuarial Value of Plan Assets	\$1,681,323	\$1,523,965
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$10,229,527	\$8,219,326
<b>3. Amortization of Unfunded Actuarial Accrued Liability</b>		
a. Unfunded Actuarial Accrued Liability	\$10,229,527	\$8,219,326
b. Amortization Period in years	30	30
c. Payroll Growth Rate	3.5%	3.5%
d. Amortization Factor	35.87	28.86
e. Amortization Amount (3.a. / 3.d.)	\$285,183	\$284,800
<b>4. Interest on 1. and 3.e.</b>	<b>\$22,551</b>	<b>\$29,144</b>
<b>5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)</b>	<b>\$1,016,009</b>	<b>\$800,158</b>
<b>6. Actual Employer Contribution to OPEB Trust</b>	<b>\$6,000</b>	<b>TBD</b>
<b>7. Expected Benefit Payments</b>	<b>\$313,230</b>	
<b>8. Total Contribution (6. + 7.)</b>	<b>\$319,230</b>	

## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.1 - Plan Description

#### Plan Administration

The County of Dukes County 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, 2022, OPEB plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments <sup>1</sup>	22
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	35
	<hr/>
	57
	<hr/>

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

#### Benefits Provided

The County 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 County and retirees.

#### Employer Future Period Contributions

The County will seek to make a minimum contribution of \$59,000 annually. As the COVID economic recovery continues, there is a possibility that the County may make additional contributions to OPEB.

## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.2 - Net OPEB Liability

The components of the net OPEB liability at June 30, 2022, were as follows:

Total OPEB liability	\$ 9,743,291
Fiduciary net position	(1,523,965)
Net OPEB liability	\$ 8,219,326

Fiduciary net position as a percentage of the total OPEB liability 15.64%

#### Actuarial Assumptions

The total OPEB liability was determined by an actuarial valuation as of July 1, 2020, rolled forward to the measurement date and using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.4% per year, based on current economic data, analyses from economists and other experts, and professional judgment.
Discount rate	3.78 percent, net of investment expenses, including inflation.
Healthcare cost trend rate	7 percent for 2020, decreasing 0.4 percent per year to 5.4 percent, then grading down to an ultimate trend rate of 4 percent, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical inflation rate is reached in 2075.
Pre-Retirement Mortality	RP-2014 Blue Collar Mortality Table, projected with generational mortality improvement using scale MP-2018.
Healthy Retiree Mortality	RP-2014 Blue Collar Mortality Table, projected with generational mortality improvement using scale MP-2018.
Disabled Retiree Mortality	RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2018.

## 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, 2022 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%	5.08%
Mid Cap Equity	10%	5.06%
Small Cap Equity	10%	4.89%
International Equity	15%	6.09%
Real Estate	10%	2.65%
Fixed Income	20%	1.36%
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 3.78%. The projection of cash flows used to determine the discount rate assumed that contributions from the County 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 12 periods of projected future benefit payments and the 3.54% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability.

## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.2 - Net OPEB Liability

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

The following presents the net OPEB liability calculated using the current discount rate of 3.78 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (2.78 percent) or 1-percentage point higher (4.78 percent) than the current rate:

	<b>1% Decrease (2.78%)</b>	<b>Assumed Discount Rate (3.78%)</b>	<b>1% Increase (4.78%)</b>
Total OPEB Liability	\$ 11,462,993	\$ 9,743,291	\$ 8,391,009
Fiduciary Net Position	(1,523,965)	(1,523,965)	(1,523,965)
Net OPEB Liability	\$ 9,939,028	\$ 8,219,326	\$ 6,867,044
% Change in Net OPEB Liability	20.9%		-16.5%

#### 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 (6% year 1 decreasing to 3%) or 1-percentage point higher (8% year 1 decreasing to 5%) than the current healthcare cost trend rates:

	<b>1% Decrease 6% Year 1 Decreasing to 3%</b>	<b>Assumed Healthcare Cost Trend Rates 7% Year 1 Decreasing to 4%</b>	<b>1% Increase 8% Year 1 Decreasing to 5%</b>
Total OPEB Liability	\$ 8,134,997	\$ 9,743,291	\$ 11,845,443
Fiduciary Net Position	(1,523,965)	(1,523,965)	(1,523,965)
Net OPEB Liability	\$ 6,611,032	\$ 8,219,326	\$ 10,321,478
% Change in Net OPEB Liability	-19.6%		25.6%

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Fiscal Year Ended June 30	2022	2021	2020	2019	2018
<b>Total OPEB Liability</b>					
Service cost	\$ 708,275	\$ 741,178	\$ 507,923	\$ 330,289	\$ 301,243
Interest	282,899	288,993	364,938	328,781	313,794
Changes of benefit terms	-	-	(337,801)	-	(8,833)
Differences between expected and actual experience	-	(1,389,686)	-	349,306	-
Changes of assumptions	(2,845,503)	365,951	2,733,808	2,331,407	190,641
Benefit payments	(313,230)	(283,395)	(303,108)	(318,349)	(255,164)
<b>Net change in total OPEB liability</b>	<b>\$ (2,167,559)</b>	<b>\$ (276,959)</b>	<b>\$ 2,965,760</b>	<b>\$ 3,021,434</b>	<b>\$ 541,681</b>
<b>Total OPEB liability—beginning</b>	<b>\$ 11,910,850</b>	<b>\$ 12,187,809</b>	<b>\$ 9,222,049</b>	<b>\$ 6,200,615</b>	<b>\$ 5,658,934</b>
<b>Total OPEB liability—ending (a)</b>	<b>\$ 9,743,291</b>	<b>\$ 11,910,850</b>	<b>\$ 12,187,809</b>	<b>\$ 9,222,049</b>	<b>\$ 6,200,615</b>
<b>Plan Fiduciary Net Position</b>					
Contributions—employer	\$ 319,230	\$ 368,266	\$ 401,948	\$ 533,300	\$ 375,164
Net investment income	(163,358)	373,798	48,997	44,971	33,657
Benefit payments	(313,230)	(283,395)	(303,108)	(318,349)	(255,164)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
<b>Net change in plan fiduciary net position</b>	<b>\$ (157,358)</b>	<b>\$ 458,669</b>	<b>\$ 147,837</b>	<b>\$ 259,922</b>	<b>\$ 153,657</b>
<b>Plan fiduciary net position—beginning</b>	<b>\$ 1,681,323</b>	<b>\$ 1,222,654</b>	<b>\$ 1,074,817</b>	<b>\$ 814,895</b>	<b>\$ 661,238</b>
<b>Plan fiduciary net position—ending (b)</b>	<b>\$ 1,523,965</b>	<b>\$ 1,681,323</b>	<b>\$ 1,222,654</b>	<b>\$ 1,074,817</b>	<b>\$ 814,895</b>
<b>Net OPEB liability—ending (a) – (b)</b>	<b>\$ 8,219,326</b>	<b>\$ 10,229,527</b>	<b>\$ 10,965,155</b>	<b>\$ 8,147,232</b>	<b>\$ 5,385,720</b>
Plan fiduciary net position as a percentage of the total OPEB liability	15.64%	14.12%	10.03%	11.65%	13.14%
Covered payroll	\$ 2,678,231	\$ 2,704,362	\$ 2,808,207	\$ 2,658,800	\$ 2,395,994
Net OPEB liability as a percentage of covered payroll	306.89%	378.26%	390.47%	306.43%	224.78%
<b>Discount Rate</b>	<b>3.78%</b>	<b>2.27%</b>	<b>2.26%</b>	<b>3.81%</b>	<b>5.16%</b>

