



OAK BLUFFS WATER 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

Ms. Coreen Alton
Office Administrator
Oak Bluffs Water District
PO Box 1297
Oak Bluffs, MA 02557

Dear Coreen:

We are pleased to present the enclosed report of the July 1, 2022 actuarial valuation of the retiree health care benefits for the Oak Bluffs Water 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 Oak Bluffs Water 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 6.5%, the rate that reflects the long-term expected rate of return on OPEB plan assets. The long-term expected rate of return is based on the target allocations provided in the Dukes County Pooled OPEB Trust's investment policy statement and long-term expected rates of return by asset class obtained from recent surveys of capital market expectations and other reliable sources.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions other than those explicitly applicable to the postemployment benefit plans are consistent with those used by the Dukes County Retirement System's actuaries for the Retirement System pension valuations.

Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques. The potential range of future measurements was not assessed as it was outside the scope of the project.

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

This valuation report is intended for the sole use of the Oak Bluffs Water 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 Oak Bluffs Water 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 Oak Bluffs Water 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.

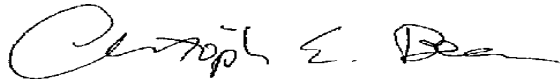
Respectfully submitted,



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



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



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

TABLE OF CONTENTS

EXECUTIVE SUMMARY		1
SECTION 1	PRINCIPAL VALUATION RESULTS	5
	Exhibit 1.1 - OPEB Trust Assets	
	Exhibit 1.2 - Total OPEB Liability	
	Exhibit 1.3 - Development of Actuarially Determined Employer Contributions	
SECTION 2	NOTES TO THE FINANCIAL STATEMENTS	8
	Exhibit 2.1 - Plan Description	
	Exhibit 2.2 - Net OPEB Liability	
SECTION 3	SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION	12
	Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios	
	Exhibit 3.2 - Investment Returns	
	Exhibit 3.3 - Schedule of Employer Contributions	
SECTION 4	EMPLOYER REPORTING AMOUNTS UNDER GASB 75	19
	Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources	
	Exhibit 4.2 - OPEB Expense	
SECTION 5	SUMMARY OF PLAN PROVISIONS	22
SECTION 6	ACTUARIAL ASSUMPTIONS AND METHODS	24
SECTION 7	PLAN MEMBER INFORMATION	30
	Exhibit 7.1 - Active Members by Age and Years of Service	
	Exhibit 7.2 - Retired Members, Covered Spouses and Survivors	
SECTION 8	GLOSSARY OF TERMS	32
Appendix A	CALCULATION OF SINGLE DISCOUNT RATE	
Appendix B	SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES and DEFERRED INFLOWS OF RESOURCES	

EXECUTIVE SUMMARY

Purpose of Report

This report presents the results of the actuarial valuation of the Oak Bluffs Water 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, however, GASB 74 is effective in the plan year ending June 30, 2022 for the Oak Bluffs Water District since participation in the OPEB trust did not begin until this year. 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 Oak Bluffs Water 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

Oak Bluffs Water District Other Postemployment Benefits Program

The Oak Bluffs Water 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	12	(16.7%)
Inactive Plan Members (excludes covered spouses)	5	6	(16.7%)
Total Plan Members	15	18	(16.7%)
Covered Spouses	2	2	0.0%
Covered Payroll	\$650,535	\$677,484	(4.0%)
Net OPEB Liability			
Discount Rate	6.50%	6.60%	
Total OPEB Liability (TOL)	\$1,643,319	\$1,683,191	(2.4%)
Fiduciary Net Position (FNP)	\$638,873	\$486,424	31.3%
Net OPEB Liability	\$1,004,446	\$1,196,767	(16.1%)
FNP as % of TOL	38.9%	28.9%	34.6%
OPEB Expense			
OPEB Expense	\$46,115	\$152,488	(69.8%)
Deferred Outflows	\$445,083	\$719,214	
Deferred Inflows	\$1,310,832	\$1,503,303	
Recognition Period	5.53	5.43	

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 \$189,000. This gain is primarily attributable to:

- ◆ a gain due to lower than expected medical premiums since the prior valuation
- ◆ a gain due to fewer retirements and more terminations than expected

Changes of Assumptions

The discount rate changed from 6.6% as of June 30, 2022 to 6.5% as of June 30, 2023. In addition, many other assumptions were updated in this valuation, including the inflation rate, healthcare trend rates, mortality improvement rates, and participation rates. A summary of the impact on the Total OPEB Liability (TOL) of each assumption change is provided below:

