



MARTHA'S VINEYARD REFUSE DISPOSAL DISTRICT

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. Donald Hatch
District Manager
Martha's Vineyard Refuse Disposal District
P.O. Box 190
West Tisbury, MA 02575

Dear Don:

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 Refuse Disposal District, 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 Refuse Disposal District 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 3.66%, the rate that reflects a blended-rate of the long-term expected rate of return on OPEB plan assets and the municipal bond rate. The municipal bond rate of 3.65% is based on the Bond Buyer 20-Bond GO Index published on June 30, 2023. The long-term expected rate of return is 6.5%.

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 Refuse Disposal District 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 Refuse Disposal District 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 Refuse Disposal District, other than as consulting actuary for this assignment, that would impair our independence.

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

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

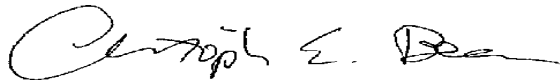
Respectfully submitted,



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EXECUTIVE SUMMARY

Purpose of Report

This report presents the results of the actuarial valuation of the Martha's Vineyard Refuse Disposal District'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 Refuse Disposal District. 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 Refuse Disposal District.

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 Refuse Disposal District Other Postemployment Benefits Program

The Martha's Vineyard Refuse Disposal District 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 District 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 District and retirees.

Summary of Principal Results

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

Disclosure Date	June 30, 2023	June 30, 2022	% Change
Valuation Date	July 1, 2022	July 1, 2020	
Membership Data			
Active Plan Members	10	11	(9.1%)
Inactive Plan Members (excludes covered spouses)	4	3	33.3%
Total Plan Members	14	14	0.0%
Covered Spouses	3	3	0.0%
Covered Payroll	\$620,724	\$710,525	(12.6%)
Net OPEB Liability			
Discount Rate	3.66%	3.54%	
Total OPEB Liability (TOL)	\$1,661,611	\$1,978,673	(16.0%)
Fiduciary Net Position (FNP)	\$73,621	\$66,591	10.6%
Net OPEB Liability	\$1,587,990	\$1,912,082	(16.9%)
FNP as % of TOL	4.4%	3.4%	29.4%
OPEB Expense			
OPEB Expense	\$53,324	\$135,023	(60.5%)
Deferred Outflows	\$296,984	\$456,203	
Deferred Inflows	\$882,130	\$717,667	
Recognition Period	6.09	5.89	

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 \$356,000. This gain is primarily attributable to the following:

- ◆ a gain due to lower than expected medical premiums since the prior valuation
- ◆ a gain due to a new retiree not covering a spouse since their spouse is also an employee of the District
- ◆ a gain due to fewer active employees retiring than expected
- ◆ a loss due to a new entrant with past service

Changes of Assumptions

The discount rate changed from 3.54% as of June 30, 2022 to 3.66% 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	(4,000)
◆ Increase due to change in Trend Assumption	37,000
◆ Decrease due to change in Mortality Improvement Rates	(51,000)
◆ Decrease due to change in Discount Rate	(33,000)
Total	\$ (51,000)

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 \$1,661,611. The Total OPEB Liability as of the prior measurement date, June 30, 2022, was \$1,978,673. During the current measurement period ending June 30, 2023, the Total OPEB Liability decreased by \$317,062, or -16.0%. 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 \$73,621. The Fiduciary Net Position as of the prior measurement date, June 30, 2022, was \$66,591. During the plan years ended June 30, 2023 and June 30, 2022, the actual rates of return were 10.56% and -9.69%, 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

Employer Future Period Contributions

The District has not adopted a formal funding policy, therefore we have assumed no further contributions will be made to the OPEB trust.

Discount Rate

As of the June 30, 2023 measurement date, the OPEB plan's fiduciary net position was projected to be insufficient to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to the first 2 periods of projected future benefit payments and the 3.65% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 3.66%.

OPEB Expense

The OPEB Expense for the current measurement period ending June 30, 2023, is \$53,324. Benefit changes are recognized immediately, and experience gains and losses and assumption changes developed in this valuation are recognized over 6.09 years. Investment gains and losses are recognized over 5 years. The OPEB Expense for the prior measurement period was \$135,023. 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	\$12,684	\$13,446
Cash & Equivalents	39	56
Large Cap Equity	26,795	21,922
Mid Cap Equity	7,248	6,009
Small Cap Equity	7,225	5,926
International Equity	10,956	8,943
Real Estate	8,674	10,289
Total Market Value of Assets	\$73,621	\$66,591
Asset Activity		
Market value, beginning of year	\$66,591	\$73,734
Employer Premiums	53,734	51,586
OPEB Trust Contributions	-	-
Benefit Payments	(53,734)	(51,586)
Administrative Expenses	-	-
Investment Return	7,030	(7,143)
Market value, end of year	\$73,621	\$66,591
Money-Weighted Rate of Return	10.56%	-9.69%
(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$4,395	\$4,866
Actual earnings	7,030	(7,143)
(Gain) / Loss on OPEB plan investments	(\$2,635)	\$12,009

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	\$1,379,710
b. Retirees, Covered Spouses and Survivors	598,963
c. Total OPEB Liability at 3.54% (a. + b.)	\$1,978,673
2. Service Cost	\$72,670
3. Expected Benefit Payments	
a. Current retirees	(\$38,970)
b. Future retirees	(14,764)
c. Total (a. + b.)	(\$53,734)
4. Interest [3.54% x (1.c. + 2. + .5 x 3.c)]	\$71,666
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	(\$356,416)
7. Changes of assumptions or other inputs	(\$51,248)
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$1,029,280
b. Retirees, Covered Spouses and Survivors	632,331
c. Total OPEB Liability at 3.66% (a. + b.)	\$1,661,611

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

The District has not adopted a formal funding policy, therefore we have assumed no further contributions will be made to the OPEB trust.