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Fiscal Year Ended June 30	2017				
		<b>Total OPEB Liability</b>			
Service cost	\$ 342,568				
Interest	285,191				
Changes of benefit terms	-				
Differences between expected and actual experience	-				
Changes of assumptions	(576,049)				
Benefit payments	(236,184)				
<b>Net change in total OPEB liability</b>	<b>\$ (184,474)</b>				
<b>Total OPEB liability—beginning</b>	<b>\$ 5,843,408</b>				
<b>Total OPEB liability—ending (a)</b>	<b>\$ 5,658,934</b>				
		<b>Plan Fiduciary Net Position</b>			
Contributions—employer	\$ 386,184				
Net investment income	25,782				
Benefit payments	(236,184)				
Administrative expenses	-				
Other	-				
<b>Net change in plan fiduciary net position</b>	<b>\$ 175,782</b>				
<b>Plan fiduciary net position—beginning</b>	<b>\$ 485,456</b>				
<b>Plan fiduciary net position—ending (b)</b>	<b>\$ 661,238</b>				
<b>Net OPEB liability—ending (a) – (b)</b>	<b>\$ 4,997,696</b>				
Plan fiduciary net position as a percentage of the total OPEB liability	11.68%				
Covered payroll	\$ 2,162,273				
Net OPEB liability as a percentage of covered payroll	231.13%				
<b>Discount Rate</b>	<b>5.38%</b>				

Note: Only 6 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

#### 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 2.27% as of June 30, 2021 to 3.78% as of June 30, 2022. In addition, the inflation rate was updated in this valuation.

**SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION**

**Exhibit 3.2 - Investment Returns**

Fiscal Year Ended June 30	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Annual money-weighted rate of return, net of investment expenses	-9.71%	30.26%	4.56%	4.74%	4.42%	4.14%				

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 6 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, 2021	\$ 1,681,323	12	1.00	\$ 1,518,033
Monthly net external cash flows:				
July	-	11	0.92	-
August	-	10	0.83	-
September	-	9	0.75	-
October	-	8	0.67	-
November	-	7	0.58	-
December	-	6	0.50	-
January	-	5	0.42	-
February	-	4	0.33	-
March	-	3	0.25	-
April	4,000	2	0.17	3,932
May	-	1	0.08	-
June	2,000	0	0.00	2,000
Ending value - June 30, 2022				\$ 1,523,965
Money-weighted rate of return:				-9.71%

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

### Exhibit 3.3 - Schedule of Employer Contributions

Fiscal Year Ended June 30	2022	2021	2020	2019	2018
Actuarially determined contribution	\$ 1,016,009	\$ 1,070,094	\$ 821,556	\$ 582,825	\$ 528,620
Contributions in relation to the actuarially determined contribution	<u>319,230</u>	<u>368,266</u>	<u>401,948</u>	<u>533,300</u>	<u>375,164</u>
Contribution deficiency (excess)	<u>\$ 696,779</u>	<u>\$ 701,828</u>	<u>\$ 419,608</u>	<u>\$ 49,525</u>	<u>\$ 153,456</u>
Covered payroll	\$ 2,678,231	\$ 2,704,362	\$ 2,808,207	\$ 2,658,800	\$ 2,395,994
Contributions as a percentage of covered payroll	11.92%	13.62%	14.31%	20.06%	15.66%
Discount rate	2.27%	2.26%	3.81%	5.16%	5.38%
Inflation	2.40%	2.20%	2.40%	2.60%	3.00%

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

### Exhibit 3.3 - Schedule of Employer Contributions

Fiscal Year Ended June 30

2017

Actuarially determined contribution	\$ 379,403				
Contributions in relation to the actuarially determined contribution	386,184				
Contribution deficiency (excess)	\$ (6,781)				
Covered payroll	\$ 2,162,273				
Contributions as a percentage of covered payroll	17.86%				
Discount rate	7.50%				
Inflation	3.00%				

Note: Only 6 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	7 percent for 2020, decreasing 0.4 percent per year to 5.4 percent, then grading down to an ultimate trend rate of 4 percent, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical inflation 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, 2022	
	Experience Losses	Experience Gains	Amounts Recognized in OPEB Expense through June 30, 2022	Deferred Outflows of Resources	Deferred Inflows of Resources	
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)	
2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	349,306	-	227,560	121,746	-	-
2020	-	-	-	-	-	-
2021	-	1,389,686	(437,696)	-	951,990	-
2022	-	-	-	-	-	-
Total				<u>\$ 121,746</u>	<u>\$ 951,990</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, 2022	
	Increases in the Total OPEB Liability	Decreases in the Total OPEB Liability	Amounts Recognized in OPEB Expense through June 30, 2022	Deferred Outflows of Resources	Deferred Inflows of Resources	
Year	(a)	(b)	(c)	(a) - (c)	(b) + (c)	
2018	\$ 190,641	\$ -	\$ 145,750	\$ 44,891	\$ -	-
2019	2,331,407	-	1,518,832	812,575	-	-
2020	2,733,808	-	1,335,738	1,398,070	-	-
2021	365,951	-	115,260	250,691	-	-
2022	-	2,845,503	(448,111)	-	2,397,392	-
Total				<u>\$ 2,506,227</u>	<u>\$ 2,397,392</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, 2022	
Year	Investment Earnings Less Than Projected  (a)	Investment Earnings Greater Than Projected  (b)	Amounts Recognized in OPEB Expense through June 30, 2022  (c)	Deferred Outflows of Resources  (a) - (c)	Deferred Inflows of Resources  (b) + (c)	
2018	\$ 20,436	\$ -	\$ 20,436	\$ -	\$ -	
2019	26,179	-	20,944	5,235	-	
2020	31,614	-	18,969	12,645	-	
2021	-	287,285	(114,914)	-	172,371	
2022	274,368	-	54,874	219,494	-	
Subtotal				\$ 237,374	\$ 172,371	
Net				\$ 65,003	\$ -	