◆ Decrease due to change in Inflation Assumption	(1,000)
◆ Increase due to change in Trend Assumption	59,000
◆ Decrease due to change in Mortality Improvement Rates	(29,000)
◆ Increase due to change in Participation Rates	1,000
◆ Increase due to change in Discount Rate	20,000
Total	\$ 50,000

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 \$1,643,319. The Total OPEB Liability as of the prior measurement date, June 30, 2022, was \$1,683,191. During the current measurement period ending June 30, 2023, the Total OPEB Liability decreased by \$39,872, or -2.4%. 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 \$638,873. The Fiduciary Net Position as of the prior measurement date, June 30, 2022, was \$486,424. During the plan years ended 2023 and 2022, the actual rates of return were 10.78% and -28.13%, respectively. The expected long-term rate of return is 6.50%. The Fiduciary Net Position is shown in Section 1, Exhibit 1.1.

Employer Future Period Contributions

The District is expected to contribute \$100,000 per year beginning in FY2023.

EXECUTIVE SUMMARY

Discount Rate

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

OPEB Expense

The OPEB Expense for the current measurement period ending June 30, 2023, is \$46,115. Benefit changes are recognized immediately, and experience gains and losses and assumption changes developed in this valuation are recognized over 5.53 years. Investment gains and losses are recognized over 5 years. The OPEB Expense for the prior measurement period was \$152,488. 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	\$ 110,066	\$ 98,222
Cash & Equivalents	342	411
Large Cap Equity	232,523	160,125
Mid Cap Equity	62,897	43,894
Small Cap Equity	62,701	43,289
International Equity	95,074	65,327
Real Estate	75,270	75,156
Total Market Value of Assets	\$638,873	\$486,424
Asset Activity		
Market value, beginning of year	\$486,424	\$0
Employer Premiums	56,776	76,483
OPEB Trust Contributions	100,000	500,000
Benefit Payments	(56,776)	(76,483)
Administrative Expenses	-	-
Investment Return	52,449	(13,576)
Market value, end of year	\$638,873	\$486,424
Money-Weighted Rate of Return	10.78%	-28.13%
(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$32,104	\$2,670
Actual earnings	52,449	(13,576)
(Gain) / Loss on OPEB plan investments	(\$20,345)	\$16,246

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	\$763,989
b. Retirees, Covered Spouses and Survivors	919,202
c. Total OPEB Liability at 6.6% (a. + b.)	\$1,683,191
2. Service Cost	\$44,552
3. Expected Benefit Payments	
a. Current retirees	(\$52,108)
b. Future retirees	(4,668)
c. Total (a. + b.)	(\$56,776)
4. Interest [6.6% x (1.c. + 2. + .5 x 3.c)]	\$112,157
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	(\$189,056)
7. Changes of assumptions or other inputs	\$49,251
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$750,076
b. Retirees, Covered Spouses and Survivors	893,243
c. Total OPEB Liability at 6.5% (a. + b.)	\$1,643,319

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

The District is expected to contribute \$100,000 per year beginning in FY2023.

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	6.60%	6.50%
1. Normal Cost	\$44,552	\$39,005
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$1,683,191	\$1,643,319
b. Actuarial Value of Plan Assets	\$486,424	\$638,873
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$1,196,767	\$1,004,446
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$1,196,767	\$1,004,446
b. Amortization Period in years	30	30
c. Payroll Growth Rate	3.5%	3.5%
d. Amortization Factor	20.20	20.44
e. Amortization Amount (3.a. / 3.d.)	\$59,246	\$49,141
4. Interest on 1. and 3.e.	\$6,851	\$5,729
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$110,649	\$93,875
6. Actual Employer Contribution to OPEB Trust	\$100,000	TBD
7. Expected Benefit Payments	\$56,776	
8. Total Contribution (6. + 7.)	\$156,776	

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.1 - Plan Description

Plan Administration

The Oak Bluffs Water 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	5
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	10
	<u>15</u>

¹Per paragraph 50c of GASB 75 and further clarified by Question 4.148 of the 2017-3 GASB 75 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 is expected to contribute \$100,000 per year beginning in FY2023.