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
Discount Rate	3.54%	3.66%
1. Normal Cost	\$72,670	\$69,033
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$1,978,673	\$1,661,611
b. Actuarial Value of Plan Assets	\$66,591	\$73,621
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$1,912,082	\$1,587,990
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$1,912,082	\$1,587,990
b. Amortization Period in years	30	30
c. Payroll Growth Rate	3.5%	3.5%
d. Amortization Factor	29.83	29.34
e. Amortization Amount (3.a. / 3.d.)	\$64,099	\$54,124
4. Interest on 1. and 3.e.	\$4,842	\$4,508
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$141,611	\$127,665
6. Actual Employer Contribution to OPEB Trust	\$0	TBD
7. Expected Benefit Payments	\$53,734	
8. Total Contribution (6. + 7.)	\$53,734	

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.1 - Plan Description

Plan Administration

The Martha's Vineyard Refuse Disposal District administers the retiree health care benefits program - a single-employer defined benefit plan that is used to provide postemployment benefits other than pensions (OPEB) for all permanent full-time employees.

Plan Membership

At June 30, 2023, OPEB plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments ¹	4
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	10
	<u>14</u>

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

Benefits Provided

The District 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 District and retirees.

Employer Future Period Contributions

The District has not adopted a formal funding policy, therefore we have assumed no further contributions will be made to the OPEB trust.

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	\$ 1,661,611
Fiduciary net position	(73,621)
Net OPEB liability	\$ 1,587,990

Fiduciary net position as a percentage of the total OPEB liability 4.43%

Actuarial Assumptions

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

Inflation	2.5% per year, based on current economic data, analyses from economists and other experts, and professional judgment.
Discount rate	3.66%, 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 ¹	Long-Term Expected Real Rates of Return ²
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%	

¹ provided in the Dukes County Pooled OPEB Trust's investment policy statement.

² 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 3.66%. The projection of cash flows used to determine the discount rate assumed that contributions from the District 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 2 periods of projected future benefit payments and the 3.65% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

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

The following presents the net OPEB liability calculated using the current discount rate of 3.66 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (2.66 percent) or 1-percentage point higher (4.66 percent) than the current rate:

	1% Decrease (2.66%)	Assumed Discount Rate (3.66%)	1% Increase (4.66%)
Total OPEB Liability	\$ 1,963,263	\$ 1,661,611	\$ 1,422,513
Fiduciary Net Position	(73,621)	(73,621)	(73,621)
Net OPEB Liability	\$ 1,889,642	\$ 1,587,990	\$ 1,348,892
% Change in Net OPEB Liability	19.0%		-15.1%

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the net OPEB liability calculated using the current healthcare cost trend rates as well as what the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower (7% year 1 decreasing to 3.1%) or 1-percentage point higher (9% year 1 decreasing to 5.1%) than the current healthcare cost trend rates:

	1% Decrease 7% Year 1 Decreasing to 3.1%	Assumed Healthcare Cost Trend Rates 8% Year 1 Decreasing to 4.1%	1% Increase 9% Year 1 Decreasing to 5.1%
Total OPEB Liability	\$ 1,390,834	\$ 1,661,611	\$ 2,013,113
Fiduciary Net Position	(73,621)	(73,621)	(73,621)
Net OPEB Liability	\$ 1,317,213	\$ 1,587,990	\$ 1,939,492
% Change in Net OPEB Liability	-17.1%		22.1%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios