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

Year ended June 30		
2023	\$	310,640
2024	\$	291,995
2025	\$	(105,542)
2026	\$	(492,124)
2027	\$	(504,538)
Thereafter		(156,837)
<b>Deferred Outflows</b>	<b>\$</b>	<b>2,692,976</b>
<b>Deferred Inflows</b>	<b>\$</b>	<b>3,349,382</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, 2022 is presented below:

#### Fiscal Year Ended June 30, 2022

Measurement Date	6/30/2022
1. Service cost	\$ 708,275
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	11,910,850
b. Service cost, beginning of year	708,275
c. Benefit payments	(313,230)
d. Interest on total OPEB liability = 2.27% times (a. + b. + .5 times c.)	282,899
3. Differences between expected and actual experience	(161,958)
4. Changes of benefit terms	-
5. Changes of assumptions	463,623
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	1,681,323
b. Contributions - Employer	319,230
c. Benefit payments	(313,230)
d. Administrative expenses and other	-
e. Total projected earnings	(111,010)
7. Differences between projected and actual earnings on OPEB plan investments	13,064
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
<b>10. Total OPEB Expense</b>	<b>\$ 1,194,893</b>

## SECTION 5 - SUMMARY OF PLAN PROVISIONS

**Eligibility for Postemployment Benefits** Employees of the County and their dependents are eligible for postemployment medical 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, 2021</b>	<b>Individual</b>	<b>Family</b>
Blue Care Elect PPO	\$1,155.00	\$2,892.00
Blue Cross Network Blue HMO	\$884.00	\$2,372.00
HPHC PPO	\$954.00	\$2,523.00
HPHC EPO HMO	\$869.00	\$2,325.00
Blue Care Elect HD PPO	\$963.00	\$2,415.00
<b>Medicare Plans - January 1, 2021</b>		
Medex	\$376.00	
HPHC Medicare Enhance	\$374.00	

**Participant Contributions** Retired employees contribute 10% 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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### Medicare Penalty Reimbursement

The County reimburses the Medicare late-enrollment penalty, if applicable, based on information provided in the retiree data.

### Dental Coverage

Dental coverage is not offered to retirees.

### Life Insurance Coverage

Retirees are eligible for a \$5,000 life insurance benefit. The total monthly cost is \$4.65. Retirees contribute \$1.00 towards the monthly premiums.

## SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

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<b>Valuation Date</b>	July 1, 2020
<b>Disclosure Date</b>	June 30, 2022
<b>GASB 75 Reporting Date</b>	June 30, 2022
<b>Long-Term Expected Rate of Return</b>	<p>6.6%, compounded annually, net of fees.</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>	3.54%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2022.
<b>Discount Rate (GASB)</b>	<p>3.78%, compounded annually, for the measurement as of June 30, 2022.</p> <p>2.27%, compounded annually, for the measurement as of June 30, 2021.</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>	2.27%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2022.
<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	7.00%
2	6.60%
3	6.20%
4	5.80%
5	5.40%
Ultimate	4.00%

Trend rates after year 5 grade down to the ultimate rate of 4 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

Not applicable (no dental coverage).

### Inflation

2.4% 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 - Not offered to retired employees.

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, 2020 and are applicable to retirees, survivors and spouses. Annual costs for current and future retirees are based on the blended curves shown below, developed using the plan coverages elected by current retirees and survivors and premium rates currently in effect. Future years' costs are based on the first year cost adjusted with trend.

Age	Medicare-Eligible		Medicare-Ineligible	
	Male	Female	Male	Female
Under 20	\$4,895	\$5,747	\$4,895	\$5,747
20-24	3,857	6,119	3,857	6,119
25-29	4,014	9,026	4,014	9,026
30-34	5,042	11,405	5,042	11,405
35-39	6,324	11,748	6,324	11,748
40-44	7,881	12,032	7,881	12,032
45-49	9,947	13,207	9,947	13,207
50-54	13,109	15,537	13,109	15,537
55-59	17,035	17,965	17,035	17,965
60-64	21,861	21,382	21,861	21,382
65-69	3,727	3,630	27,275	25,630
70-74	4,467	4,282	32,679	30,222
75-79	5,275	4,968	38,602	35,097
80-84	6,063	5,698	44,369	40,237
85-89	6,754	6,369	50,781	45,935
90-94	7,352	6,798	50,781	45,935
95+	7,815	6,574	50,781	45,935

### Retiree Contributions

Annual per capita participant contributions for the fiscal year beginning July 1, 2020 are as follows:

Plan	Contribution
Non-Medicare	\$ 1,506
Medicare	442

### 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.

### Employee Data

Employee and retiree data were compiled and submitted by the County as of May 31, 2022. 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-2018.

#### 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-2018.

#### Disabled Retiree Mortality

Disabled retiree mortality rates for General and Public Safety employees are based on the RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2018.

#### Turnover Rates

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

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

#### Disability Rates

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

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

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

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

## SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

### General and Public Safety Employees

#### Retirement Rates

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

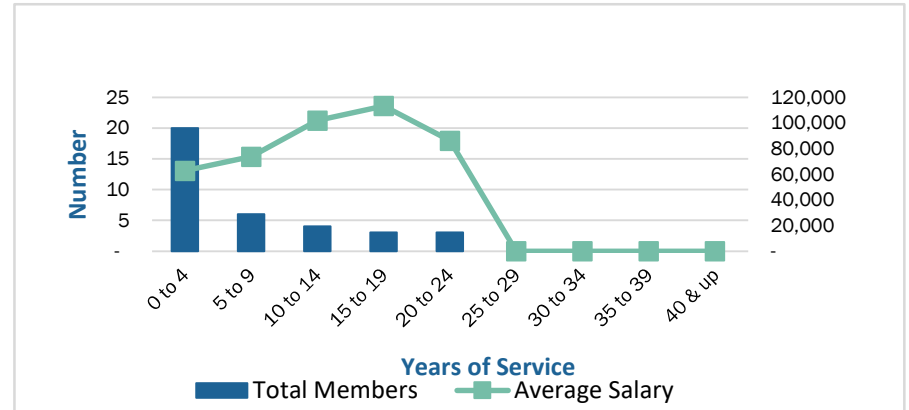
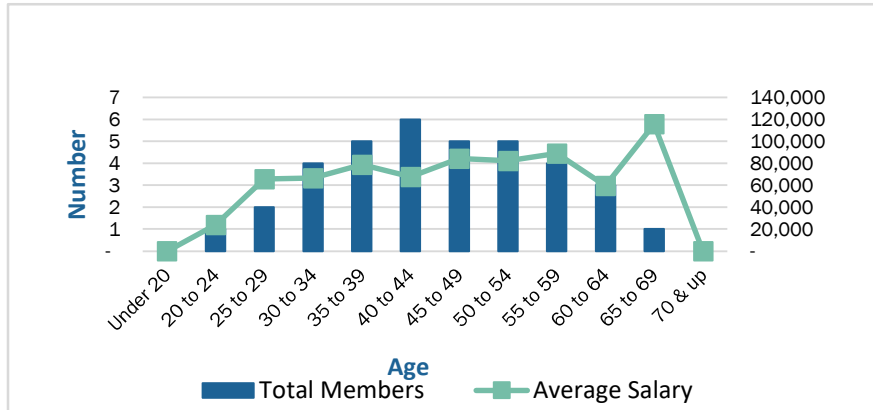
General Employees			Public Safety	
Age	Male	Female	Age	All
45	0.00%	0.00%	45	1.00%
50	1.00%	1.50%	50	2.00%
55	2.00%	5.50%	55	15.00%
60	12.00%	5.00%	60	20.00%
62	30.00%	15.00%	62	25.00%
65	40.00%	15.00%	65	100.00%
69	30.00%	20.00%		
70	100.00%	100.00%		