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	\$ 1,643,319
Fiduciary net position	(638,873)
Net OPEB liability	\$ 1,004,446

Fiduciary net position as a percentage of the total OPEB liability 38.88%

Actuarial Assumptions

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

Inflation	2.5% per year, based on current economic data, analyses from economists and other experts, and professional judgment.
Discount rate	6.5%, net of investment expenses, including inflation.
Healthcare cost trend rate	8% for 2022, decreasing 0.5% per year to 6%, then grading down to an ultimate trend rate of 4.1%, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical trend rate is reached in 2075.
Pre-Retirement Mortality	RP-2014 Blue Collar Mortality Table, projected with generational mortality improvement using scale MP-2020.
Post-Retirement 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 6.5%. 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 available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

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

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

	1% Decrease (5.5%)	Assumed Discount Rate (6.5%)	1% Increase (7.5%)
Total OPEB Liability	\$ 1,865,409	\$ 1,643,319	\$ 1,460,117
Fiduciary Net Position	(638,873)	(638,873)	(638,873)
Net OPEB Liability	\$ 1,226,536	\$ 1,004,446	\$ 821,244
% Change in Net OPEB Liability	22.1%		-18.2%

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	\$ 1,440,425	\$ 1,643,319	\$ 1,890,904
Fiduciary Net Position	(638,873)	(638,873)	(638,873)
Net OPEB Liability	\$ 801,552	\$ 1,004,446	\$ 1,252,031
% Change in Net OPEB Liability	-20.2%		24.6%

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	\$ 44,552	\$ 131,956	\$ 138,877	\$ 98,616	\$ 78,825
Interest	112,157	72,342	71,483	88,840	55,657
Changes of benefit terms	-	-	-	(101,295)	-
Differences between expected and actual experience	(189,056)	-	(159,346)	-	594,329
Changes of assumptions	49,251	(1,700,074)	143,110	625,018	390,125
Benefit payments	(56,776)	(76,483)	(68,687)	(41,661)	(35,540)
Net change in total OPEB liability	\$ (39,872)	\$ (1,572,259)	\$ 125,437	\$ 669,518	\$ 1,083,396
Total OPEB liability—beginning	\$ 1,683,191	\$ 3,255,450	\$ 3,130,013	\$ 2,460,495	\$ 1,377,099
Total OPEB liability—ending (a)	\$ 1,643,319	\$ 1,683,191	\$ 3,255,450	\$ 3,130,013	\$ 2,460,495
Plan Fiduciary Net Position					
Contributions—employer	\$ 156,776	\$ 576,483	\$ 68,687	\$ 41,661	\$ 35,540
Net investment income	52,449	(13,576)	-	-	-
Benefit payments	(56,776)	(76,483)	(68,687)	(41,661)	(35,540)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
Net change in plan fiduciary net position	\$ 152,449	\$ 486,424	\$ -	\$ -	\$ -
Plan fiduciary net position—beginning	\$ 486,424	\$ -	\$ -	\$ -	\$ -
Plan fiduciary net position—ending (b)	\$ 638,873	\$ 486,424	\$ -	\$ -	\$ -
Net OPEB liability—ending (a) – (b)	\$ 1,004,446	\$ 1,196,767	\$ 3,255,450	\$ 3,130,013	\$ 2,460,495
Plan fiduciary net position as a percentage of the total OPEB liability	38.88%	28.90%	0.00%	0.00%	0.00%
Covered payroll	\$ 650,535	\$ 677,484	\$ 537,077	\$ 688,627	\$ 596,231
Net OPEB liability as a percentage of covered payroll	154.40%	176.65%	606.14%	454.53%	412.67%
Discount Rate	6.50%	6.60%	2.16%	2.21%	3.50%

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	\$ 82,162	\$ 97,097
Interest	50,826	43,348
Changes of benefit terms	(1,878)	-
Differences between expected and actual experience	-	-
Changes of assumptions	(72,832)	(194,490)
Benefit payments	(37,459)	(27,086)
Net change in total OPEB liability	\$ 20,819	\$ (81,131)
Total OPEB liability—beginning	\$ 1,356,280	\$ 1,437,411
Total OPEB liability—ending (a)	\$ 1,377,099	\$ 1,356,280
Plan Fiduciary Net Position		
Contributions—employer	\$ 37,459	\$ 27,086
Net investment income	-	-
Benefit payments	(37,459)	(27,086)
Administrative expenses	-	-
Other	-	-
Net change in plan fiduciary net position	\$ -	\$ -
Plan fiduciary net position—beginning	\$ -	\$ -
Plan fiduciary net position—ending (b)	\$ -	\$ -
Net OPEB liability—ending (a) – (b)	\$ 1,377,099	\$ 1,356,280
Plan fiduciary net position as a percentage of the total OPEB liability	0.00%	0.00%
Covered payroll	\$ 483,846	\$ 496,853
Net OPEB liability as a percentage of covered payroll	284.62%	272.97%
Discount Rate	3.87%	3.58%