Fiscal Year Ended June 30	2023	2022	2021	2020	2019
Total OPEB Liability					
Service cost	\$ 72,670	\$ 104,589	\$ 114,063	\$ 80,045	\$ 61,848
Interest	71,666	54,093	57,271	69,972	64,257
Changes of benefit terms	-	-	-	(53,824)	-
Differences between expected and actual experience	(356,416)	-	(319,990)	-	(95,375)
Changes of assumptions	(51,248)	(553,911)	113,367	510,942	334,491
Benefit payments	(53,734)	(51,586)	(33,194)	(53,274)	(38,764)
Net change in total OPEB liability	\$ (317,062)	\$ (446,815)	\$ (68,483)	\$ 553,861	\$ 326,457
Total OPEB liability—beginning	\$ 1,978,673	\$ 2,425,488	\$ 2,493,971	\$ 1,940,110	\$ 1,613,653
Total OPEB liability—ending (a)	\$ 1,661,611	\$ 1,978,673	\$ 2,425,488	\$ 2,493,971	\$ 1,940,110
Plan Fiduciary Net Position					
Contributions—employer	\$ 53,734	\$ 51,586	\$ 33,194	\$ 53,274	\$ 38,764
Net investment income	7,030	(7,143)	17,080	2,378	2,491
Benefit payments	(53,734)	(51,586)	(33,194)	(53,274)	(38,764)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
Net change in plan fiduciary net position	\$ 7,030	\$ (7,143)	\$ 17,080	\$ 2,378	\$ 2,491
Plan fiduciary net position—beginning	\$ 66,591	\$ 73,734	\$ 56,654	\$ 54,276	\$ 51,785
Plan fiduciary net position—ending (b)	\$ 73,621	\$ 66,591	\$ 73,734	\$ 56,654	\$ 54,276
Net OPEB liability—ending (a) – (b)	\$ 1,587,990	\$ 1,912,082	\$ 2,351,754	\$ 2,437,317	\$ 1,885,834
Plan fiduciary net position as a percentage of the total OPEB liability	4.43%	3.37%	3.04%	2.27%	2.80%
Covered payroll	\$ 620,724	\$ 710,525	\$ 684,022	\$ 687,735	\$ 627,576
Net OPEB liability as a percentage of covered payroll	255.83%	269.11%	343.81%	354.40%	300.49%
Discount Rate	3.66%	3.54%	2.16%	2.21%	3.51%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Fiscal Year Ended June 30	2018	2017			
Total OPEB Liability					
Service cost	\$ 64,366	\$ 76,023			
Interest	59,418	51,245			
Changes of benefit terms	(2,206)	-			
Differences between expected and actual experience	-	-			
Changes of assumptions	(75,032)	(208,807)			
Benefit payments	(38,027)	(33,337)			
Net change in total OPEB liability	\$ 8,519	\$ (114,876)			
Total OPEB liability—beginning	\$ 1,605,134	\$ 1,720,010			
Total OPEB liability—ending (a)	\$ 1,613,653	\$ 1,605,134			
Plan Fiduciary Net Position					
Contributions—employer	\$ 38,027	\$ 57,873			
Net investment income	1,954	1,070			
Benefit payments	(38,027)	(33,337)			
Administrative expenses	-	-			
Other	-	-			
Net change in plan fiduciary net position	\$ 1,954	\$ 25,606			
Plan fiduciary net position—beginning	\$ 49,831	\$ 24,225			
Plan fiduciary net position—ending (b)	\$ 51,785	\$ 49,831			
Net OPEB liability—ending (a) – (b)	\$ 1,561,868	\$ 1,555,303			
Plan fiduciary net position as a percentage of the total OPEB liability	3.21%	3.10%			
Covered payroll	\$ 658,288	\$ 519,613			
Net OPEB liability as a percentage of covered payroll	237.26%	299.32%			
Discount rate	3.88%	3.60%			

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

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

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

Notes to Schedule

Changes of Benefit Terms

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

Changes of Assumptions

The discount rate changed from 3.54% as of June 30, 2022 to 3.66% 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	10.56%	-9.69%	30.15%	4.38%	4.81%	3.92%	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 _{mw}) ^(c)
Beginning value - July 1, 2022	\$ 66,591	12	1.00	\$ 73,621
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	-	2	0.17	-
May	-	1	0.08	-
June	-	0	0.00	-
Ending value - June 30, 2023				\$ 73,621
Money-weighted rate of return:				10.56%

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	\$ 141,611	\$ 172,726	\$ 185,401	\$ 148,009	\$ 121,256
Contributions in relation to the actuarially determined contribution	53,734	51,586	33,194	53,274	38,764
Contribution deficiency (excess)	\$ 87,877	\$ 121,140	\$ 152,207	\$ 94,735	\$ 82,492
Covered payroll	\$ 620,724	\$ 710,525	\$ 684,022	\$ 687,735	\$ 627,576
Contributions as a percentage of covered payroll	8.66%	7.26%	4.85%	7.75%	6.18%
Discount rate	3.54%	2.16%	2.21%	3.51%	3.88%
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	\$ 117,448	\$ 75,839			
Contributions in relation to the actuarially determined contribution	38,027	57,873			
Contribution deficiency (excess)	\$ 79,421	\$ 17,966			
Covered payroll	\$ 658,288	\$ 519,613			
Contributions as a percentage of covered payroll	5.78%	11.14%			
Discount rate	3.60%	6.40%			
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	-	95,375	(77,540)	-	17,835
2020	-	-	-	-	-
2021	-	319,990	(162,984)	-	157,006
2022	-	-	-	-	-
2023	-	356,416	(58,525)	-	297,891
Total				<u>\$ -</u>	<u>\$ 472,732</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	\$ -	\$ 75,032	\$ (74,292)	\$ -	\$ 740
2019	334,491	-	271,945	62,546	-
2020	510,942	-	332,320	178,622	-
2021	113,367	-	57,741	55,626	-
2022	-	553,911	(188,086)	-	365,825
2023	-	51,248	(8,415)	-	42,833
Total				<u>\$ 296,794</u>	<u>\$ 409,398</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	\$ 1,783	\$ -	\$ 1,783	\$ -	\$ -	
2019	1,393	-	1,393	-	-	
2020	1,693	-	1,355	338	-	
2021	-	13,114	(7,869)	-	5,245	
2022	12,009	-	4,804	7,205	-	
2023	-	2,635	(527)	-	2,108	
Subtotal				\$ 7,543	\$ 7,353	
Net				\$ 190	\$ -	

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	\$	(75,253)
2025	\$	(107,901)
2026	\$	(177,865)
2027	\$	(151,163)
2028	\$	(66,940)
Thereafter		(6,024)
Deferred Outflows	\$	296,984
Deferred Inflows	\$	882,130

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	\$ 72,670
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	1,978,673
b. Service cost, beginning of year	72,670
c. Benefit payments	(53,734)
d. Interest on total OPEB liability = 3.54% times (a. + b. + .5 times c.)	71,666
3. Differences between expected and actual experience	(128,361)
4. Changes of benefit terms	-
5. Changes of assumptions	41,876
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	66,591
b. Contributions - Employer	53,734
c. Benefit payments	(53,734)
d. Administrative expenses and other	-
e. Total projected earnings	(4,395)
7. Differences between projected and actual earnings on OPEB plan investments	(132)
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense	\$ 53,324

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Eligibility for Postemployment Benefits Employees of the District and their dependents are eligible for postemployment medical, 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

Dental Coverage

Dental coverage is provided. The total monthly costs are \$42.00 and \$109.00 for individual and family plans, respectively. Retirees contribute 100% of the monthly premiums.