## SECTION 7 - PLAN MEMBER INFORMATION

### Exhibit 7.1 - Active Members by Age and Years of Service as of July 1, 2020

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	1	-	-	-	-	-	-	-	-	1	23,943	23,943
25 to 29	2	-	-	-	-	-	-	-	-	2	131,036	65,518
30 to 34	3	1	-	-	-	-	-	-	-	4	266,595	66,649
35 to 39	4	-	1	-	-	-	-	-	-	5	393,432	78,686
40 to 44	4	1	1	-	-	-	-	-	-	6	406,668	67,778
45 to 49	1	2	1	-	1	-	-	-	-	5	422,110	84,422
50 to 54	2	2	-	1	-	-	-	-	-	5	410,749	82,150
55 to 59	2	-	1	-	1	-	-	-	-	4	355,477	88,869
60 to 64	1	-	-	1	1	-	-	-	-	3	178,616	59,539
65 to 69	-	-	-	1	-	-	-	-	-	1	115,736	115,736
70 & up	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>20</b>	<b>6</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>36</b>	<b>2,704,362</b>	<b>75,121</b>
<b>Total Salary</b>	<b>1,254,269</b>	<b>443,028</b>	<b>407,977</b>	<b>340,136</b>	<b>258,952</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>			
<b>Average Salary</b>	<b>62,713</b>	<b>73,838</b>	<b>101,994</b>	<b>113,379</b>	<b>86,317</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>			

Average Age: 45.3      Average Service: 7.3



## SECTION 7 - PLAN MEMBER INFORMATION

### Exhibit 7.2 - Retired Members, Covered Spouses and Survivors as of July 1, 2020

Age	Non-Medicare Plans					Medicare Plans		Total
	Blue Care Elect PPO	Blue Cross Network Blue HMO	HPHC PPO	HPHC EPO HMO	Blue Care Elect HD PPO	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	1	0	0	0	0	0	0	1
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	2	0	0	0	0	1	0	3
65 to 69	1	0	0	0	0	10	0	11
70 to 74	0	0	0	0	0	3	1	4
75 to 79	0	0	0	0	0	2	0	2
80 to 84	0	0	0	0	0	1	0	1
85 to 89	1	0	0	0	0	0	0	1
90+	0	0	0	0	0	1	0	1
<b>Total</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>1</b>	<b>24</b>
<b>Covered Spouses</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1</b>	<b>9</b>

Average Age: 70.2

In addition, there is 1 retiree that is not covered under any medical plan but is covered under a life insurance policy which the County contributes to.

## 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.

## SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	County of Duke's County	Martha's Vineyard Airport	Senior Services	Dukes County Contributory Ret. System	Vineyard Health Care Access Program	Registry of Deeds	Total
<b>Summary of Member Data Used in Valuation</b>							
Active Members	8	19	0	2	3	4	36
Average Age	47.4	44.4	-	46.4	48.6	42.6	45.3
Average Service	5.4	7.5	-	10.7	9.0	7.3	7.3
Covered Payroll	395,894	1,609,064	-	189,285	215,698	294,421	2,704,362
Retired Members and Survivors	11	9	1	2	0	2	25
Average Age	71.8	67.9	64.5	76.2	-	68.8	70.2
Covered Spouses	4	4	1	0	0	0	9
Expected Benefit Payments	106,712	144,209	6,887	47,755	1,481	6,186	313,230
OPEB Trust contributions	0	0	0	2,000	0	4,000	6,000
Total Employer Contributions	106,712	144,209	6,887	49,755	1,481	10,186	319,230
<b>Beginning Net OPEB Liability - June 30, 2021</b>							
Total OPEB Liability	3,119,832	6,459,442	329,508	941,335	307,669	753,064	11,910,850
Fiduciary Net Position	763,486	268,409	107,996	2,000	91,402	448,030	1,681,323
Net OPEB Liability	2,356,346	6,191,033	221,512	939,335	216,267	305,034	10,229,527
Total OPEB Liability, beginning of year	3,119,832	6,459,442	329,508	941,335	307,669	753,064	11,910,850
Service cost	104,993	502,824	0	21,300	36,584	42,574	708,275
Interest	71,994	156,406	7,402	21,310	7,798	17,989	282,899
Changes of benefit terms	0	0	0	0	0	0	0
Differences between expected and actual experience	0	0	0	0	0	0	0
Changes of assumptions	(653,072)	(1,622,191)	(66,605)	(174,646)	(91,526)	(237,463)	(2,845,503)
Benefit payments	(106,712)	(144,209)	(6,887)	(47,755)	(1,481)	(6,186)	(313,230)
Net change in total OPEB liability	(582,797)	(1,107,170)	(66,090)	(179,791)	(48,625)	(183,086)	(2,167,559)
Total OPEB Liability, end of year	2,537,035	5,352,272	263,418	761,544	259,044	569,978	9,743,291
<b>Ending Net OPEB Liability - June 30, 2022</b>							
Total OPEB Liability	2,537,035	5,352,272	263,418	761,544	259,044	569,978	9,743,291
Fiduciary Net Position	717,901	233,994	94,149	3,744	79,683	394,494	1,523,965
Net OPEB Liability	1,819,134	5,118,278	169,269	757,800	179,361	175,484	8,219,326
<b>Actuarially Determined Employer Contribution</b>							
Normal Cost	104,993	502,824	0	21,300	36,584	42,574	708,275
Amortization Payment	65,691	172,597	6,175	26,187	6,029	8,504	285,183
Interest	3,874	15,333	140	1,078	967	1,159	22,551
Actuarially Determined Employer Contribution	174,558	690,754	6,315	48,565	43,580	52,237	1,016,009