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 6.6% as of June 30, 2022 to 6.5% as of June 30, 2023. In addition, many other assumptions were updated in this valuation, including the inflation rate, healthcare trend rates, mortality improvement rates, and participation rates.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Fiscal Year Ended June 30	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expenses	10.78%	-28.13%	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable			

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	\$ 486,424	12	1.00	\$ 538,873
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	100,000	0	0.00	100,000
Ending value - June 30, 2023				\$ 638,873
Money-weighted rate of return:				10.78%

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	\$ 110,649	\$ 225,998	\$ 230,321	\$ 186,955	\$ 132,064
Contributions in relation to the actuarially determined contribution	156,776	576,483	68,687	41,661	35,540
Contribution deficiency (excess)	<u>\$ (46,127)</u>	<u>\$ (350,485)</u>	<u>\$ 161,634</u>	<u>\$ 145,294</u>	<u>\$ 96,524</u>
Covered payroll	\$ 650,535	\$ 677,484	\$ 537,077	\$ 688,627	\$ 596,231
Contributions as a percentage of covered payroll	24.10%	85.09%	12.79%	6.05%	5.96%
Discount rate	6.60%	2.16%	2.21%	3.50%	3.87%
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	\$ 129,239	\$ 110,945
Contributions in relation to the actuarially determined contribution	<u>37,459</u>	<u>27,086</u>
Contribution deficiency (excess)	<u>\$ 91,780</u>	<u>\$ 83,859</u>
Covered payroll	\$ 483,846	\$ 496,853
Contributions as a percentage of covered payroll	7.74%	5.45%
Discount rate	3.58%	4.00%
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	594,329	-	507,975	86,354	-
2020	-	-	-	-	-
2021	-	159,346	(88,035)	-	71,311
2022	-	-	-	-	-
2023	-	189,056	(34,187)	-	154,869
Total				<u>\$ 86,354</u>	<u>\$ 226,180</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	\$ -	\$ 72,832	\$ (68,604)	\$ -	\$ 4,228
2019	390,125	-	333,440	56,685	-
2020	625,018	-	427,364	197,654	-
2021	143,110	-	79,065	64,045	-
2022	-	1,700,074	(626,178)	-	1,073,896
2023	49,251	-	8,906	40,345	-
Total				<u>\$ 358,729</u>	<u>\$ 1,078,124</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	\$ -	\$ -	\$ -	\$ -	\$ -
2019	-	-	-	-	-
2020	-	-	-	-	-
2021	-	-	-	-	-
2022	16,246	-	6,498	9,748	-
2023	-	20,345	(4,069)	-	16,276
Subtotal				\$ 9,748	\$ 16,276
Net				\$ -	\$ 6,528

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	\$	(96,528)
2025	\$	(251,367)
2026	\$	(340,475)
2027	\$	(163,979)
2028	\$	(13,400)
Thereafter		-
Deferred Outflows	\$	445,083
Deferred Inflows	\$	1,310,832

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	\$ 44,552
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	1,683,191
b. Service cost, beginning of year	44,552
c. Benefit payments	(56,776)
d. Interest on total OPEB liability = 6.6% times (a. + b. + .5 times c.)	112,157
3. Differences between expected and actual experience	38,063
4. Changes of benefit terms	-
5. Changes of assumptions	(115,733)
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	486,424
b. Contributions - Employer	156,776
c. Benefit payments	(56,776)
d. Administrative expenses and other	-
e. Total projected earnings	(32,104)
7. Differences between projected and actual earnings on OPEB plan investments	(820)
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense	\$ 46,115

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Eligibility for Postemployment Benefits Employees of the District and their dependents are eligible for postemployment medical, dental and life insurance based on the eligibility requirements under the Dukes County Retirement System.

Retirement Eligibility General employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service.

General employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service.

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	\$371.00

Participant Contributions Retired employees contribute 25% of the total medical 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 25% of the monthly premiums.

Life Insurance Coverage

Retirees are eligible for a \$5,000 life insurance benefit. The total monthly cost is \$5.20. Retirees contribute \$0.00 towards the monthly premiums.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date	July 1, 2022
Disclosure Date	June 30, 2023
GASB 75 Reporting Date	June 30, 2023
Long-Term Expected Rate of Return	<p>6.5%, 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>6.5%, compounded annually, for the measurement as of June 30, 2023.</p> <p>6.6%, compounded annually, for the measurement as of June 30, 2022.</p> <p>The single rate that reflects the long-term expected rate of return on OPEB plan investments to the extent that the OPEB plan's assets, which are expected to be invested using a strategy to achieve that return, are sufficient to pay benefits, and a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.</p>
Discount Rate (ADEC)	6.6%, 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

Dental trend rates are 4% per year.