Life Insurance Coverage

Life insurance coverage is not offered to retirees.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date	July 1, 2022
Disclosure Date	June 30, 2023
GASB 75 Reporting Date	June 30, 2023
Long-Term Expected Rate of Return	<p>6.5%, 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>
Municipal Bond Rate	3.65%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2023.
Discount Rate (GASB)	<p>3.66%, compounded annually, for the measurement as of June 30, 2023.</p> <p>3.54%, compounded annually, for the measurement as of June 30, 2022.</p> <p>The single rate that reflects the long-term expected rate of return on OPEB plan investments to the extent that the OPEB plan's assets, which are expected to be invested using a strategy to achieve that return, are sufficient to pay benefits, and a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.</p>
Discount Rate (ADEC)	3.54%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2023.
Amortization Method	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

Not applicable as retirees pay 100% of the dental premium.

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 - Not applicable as retirees pay 100% of dental premium.

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.

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

For current retirees, the actual census information is used.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Per Capita Costs

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

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

Retiree Contributions

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

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

Actuarial Cost Method

Entry Age Normal. The costs of each employee's postemployment benefits are allocated as a level basis over the earnings of the employee between the employee's date of hire and the assumed exit ages.

Actuarial Value of Assets

Market value of assets as of the disclosure date.

Census Data

Employee and retiree data were compiled and submitted by the District as of May 31, 2023. We made reasonable adjustments for missing or invalid data.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Use of ProVal®

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

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

General 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:

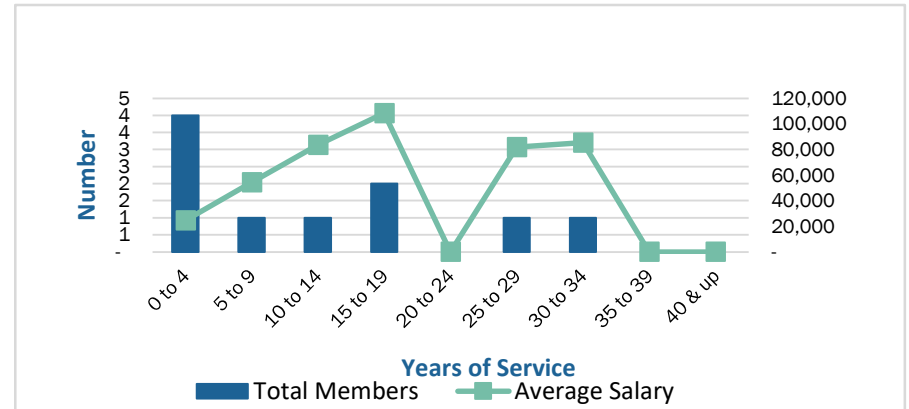
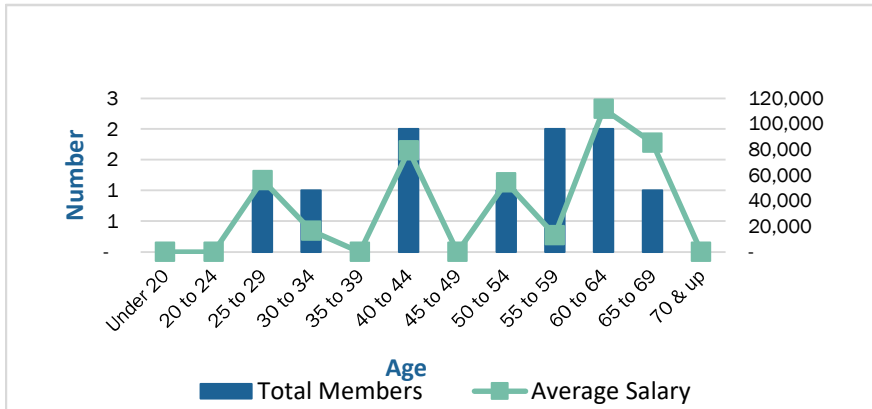
General Employees		
Age	Male	Female
45	0.00%	0.00%
50	1.00%	1.50%
55	2.00%	5.50%
60	12.00%	5.00%
62	30.00%	15.00%
65	40.00%	15.00%
69	30.00%	20.00%
70	100.00%	100.00%

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	1	-	-	-	-	-	-	-	-	1	56,049	56,049
30 to 34	1	-	-	-	-	-	-	-	-	1	16,496	16,496
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	-	-	1	1	-	-	-	-	-	2	158,662	79,331
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-
50 to 54	-	1	-	-	-	-	-	-	-	1	54,294	54,294
55 to 59	2	-	-	-	-	-	-	-	-	2	26,295	13,148
60 to 64	-	-	-	1	-	1	-	-	-	2	223,548	111,774
65 to 69	-	-	-	-	-	-	1	-	-	1	85,380	85,380
70 & up	-	-	-	-	-	-	-	-	-	-	-	-
Total	4	1	1	2	-	1	1	-	-	10	620,724	62,072
Total Salary	98,841	54,294	83,592	216,700	-	81,919	85,380	-	-			
Average Salary	24,710	54,294	83,592	108,350	-	81,919	85,380	-	-			

Average Age: 51.3 Average Service: 12.2



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	1	0	1
65 to 69	0	0	0	0	0	1	0	1
70 to 74	0	0	0	0	0	1	0	1
75 to 79	0	0	0	0	0	1	0	1
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	4	0	4
Covered Spouses	0	0	0	0	0	3	0	3

Average Age: 71.5

SECTION 8 - GLOSSARY OF TERMS

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

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

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

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

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

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

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

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

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

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

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

SECTION 8 - GLOSSARY OF TERMS

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

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

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

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

GASB – Governmental Accounting Standards Board.