## SECTION 9 - BREAKOUT OF RESULTS BY DEPARTMENT

Department	County of Duke's County	Martha's Vineyard Airport	Senior Services	Dukes County Contributory Ret. System	Vineyard Health Care Access Program	Registry of Deeds	Total
<b>Total Deferred Outflows of Resources</b>							
Differences between Expected and Actual Experience	31,889	66,025	3,368	9,622	3,145	7,697	121,746
Changes in Assumptions	656,461	1,359,166	69,334	198,071	64,738	158,456	2,506,227
Differences between Expected and Actual Earnings on OPEB Plan Investments	29,518	10,377	4,175	77	3,534	17,322	65,003
<b>Total Deferred Outflows of Resources</b>	<b>717,868</b>	<b>1,435,568</b>	<b>76,877</b>	<b>207,771</b>	<b>71,417</b>	<b>183,475</b>	<b>2,692,976</b>
<b>Total Deferred Inflows of Resources</b>							
Differences between Expected and Actual Experience	249,357	516,279	26,336	75,237	24,591	60,190	951,990
Changes in Assumptions	627,954	1,300,144	66,323	189,470	61,927	151,575	2,397,392
Differences between Expected and Actual Earnings on OPEB Plan Investments	0	0	0	0	0	0	0
<b>Total Deferred Inflows of Resources</b>	<b>877,310</b>	<b>1,816,423</b>	<b>92,659</b>	<b>264,707</b>	<b>86,518</b>	<b>211,765</b>	<b>3,349,382</b>
<b>Total OPEB Expense</b>	<b>276,163</b>	<b>713,221</b>	<b>28,590</b>	<b>131,775</b>	<b>28,981</b>	<b>16,162</b>	<b>1,194,893</b>
<b>Sensitivity of the Net OPEB Liability to Changes in the Discount Rate</b>							
Current Discount Rate: 3.78%	1,819,134	5,118,278	169,269	757,800	179,361	175,484	8,219,326
1% Decrease in the Discount Rate: 2.78%	2,266,924	6,062,960	215,763	892,213	225,083	276,086	9,939,028
1% Increase in the Discount Rate: 4.78%	1,467,016	4,375,430	132,709	652,104	143,408	96,376	6,867,044
<b>Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates</b>							
Current Trend Rates	1,819,134	5,118,278	169,269	757,800	179,361	175,484	8,219,326
1% Decrease in Trend Rates	1,400,354	4,234,796	125,787	632,094	136,601	81,400	6,611,032
1% Increase in Trend Rates	2,366,509	6,273,051	226,102	922,106	235,251	298,459	10,321,478
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in OPEB Expense</b>							
<b>2023</b>	75,455	180,237	7,469	26,945	7,146	13,388	310,640
<b>2024</b>	70,926	169,419	7,021	25,328	6,717	12,584	291,995
<b>2025</b>	(25,636)	(61,236)	(2,538)	(9,155)	(2,428)	(4,549)	(105,542)
<b>2026</b>	(119,538)	(285,536)	(11,832)	(42,687)	(11,322)	(21,209)	(492,124)
<b>2027</b>	(122,553)	(292,739)	(12,131)	(43,764)	(11,607)	(21,744)	(504,538)
<b>Thereafter</b>	(38,096)	(90,999)	(3,771)	(13,604)	(3,608)	(6,759)	(156,837)

## APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

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

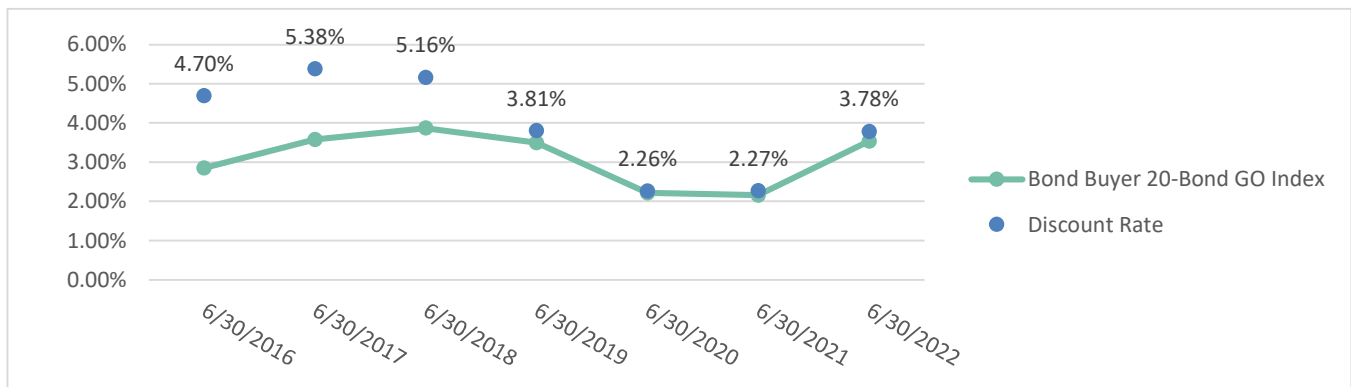
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period.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

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

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

For purposes of this valuation, liabilities are based on a discount rate of 3.78%, a long-term investment return rate of 6.6% and a municipal bond rate of 3.54%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2022. 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 12 periods of projected future benefit payments and the 3.54% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 3.78%.