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

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

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

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

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

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

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

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

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

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

SECTION 8 - GLOSSARY OF TERMS

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

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

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

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

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.

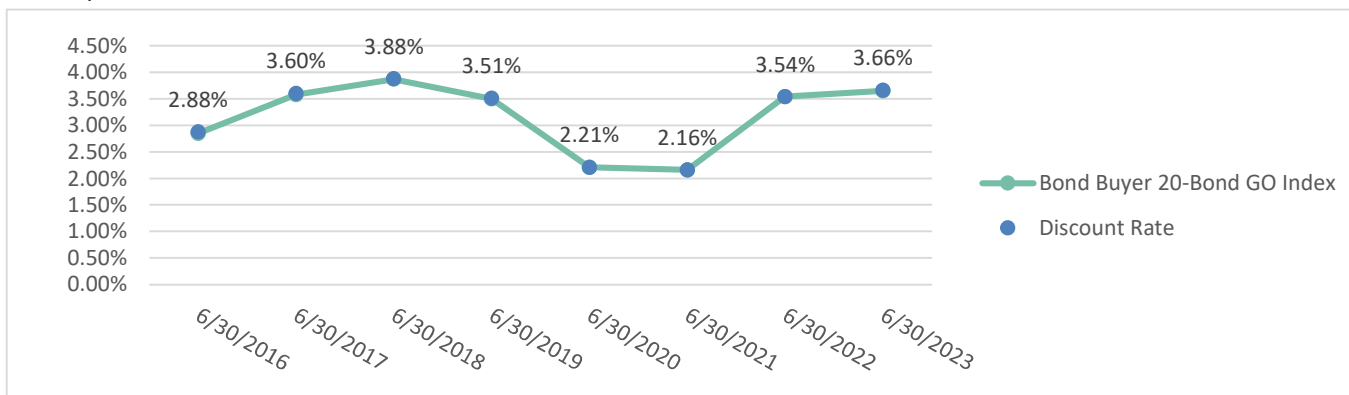
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. 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 3.66%, a long-term investment return rate of 6.5% and a municipal bond rate of 3.65%, based on the Bond Buyer 20-Bond GO Index published on June 30, 2023. The OPEB plan's fiduciary net position was projected to be insufficient to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to the first 2 periods of projected future benefit payments and the 3.65% municipal bond rate was applied to all periods thereafter to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 3.66%.

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



APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Projected Payroll			Projected Contributions				
Year	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 10.41%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2023	640,724	-	640,724	53,734	-	-	53,734
2024	546,204	116,945	663,149	51,112	-	12,174	38,938
2025	480,136	206,223	686,359	55,230	-	21,468	33,762
2026	424,288	286,094	710,382	55,001	-	29,782	25,219
2027	341,336	393,909	735,245	60,267	-	41,006	19,261
2028	320,278	440,701	760,979	57,011	-	45,877	11,134
2029	304,269	483,344	787,613	52,199	-	50,316	1,883
2030	289,693	525,486	815,179	59,073	-	54,703	4,370
2031	269,348	574,362	843,710	64,679	-	59,791	4,888
2032	250,942	622,298	873,240	68,957	-	64,781	4,176
2033	244,398	659,405	903,803	77,710	-	68,644	9,066
2034	233,951	701,485	935,436	80,414	-	73,024	7,390
2035	211,871	756,305	968,176	85,681	-	78,731	6,950
2036	203,727	798,335	1,002,062	95,327	-	83,106	12,221
2037	194,629	842,505	1,037,134	100,791	-	87,704	13,087
2038	184,623	888,811	1,073,434	111,367	-	92,525	18,842
2039	173,038	937,966	1,111,004	126,551	-	97,642	28,909
2040	153,065	996,824	1,149,889	139,671	-	103,769	35,902
2041	132,766	1,057,369	1,190,135	143,925	-	110,072	33,853
2042	117,521	1,114,269	1,231,790	149,837	-	115,995	33,842
2043	107,126	1,167,777	1,274,903	137,914	-	121,565	16,349
2044	92,750	1,226,775	1,319,525	116,049	-	127,707	-
2045	85,521	1,280,187	1,365,708	116,242	-	133,267	-
2046	77,997	1,335,511	1,413,508	102,978	-	139,026	-
2047	71,746	1,391,235	1,462,981	100,975	-	144,827	-
2048	65,880	1,448,305	1,514,185	100,397	-	150,768	-
2049	60,543	1,506,638	1,567,181	103,632	-	156,840	-
2050	48,550	1,573,482	1,622,032	100,628	-	163,799	-
2051	49,543	1,629,260	1,678,803	99,941	-	169,605	-
2052	50,545	1,687,016	1,737,561	100,461	-	175,617	-
2053	50,263	1,748,113	1,798,376	104,425	-	181,978	-
2054	49,334	1,811,985	1,861,319	113,019	-	188,627	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 10.41%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2055	47,958	1,878,507	1,926,465	122,002	-	195,551	-
2056	41,837	1,952,054	1,993,891	126,627	-	203,208	-
2057	35,915	2,027,762	2,063,677	111,138	-	211,089	-
2058	31,085	2,104,821	2,135,906	114,350	-	219,111	-
2059	25,800	2,184,863	2,210,663	101,121	-	227,443	-
2060	22,167	2,265,869	2,288,036	83,952	-	235,876	-
2061	17,921	2,350,196	2,368,117	84,437	-	244,654	-
2062	14,495	2,436,506	2,451,001	83,328	-	253,639	-
2063	10,622	2,526,164	2,536,786	82,229	-	262,972	-
2064	8,637	2,616,937	2,625,574	84,754	-	272,422	-
2065	-	2,717,469	2,717,469	82,822	-	282,887	-
2066	-	2,812,580	2,812,580	83,317	-	292,788	-
2067	-	2,911,020	2,911,020	82,185	-	303,036	-
2068	-	3,012,906	3,012,906	80,438	-	313,642	-
2069	-	3,118,358	3,118,358	80,731	-	324,619	-
2070	-	3,227,501	3,227,501	78,438	-	335,981	-
2071	-	3,340,464	3,340,464	77,352	-	347,740	-
2072	-	3,457,380	3,457,380	75,453	-	359,911	-
2073	-	3,578,388	3,578,388	72,281	-	372,508	-
2074	-	3,703,632	3,703,632	70,033	-	385,546	-
2075	-	3,833,259	3,833,259	67,441	-	399,040	-
2076	-	3,967,423	3,967,423	64,547	-	413,006	-
2077	-	4,106,283	4,106,283	62,433	-	427,462	-
2078	-	4,250,003	4,250,003	58,867	-	442,423	-
2079	-	4,398,753	4,398,753	57,470	-	457,908	-
2080	-	4,552,709	4,552,709	55,217	-	473,934	-
2081	-	4,712,054	4,712,054	52,652	-	490,522	-
2082	-	4,876,976	4,876,976	50,444	-	507,690	-
2083	-	5,047,670	5,047,670	47,053	-	525,460	-
2084	-	5,224,338	5,224,338	44,884	-	543,851	-
2085	-	5,407,190	5,407,190	42,078	-	562,885	-
2086	-	5,596,442	5,596,442	38,895	-	582,586	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 10.41%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2087	-	5,792,317	5,792,317	35,806	-	602,977	-
2088	-	5,995,048	5,995,048	32,093	-	624,081	-
2089	-	6,204,875	6,204,875	27,962	-	645,924	-
2090	-	6,422,046	6,422,046	24,171	-	668,531	-
2091	-	6,646,818	6,646,818	20,811	-	691,930	-
2092	-	6,879,457	6,879,457	17,651	-	716,148	-
2093	-	7,120,238	7,120,238	14,719	-	741,213	-
2094	-	7,369,446	7,369,446	12,043	-	767,155	-
2095	-	7,627,377	7,627,377	9,653	-	794,006	-
2096	-	7,894,335	7,894,335	7,568	-	821,796	-
2097	-	8,170,637	8,170,637	5,795	-	850,559	-
2098	-	8,456,609	8,456,609	4,329	-	880,328	-
2099	-	8,752,590	8,752,590	3,149	-	911,140	-
2100	-	9,058,931	9,058,931	2,227	-	943,030	-
2101	-	9,375,994	9,375,994	1,531	-	976,036	-
2102	-	9,704,154	9,704,154	1,020	-	1,010,197	-
2103	-	10,043,799	10,043,799	659	-	1,045,554	-
2104	-	10,395,332	10,395,332	412	-	1,082,148	-
2105	-	10,759,169	10,759,169	249	-	1,120,023	-
2106	-	11,135,740	11,135,740	146	-	1,159,224	-
2107	-	11,525,491	11,525,491	82	-	1,199,797	-
2108	-	11,928,883	11,928,883	45	-	1,241,790	-
2109	-	12,346,394	12,346,394	24	-	1,285,253	-
2110	-	12,778,518	12,778,518	13	-	1,330,236	-
2111	-	13,225,766	13,225,766	7	-	1,376,795	-
2112	-	13,688,668	13,688,668	3	-	1,424,982	-
2113	-	14,167,771	14,167,771	2	-	1,474,857	-
2114	-	14,663,643	14,663,643	1	-	1,526,477	-
2115	-	15,176,871	15,176,871	-	-	1,579,904	-
2116	-	15,708,061	15,708,061	-	-	1,635,200	-
2117	-	16,257,843	16,257,843	-	-	1,692,432	-

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	66,591	53,734	53,734	-	7,030	73,621
2024	73,621	38,938	51,112	-	4,390	65,837
2025	65,837	33,762	55,230	-	3,582	47,951
2026	47,951	25,219	55,001	-	2,149	20,318
2027	20,318	19,261	60,267	-	-	-
2028	-	11,134	57,011	-	-	-
2029	-	1,883	52,199	-	-	-
2030	-	4,370	59,073	-	-	-
2031	-	4,888	64,679	-	-	-
2032	-	4,176	68,957	-	-	-
2033	-	9,066	77,710	-	-	-
2034	-	7,390	80,414	-	-	-
2035	-	6,950	85,681	-	-	-
2036	-	12,221	95,327	-	-	-
2037	-	13,087	100,791	-	-	-
2038	-	18,842	111,367	-	-	-
2039	-	28,909	126,551	-	-	-
2040	-	35,902	139,671	-	-	-
2041	-	33,853	143,925	-	-	-
2042	-	33,842	149,837	-	-	-
2043	-	16,349	137,914	-	-	-
2044	-	-	116,049	-	-	-
2045	-	-	116,242	-	-	-
2046	-	-	102,978	-	-	-
2047	-	-	100,975	-	-	-
2048	-	-	100,397	-	-	-
2049	-	-	103,632	-	-	-
2050	-	-	100,628	-	-	-
2051	-	-	99,941	-	-	-
2052	-	-	100,461	-	-	-
2053	-	-	104,425	-	-	-
2054	-	-	113,019	-	-	-
2055	-	-	122,002	-	-	-
2056	-	-	126,627	-	-	-