Below are the historical Bond Buyer 20-Bond GO Indices and the County'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) * 18.51%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2022	2,537,677	-	2,537,677	313,230	6,000	-	319,230
2023	2,397,092	229,404	2,626,496	322,663	159,000	42,467	439,196
2024	2,273,844	444,579	2,718,423	331,428	59,000	82,300	308,128
2025	2,162,839	650,729	2,813,568	338,845	59,000	120,462	277,383
2026	2,027,161	884,882	2,912,043	371,705	59,000	163,808	266,897
2027	1,923,549	1,090,416	3,013,965	427,751	59,000	201,857	284,894
2028	1,770,061	1,349,393	3,119,454	477,262	59,000	249,798	286,464
2029	1,669,045	1,559,590	3,228,635	500,485	59,000	288,710	270,775
2030	1,571,523	1,770,114	3,341,637	537,363	59,000	327,682	268,681
2031	1,469,407	1,989,187	3,458,594	540,457	59,000	368,236	231,221
2032	1,361,468	2,218,177	3,579,645	591,630	59,000	410,627	240,003
2033	1,263,670	2,441,263	3,704,933	595,590	59,000	451,924	202,666
2034	1,189,850	2,644,756	3,834,606	600,727	59,000	489,594	170,133
2035	1,102,823	2,865,994	3,968,817	625,340	59,000	530,550	153,790
2036	1,047,102	3,060,624	4,107,726	666,129	59,000	566,579	158,550
2037	990,229	3,261,267	4,251,496	618,449	59,000	603,722	73,727
2038	907,852	3,492,446	4,400,298	629,366	59,000	646,518	41,848
2039	874,906	3,679,402	4,554,308	666,661	59,000	681,127	44,534
2040	823,709	3,890,000	4,713,709	583,612	59,000	720,113	-
2041	782,263	4,096,426	4,878,689	592,548	59,000	758,326	-
2042	745,519	4,303,924	5,049,443	636,213	59,000	796,738	-
2043	701,685	4,524,489	5,226,174	624,493	59,000	837,568	-
2044	648,540	4,760,550	5,409,090	639,817	59,000	881,268	-
2045	601,312	4,997,096	5,598,408	685,382	59,000	925,057	-
2046	542,644	5,251,708	5,794,352	690,841	59,000	972,190	-
2047	477,503	5,519,651	5,997,154	655,295	59,000	1,021,792	-
2048	428,516	5,778,538	6,207,054	667,778	59,000	1,069,717	-
2049	396,329	6,027,972	6,424,301	673,520	59,000	1,115,892	-
2050	366,163	6,282,989	6,649,152	640,945	59,000	1,163,100	-
2051	344,110	6,537,762	6,881,872	681,819	59,000	1,210,263	-
2052	300,508	6,822,230	7,122,738	699,927	59,000	1,262,924	-
2053	259,405	7,112,629	7,372,034	730,092	59,000	1,316,682	-
2054	221,765	7,408,290	7,630,055	761,882	59,000	1,371,415	-
2055	193,132	7,703,975	7,897,107	798,962	59,000	1,426,151	-

## 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) * 18.51%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2056	159,993	8,013,513	8,173,506	746,487	59,000	1,483,453	-
2057	128,813	8,330,766	8,459,579	777,975	59,000	1,542,182	-
2058	106,586	8,649,078	8,755,664	790,653	59,000	1,601,108	-
2059	88,424	8,973,688	9,062,112	756,139	59,000	1,661,199	-
2060	72,123	9,307,163	9,379,286	708,970	59,000	1,722,932	-
2061	43,864	9,663,697	9,707,561	693,255	59,000	1,788,933	-
2062	28,754	10,018,572	10,047,326	698,658	59,000	1,854,627	-
2063	24,035	10,374,947	10,398,982	639,571	59,000	1,920,599	-
2064	19,693	10,743,253	10,762,946	617,376	59,000	1,988,779	-
2065	15,643	11,124,006	11,139,649	619,290	59,000	2,059,264	-
2066	12,708	11,516,829	11,529,537	616,790	59,000	2,131,983	-
2067	3,611	11,929,460	11,933,071	607,922	59,000	2,208,369	-
2068	2,749	12,347,979	12,350,728	597,546	59,000	2,285,844	-
2069	2,233	12,780,770	12,783,003	583,774	59,000	2,365,962	-
2070	-	13,230,408	13,230,408	572,429	59,000	2,449,199	-
2071	-	13,693,472	13,693,472	560,240	59,000	2,534,921	-
2072	-	14,172,744	14,172,744	542,443	59,000	2,623,643	-
2073	-	14,668,790	14,668,790	525,838	59,000	2,715,470	-
2074	-	15,182,198	15,182,198	506,329	59,000	2,810,512	-
2075	-	15,713,575	15,713,575	492,057	59,000	2,908,880	-
2076	-	16,263,550	16,263,550	475,931	59,000	3,010,691	-
2077	-	16,832,774	16,832,774	454,262	59,000	3,116,065	-
2078	-	17,421,921	17,421,921	435,994	59,000	3,225,127	-
2079	-	18,031,688	18,031,688	417,654	59,000	3,338,006	-
2080	-	18,662,797	18,662,797	398,692	59,000	3,454,837	-
2081	-	19,315,995	19,315,995	383,294	59,000	3,575,756	-
2082	-	19,992,055	19,992,055	359,457	59,000	3,700,907	-
2083	-	20,691,777	20,691,777	342,749	59,000	3,830,439	-
2084	-	21,415,989	21,415,989	324,169	59,000	3,964,505	-
2085	-	22,165,549	22,165,549	306,597	59,000	4,103,262	-
2086	-	22,941,343	22,941,343	288,184	59,000	4,246,876	-
2087	-	23,744,290	23,744,290	266,212	59,000	4,395,517	-
2088	-	24,575,340	24,575,340	247,561	59,000	4,549,360	-
2089	-	25,435,477	25,435,477	226,532	59,000	4,708,588	-

## 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) * 18.51%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2090	-	26,325,719	26,325,719	208,246	59,000	4,873,388	-
2091	-	27,247,119	27,247,119	187,757	59,000	5,043,957	-
2092	-	28,200,768	28,200,768	168,158	59,000	5,220,495	-
2093	-	29,187,795	29,187,795	148,111	59,000	5,403,213	-
2094	-	30,209,368	30,209,368	129,593	59,000	5,592,325	-
2095	-	31,266,696	31,266,696	112,508	59,000	5,788,057	-
2096	-	32,361,030	32,361,030	96,460	59,000	5,990,639	-
2097	-	33,493,666	33,493,666	81,526	59,000	6,200,311	-
2098	-	34,665,944	34,665,944	67,818	59,000	6,417,322	-
2099	-	35,879,252	35,879,252	55,471	59,000	6,641,928	-
2100	-	37,135,026	37,135,026	44,561	59,000	6,874,396	-
2101	-	38,434,752	38,434,752	35,079	59,000	7,114,999	-
2102	-	39,779,968	39,779,968	27,021	59,000	7,364,024	-
2103	-	41,172,267	41,172,267	20,344	59,000	7,621,765	-
2104	-	42,613,296	42,613,296	14,950	59,000	7,888,527	-
2105	-	44,104,761	44,104,761	10,688	59,000	8,164,625	-
2106	-	45,648,428	45,648,428	7,419	59,000	8,450,387	-
2107	-	47,246,123	47,246,123	4,999	59,000	8,746,151	-
2108	-	48,899,737	48,899,737	3,264	59,000	9,052,266	-
2109	-	50,611,228	50,611,228	2,056	59,000	9,369,095	-
2110	-	52,382,621	52,382,621	1,246	59,000	9,697,014	-
2111	-	54,216,013	54,216,013	726	59,000	10,036,409	-
2112	-	56,113,573	56,113,573	406	59,000	10,387,683	-
2113	-	58,077,548	58,077,548	221	59,000	10,751,252	-
2114	-	60,110,262	60,110,262	116	59,000	11,127,546	-
2115	-	62,214,121	62,214,121	58	59,000	11,517,010	-
2116	-	64,391,615	64,391,615	29	59,000	11,920,106	-
2117	-	66,645,322	66,645,322	14	59,000	12,337,309	-
2118	-	68,977,908	68,977,908	7	59,000	12,769,115	-
2119	-	71,392,135	71,392,135	2	59,000	13,216,034	-
2120	-	73,890,860	73,890,860	-	59,000	13,678,595	-