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	-	-	111,138	-	-	-
2058	-	-	114,350	-	-	-
2059	-	-	101,121	-	-	-
2060	-	-	83,952	-	-	-
2061	-	-	84,437	-	-	-
2062	-	-	83,328	-	-	-
2063	-	-	82,229	-	-	-
2064	-	-	84,754	-	-	-
2065	-	-	82,822	-	-	-
2066	-	-	83,317	-	-	-
2067	-	-	82,185	-	-	-
2068	-	-	80,438	-	-	-
2069	-	-	80,731	-	-	-
2070	-	-	78,438	-	-	-
2071	-	-	77,352	-	-	-
2072	-	-	75,453	-	-	-
2073	-	-	72,281	-	-	-
2074	-	-	70,033	-	-	-
2075	-	-	67,441	-	-	-
2076	-	-	64,547	-	-	-
2077	-	-	62,433	-	-	-
2078	-	-	58,867	-	-	-
2079	-	-	57,470	-	-	-
2080	-	-	55,217	-	-	-
2081	-	-	52,652	-	-	-
2082	-	-	50,444	-	-	-
2083	-	-	47,053	-	-	-
2084	-	-	44,884	-	-	-
2085	-	-	42,078	-	-	-
2086	-	-	38,895	-	-	-
2087	-	-	35,806	-	-	-
2088	-	-	32,093	-	-	-
2089	-	-	27,962	-	-	-
2090	-	-	24,171	-	-	-

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	-	-	20,811	-	-	-
2092	-	-	17,651	-	-	-
2093	-	-	14,719	-	-	-
2094	-	-	12,043	-	-	-
2095	-	-	9,653	-	-	-
2096	-	-	7,568	-	-	-
2097	-	-	5,795	-	-	-
2098	-	-	4,329	-	-	-
2099	-	-	3,149	-	-	-
2100	-	-	2,227	-	-	-
2101	-	-	1,531	-	-	-
2102	-	-	1,020	-	-	-
2103	-	-	659	-	-	-
2104	-	-	412	-	-	-
2105	-	-	249	-	-	-
2106	-	-	146	-	-	-
2107	-	-	82	-	-	-
2108	-	-	45	-	-	-
2109	-	-	24	-	-	-
2110	-	-	13	-	-	-
2111	-	-	7	-	-	-
2112	-	-	3	-	-	-
2113	-	-	2	-	-	-
2114	-	-	1	-	-	-
2115	-	-	-	-	-	-
2116	-	-	-	-	-	-
2117	-	-	-	-	-	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

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

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g) = 3.66%
2024	73,621	51,112	51,112	-	49,528	-	50,203
2025	65,837	55,230	55,230	-	50,252	-	52,334
2026	47,951	55,001	-	55,001	-	50,286	50,279
2027	20,318	60,267	-	60,267	-	53,160	53,149
2028	-	57,011	-	57,011	-	48,517	48,505
2029	-	52,199	-	52,199	-	42,858	42,844
2030	-	59,073	-	59,073	-	46,794	46,776
2031	-	64,679	-	64,679	-	49,430	49,409
2032	-	68,957	-	68,957	-	50,844	50,819
2033	-	77,710	-	77,710	-	55,280	55,250
2034	-	80,414	-	80,414	-	55,189	55,155
2035	-	85,681	-	85,681	-	56,733	56,695
2036	-	95,327	-	95,327	-	60,898	60,853
2037	-	100,791	-	100,791	-	62,121	62,072
2038	-	111,367	-	111,367	-	66,222	66,166
2039	-	126,551	-	126,551	-	72,601	72,535
2040	-	139,671	-	139,671	-	77,306	77,232
2041	-	143,925	-	143,925	-	76,855	76,777
2042	-	149,837	-	149,837	-	77,195	77,112
2043	-	137,914	-	137,914	-	68,550	68,472
2044	-	116,049	-	116,049	-	55,651	55,584
2045	-	116,242	-	116,242	-	53,780	53,713
2046	-	102,978	-	102,978	-	45,966	45,906
2047	-	100,975	-	100,975	-	43,485	43,425
2048	-	100,397	-	100,397	-	41,713	41,654
2049	-	103,632	-	103,632	-	41,541	41,479
2050	-	100,628	-	100,628	-	38,916	38,856
2051	-	99,941	-	99,941	-	37,290	37,230
2052	-	100,461	-	100,461	-	36,164	36,104
2053	-	104,425	-	104,425	-	36,267	36,205
2054	-	113,019	-	113,019	-	37,869	37,802
2055	-	122,002	-	122,002	-	39,440	39,367