## 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)
2022	1,681,323	319,230	313,230	-	(163,358)	1,523,965
2023	1,523,965	439,196	322,663	-	104,427	1,744,925
2024	1,744,925	308,128	331,428	-	114,396	1,836,021
2025	1,836,021	277,383	338,845	-	119,149	1,893,708
2026	1,893,708	266,897	371,705	-	121,526	1,910,426
2027	1,910,426	284,894	427,751	-	121,374	1,888,943
2028	1,888,943	286,464	477,262	-	118,374	1,816,519
2029	1,816,519	270,775	500,485	-	112,310	1,699,119
2030	1,699,119	268,681	537,363	-	103,275	1,533,712
2031	1,533,712	231,221	540,457	-	91,020	1,315,496
2032	1,315,496	240,003	591,630	-	75,219	1,039,088
2033	1,039,088	202,666	595,590	-	55,613	701,777
2034	701,777	170,133	600,727	-	32,108	303,291
2035	303,291	153,790	625,340	-	4,456	-
2036	-	158,550	666,129	-	-	-
2037	-	73,727	618,449	-	-	-
2038	-	41,848	629,366	-	-	-
2039	-	44,534	666,661	-	-	-
2040	-	-	583,612	-	-	-
2041	-	-	592,548	-	-	-
2042	-	-	636,213	-	-	-
2043	-	-	624,493	-	-	-
2044	-	-	639,817	-	-	-
2045	-	-	685,382	-	-	-
2046	-	-	690,841	-	-	-
2047	-	-	655,295	-	-	-
2048	-	-	667,778	-	-	-
2049	-	-	673,520	-	-	-
2050	-	-	640,945	-	-	-
2051	-	-	681,819	-	-	-
2052	-	-	699,927	-	-	-
2053	-	-	730,092	-	-	-
2054	-	-	761,882	-	-	-
2055	-	-	798,962	-	-	-

## 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)
2056	-	-	746,487	-	-	-
2057	-	-	777,975	-	-	-
2058	-	-	790,653	-	-	-
2059	-	-	756,139	-	-	-
2060	-	-	708,970	-	-	-
2061	-	-	693,255	-	-	-
2062	-	-	698,658	-	-	-
2063	-	-	639,571	-	-	-
2064	-	-	617,376	-	-	-
2065	-	-	619,290	-	-	-
2066	-	-	616,790	-	-	-
2067	-	-	607,922	-	-	-
2068	-	-	597,546	-	-	-
2069	-	-	583,774	-	-	-
2070	-	-	572,429	-	-	-
2071	-	-	560,240	-	-	-
2072	-	-	542,443	-	-	-
2073	-	-	525,838	-	-	-
2074	-	-	506,329	-	-	-
2075	-	-	492,057	-	-	-
2076	-	-	475,931	-	-	-
2077	-	-	454,262	-	-	-
2078	-	-	435,994	-	-	-
2079	-	-	417,654	-	-	-
2080	-	-	398,692	-	-	-
2081	-	-	383,294	-	-	-
2082	-	-	359,457	-	-	-
2083	-	-	342,749	-	-	-
2084	-	-	324,169	-	-	-
2085	-	-	306,597	-	-	-
2086	-	-	288,184	-	-	-
2087	-	-	266,212	-	-	-
2088	-	-	247,561	-	-	-
2089	-	-	226,532	-	-	-

## 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)
2090	-	-	208,246	-	-	-
2091	-	-	187,757	-	-	-
2092	-	-	168,158	-	-	-
2093	-	-	148,111	-	-	-
2094	-	-	129,593	-	-	-
2095	-	-	112,508	-	-	-
2096	-	-	96,460	-	-	-
2097	-	-	81,526	-	-	-
2098	-	-	67,818	-	-	-
2099	-	-	55,471	-	-	-
2100	-	-	44,561	-	-	-
2101	-	-	35,079	-	-	-
2102	-	-	27,021	-	-	-
2103	-	-	20,344	-	-	-
2104	-	-	14,950	-	-	-
2105	-	-	10,688	-	-	-
2106	-	-	7,419	-	-	-
2107	-	-	4,999	-	-	-
2108	-	-	3,264	-	-	-
2109	-	-	2,056	-	-	-
2110	-	-	1,246	-	-	-
2111	-	-	726	-	-	-
2112	-	-	406	-	-	-
2113	-	-	221	-	-	-
2114	-	-	116	-	-	-
2115	-	-	58	-	-	-
2116	-	-	29	-	-	-
2117	-	-	14	-	-	-
2118	-	-	7	-	-	-
2119	-	-	2	-	-	-
2120	-	-	-	-	-	-

## 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) = 3.78%
2023	1,523,965	322,663	322,663	-	312,515	-	316,736
2024	1,744,925	331,428	331,428	-	301,130	-	313,498
2025	1,836,021	338,845	338,845	-	288,807	-	308,846
2026	1,893,708	371,705	371,705	-	297,200	-	326,465
2027	1,910,426	427,751	427,751	-	320,836	-	362,014
2028	1,888,943	477,262	477,262	-	335,809	-	389,214
2029	1,816,519	500,485	500,485	-	330,346	-	393,296
2030	1,699,119	537,363	537,363	-	332,728	-	406,904
2031	1,533,712	540,457	540,457	-	313,924	-	394,350
2032	1,315,496	591,630	591,630	-	322,372	-	415,976
2033	1,039,088	595,590	595,590	-	304,437	-	403,517
2034	701,777	600,727	600,727	-	288,051	-	392,183
2035	303,291	625,340	-	625,340	-	404,822	393,391
2036	-	666,129	-	666,129	-	416,484	403,797
2037	-	618,449	-	618,449	-	373,453	361,247
2038	-	629,366	-	629,366	-	367,051	354,243
2039	-	666,661	-	666,661	-	375,509	361,576
2040	-	583,612	-	583,612	-	317,491	305,011
2041	-	592,548	-	592,548	-	311,331	298,408
2042	-	636,213	-	636,213	-	322,845	308,736
2043	-	624,493	-	624,493	-	306,063	292,017
2044	-	639,817	-	639,817	-	302,852	288,292
2045	-	685,382	-	685,382	-	313,328	297,582
2046	-	690,841	-	690,841	-	305,026	289,034
2047	-	655,295	-	655,295	-	279,439	264,182
2048	-	667,778	-	667,778	-	275,026	259,415
2049	-	673,520	-	673,520	-	267,907	252,122
2050	-	640,945	-	640,945	-	246,233	231,195
2051	-	681,819	-	681,819	-	252,980	236,986
2052	-	699,927	-	699,927	-	250,820	234,424
2053	-	730,092	-	730,092	-	252,685	235,627
2054	-	761,882	-	761,882	-	254,672	236,936
2055	-	798,962	-	798,962	-	257,935	239,423
2056	-	746,487	-	746,487	-	232,755	215,555

## 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) = 3.78%
2057	-	777,975	-	777,975	-	234,279	216,471
2058	-	790,653	-	790,653	-	229,957	211,990
2059	-	756,139	-	756,139	-	212,400	195,357
2060	-	708,970	-	708,970	-	192,341	176,503
2061	-	693,255	-	693,255	-	181,647	166,308
2062	-	698,658	-	698,658	-	176,804	161,503
2063	-	639,571	-	639,571	-	156,318	142,463
2064	-	617,376	-	617,376	-	145,734	132,513
2065	-	619,290	-	619,290	-	141,188	128,086
2066	-	616,790	-	616,790	-	135,810	122,925
2067	-	607,922	-	607,922	-	129,281	116,747
2068	-	597,546	-	597,546	-	122,730	110,578
2069	-	583,774	-	583,774	-	115,802	104,097
2070	-	572,429	-	572,429	-	109,669	98,358
2071	-	560,240	-	560,240	-	103,664	92,760
2072	-	542,443	-	542,443	-	96,939	86,544
2073	-	525,838	-	525,838	-	90,759	80,841
2074	-	506,329	-	506,329	-	84,404	75,008
2075	-	492,057	-	492,057	-	79,220	70,241
2076	-	475,931	-	475,931	-	74,004	65,466
2077	-	454,262	-	454,262	-	68,220	60,210
2078	-	435,994	-	435,994	-	63,238	55,686
2079	-	417,654	-	417,654	-	58,507	51,401
2080	-	398,692	-	398,692	-	53,941	47,282
2081	-	383,294	-	383,294	-	50,085	43,801
2082	-	359,457	-	359,457	-	45,364	39,582
2083	-	342,749	-	342,749	-	41,777	36,368
2084	-	324,169	-	324,169	-	38,161	33,145
2085	-	306,597	-	306,597	-	34,858	30,207
2086	-	288,184	-	288,184	-	31,645	27,359
2087	-	266,212	-	266,212	-	28,233	24,353
2088	-	247,561	-	247,561	-	25,357	21,823
2089	-	226,532	-	226,532	-	22,410	19,242
2090	-	208,246	-	208,246	-	19,896	17,045

## 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) = 3.78%
2091	-	187,757	-	187,757	-	17,326	14,809
2092	-	168,158	-	168,158	-	14,987	12,780
2093	-	148,111	-	148,111	-	12,749	10,847
2094	-	129,593	-	129,593	-	10,773	9,145
2095	-	112,508	-	112,508	-	9,033	7,650
2096	-	96,460	-	96,460	-	7,480	6,320
2097	-	81,526	-	81,526	-	6,106	5,147
2098	-	67,818	-	67,818	-	4,905	4,126
2099	-	55,471	-	55,471	-	3,875	3,252
2100	-	44,561	-	44,561	-	3,007	2,517
2101	-	35,079	-	35,079	-	2,286	1,910
2102	-	27,021	-	27,021	-	1,701	1,417
2103	-	20,344	-	20,344	-	1,237	1,028
2104	-	14,950	-	14,950	-	878	728
2105	-	10,688	-	10,688	-	606	502
2106	-	7,419	-	7,419	-	406	336
2107	-	4,999	-	4,999	-	264	218
2108	-	3,264	-	3,264	-	167	137
2109	-	2,056	-	2,056	-	101	83
2110	-	1,246	-	1,246	-	59	49
2111	-	726	-	726	-	33	27
2112	-	406	-	406	-	18	15
2113	-	221	-	221	-	9	8
2114	-	116	-	116	-	5	4
2115	-	58	-	58	-	2	2
2116	-	29	-	29	-	1	1
2117	-	14	-	14	-	1	-
2118	-	7	-	7	-	-	-
2119	-	2	-	2	-	-	-
2120	-	-	-	-	-	-	-

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

Year	Differences between Expected and Actual Experience	Recognition Period (Years)											
			2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
2018	-	6.54	-	-	-	-	-	-	-	-	-	-	-
2019	349,306	6.14	56,890	56,890	56,890	7,966	-	-	-	-	-	-	-
2020	-	6.14	-	-	-	-	-	-	-	-	-	-	-
2021	(1,389,686)	6.35	(218,848)	(218,848)	(218,848)	(218,848)	(218,848)	(76,598)	-	-	-	-	-
2022	-	6.35	-	-	-	-	-	-	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(161,958)	(161,958)	(161,958)	(210,882)	(218,848)	(76,598)	-	-	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)											
			2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
2018	190,641	6.54	29,150	29,150	15,741	-	-	-	-	-	-	-	-
2019	2,331,407	6.14	379,708	379,708	379,708	53,159	-	-	-	-	-	-	-
2020	2,733,808	6.14	445,246	445,246	445,246	445,246	62,332	-	-	-	-	-	-
2021	365,951	6.35	57,630	57,630	57,630	57,630	57,630	20,171	-	-	-	-	-
2022	(2,845,503)	6.35	(448,111)	(448,111)	(448,111)	(448,111)	(448,111)	(448,111)	(156,837)	-	-	-	-
Net Increase (Decrease) in OPEB Expense			463,623	463,623	450,214	107,924	(328,149)	(427,940)	(156,837)	-	-	-	-

## 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)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2018	20,436	5	4,088	-	-	-	-	-	-	-	-	-
2019	26,179	5	5,236	5,235	-	-	-	-	-	-	-	-
2020	31,614	5	6,323	6,323	6,322	-	-	-	-	-	-	-
2021	(287,285)	5	(57,457)	(57,457)	(57,457)	(57,457)	-	-	-	-	-	-
2022	274,368	5	54,874	54,874	54,874	54,873	54,873	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			13,064	8,975	3,739	(2,584)	54,873	-	-	-	-	-