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) = 3.66%
2056	-	126,627	-	126,627	-	39,493	39,419
2057	-	111,138	-	111,138	-	33,442	33,377
2058	-	114,350	-	114,350	-	33,197	33,130
2059	-	101,121	-	101,121	-	28,322	28,264
2060	-	83,952	-	83,952	-	22,686	22,638
2061	-	84,437	-	84,437	-	22,013	21,965
2062	-	83,328	-	83,328	-	20,959	20,912
2063	-	82,229	-	82,229	-	19,954	19,909
2064	-	84,754	-	84,754	-	19,843	19,796
2065	-	82,822	-	82,822	-	18,708	18,663
2066	-	83,317	-	83,317	-	18,157	18,112
2067	-	82,185	-	82,185	-	17,279	17,236
2068	-	80,438	-	80,438	-	16,317	16,274
2069	-	80,731	-	80,731	-	15,799	15,757
2070	-	78,438	-	78,438	-	14,810	14,770
2071	-	77,352	-	77,352	-	14,091	14,052
2072	-	75,453	-	75,453	-	13,261	13,223
2073	-	72,281	-	72,281	-	12,256	12,221
2074	-	70,033	-	70,033	-	11,457	11,423
2075	-	67,441	-	67,441	-	10,644	10,612
2076	-	64,547	-	64,547	-	9,829	9,799
2077	-	62,433	-	62,433	-	9,172	9,143
2078	-	58,867	-	58,867	-	8,343	8,317
2079	-	57,470	-	57,470	-	7,859	7,833
2080	-	55,217	-	55,217	-	7,285	7,261
2081	-	52,652	-	52,652	-	6,702	6,679
2082	-	50,444	-	50,444	-	6,194	6,173
2083	-	47,053	-	47,053	-	5,575	5,555
2084	-	44,884	-	44,884	-	5,130	5,112
2085	-	42,078	-	42,078	-	4,640	4,624
2086	-	38,895	-	38,895	-	4,138	4,123
2087	-	35,806	-	35,806	-	3,675	3,662

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) = 3.66%
2088	-	32,093	-	32,093	-	3,178	3,166
2089	-	27,962	-	27,962	-	2,672	2,661
2090	-	24,171	-	24,171	-	2,228	2,219
2091	-	20,811	-	20,811	-	1,851	1,844
2092	-	17,651	-	17,651	-	1,515	1,508
2093	-	14,719	-	14,719	-	1,218	1,214
2094	-	12,043	-	12,043	-	962	958
2095	-	9,653	-	9,653	-	744	741
2096	-	7,568	-	7,568	-	563	560
2097	-	5,795	-	5,795	-	416	414
2098	-	4,329	-	4,329	-	300	298
2099	-	3,149	-	3,149	-	210	209
2100	-	2,227	-	2,227	-	143	143
2101	-	1,531	-	1,531	-	95	95
2102	-	1,020	-	1,020	-	61	61
2103	-	659	-	659	-	38	38
2104	-	412	-	412	-	23	23
2105	-	249	-	249	-	13	13
2106	-	146	-	146	-	8	8
2107	-	82	-	82	-	4	4
2108	-	45	-	45	-	2	2
2109	-	24	-	24	-	1	1
2110	-	13	-	13	-	1	1
2111	-	7	-	7	-	-	-
2112	-	3	-	3	-	-	-
2113	-	2	-	2	-	-	-
2114	-	1	-	1	-	-	-
2115	-	-	-	-	-	-	-
2116	-	-	-	-	-	-	-
2117	-	-	-	-	-	-	-

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

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	-	6.06	-	-	-	-	-	-	-	-	-	-
2019	(95,375)	6.15	(15,508)	(15,508)	(2,327)	-	-	-	-	-	-	-
2020	-	6.15	-	-	-	-	-	-	-	-	-	-
2021	(319,990)	5.89	(54,328)	(54,328)	(54,328)	(48,350)	-	-	-	-	-	-
2022	-	5.89	-	-	-	-	-	-	-	-	-	-
2023	(356,416)	6.09	(58,525)	(58,525)	(58,525)	(58,525)	(58,525)	(58,525)	(5,266)	-	-	-
Net Increase (Decrease) in OPEB Expense			(128,361)	(128,361)	(115,180)	(106,875)	(58,525)	(58,525)	(5,266)	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	(75,032)	6.06	(12,382)	(740)	-	-	-	-	-	-	-	-
2019	334,491	6.15	54,389	54,389	8,157	-	-	-	-	-	-	-
2020	510,942	6.15	83,080	83,080	83,080	12,462	-	-	-	-	-	-
2021	113,367	5.89	19,247	19,247	19,247	17,132	-	-	-	-	-	-
2022	(553,911)	5.89	(94,043)	(94,043)	(94,043)	(94,043)	(83,696)	-	-	-	-	-
2023	(51,248)	6.09	(8,415)	(8,415)	(8,415)	(8,415)	(8,415)	(8,415)	(758)	-	-	-
Net Increase (Decrease) in OPEB Expense			41,876	53,518	8,026	(72,864)	(92,111)	(8,415)	(758)	-	-	-

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	1,783	5	-	-	-	-	-	-	-	-	-	-
2019	1,393	5	278	-	-	-	-	-	-	-	-	-
2020	1,693	5	338	338	-	-	-	-	-	-	-	-
2021	(13,114)	5	(2,623)	(2,623)	(2,622)	-	-	-	-	-	-	-
2022	12,009	5	2,402	2,402	2,402	2,401	-	-	-	-	-	-
2023	(2,635)	5	(527)	(527)	(527)	(527)	(527)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(132)	(410)	(747)	1,874	(527)	-	-	-	-	-