Inflation

2.5% per year, based on current economic data, analyses from economists and other experts, and professional judgment.

Payroll Growth

3.5% per year.

Participation Rates

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

Dental - 80% of eligible retirees will elect to participate.

Life - 100% of eligible retirees will elect to participate.

Medicare - all retired employees are assumed to enroll in Medicare at age 65.

Dependent Status

Male spouses are assumed to be three years older and female spouses are assumed to be three years younger than the retired employee.

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

For current retirees, the actual census information is used.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Per Capita Costs

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

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

Retiree Contributions

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

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

Actuarial Cost Method

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

Actuarial Value of Assets

Market value of assets as of the disclosure date.

Census Data

Employee and retiree data were compiled and submitted by the 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:

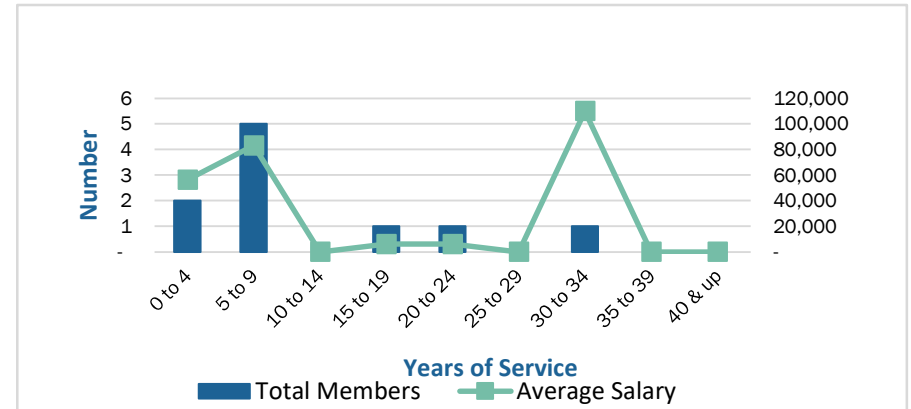
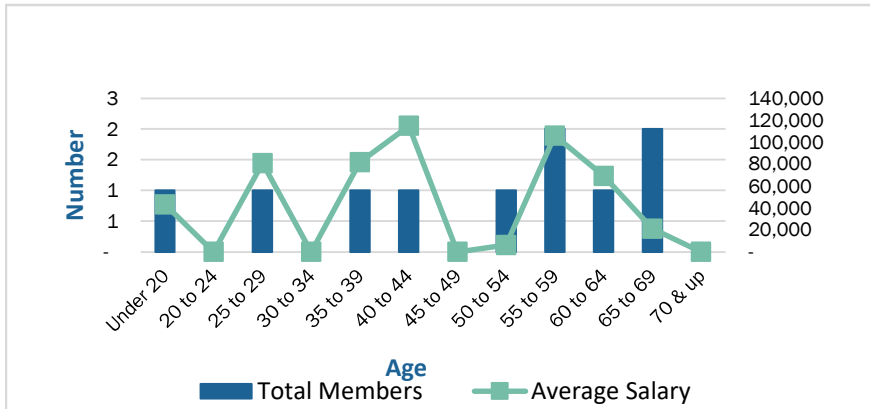
General Employees		
Age	Male	Female
45	0.00%	0.00%
50	1.00%	1.50%
55	2.00%	5.50%
60	12.00%	5.00%
62	30.00%	15.00%
65	40.00%	15.00%
69	30.00%	20.00%
70	100.00%	100.00%

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	1	-	-	-	-	-	-	-	-	1	43,325	43,325
20 to 24	-	-	-	-	-	-	-	-	-	-	-	-
25 to 29	-	1	-	-	-	-	-	-	-	1	80,906	80,906
30 to 34	-	-	-	-	-	-	-	-	-	-	-	-
35 to 39	-	1	-	-	-	-	-	-	-	1	81,905	81,905
40 to 44	-	1	-	-	-	-	-	-	-	1	114,878	114,878
45 to 49	-	-	-	-	-	-	-	-	-	-	-	-
50 to 54	-	-	-	-	1	-	-	-	-	1	6,100	6,100
55 to 59	-	1	-	-	-	-	1	-	-	2	211,860	105,930
60 to 64	1	-	-	-	-	-	-	-	-	1	69,261	69,261
65 to 69	-	1	-	1	-	-	-	-	-	2	42,301	21,150
70 & up	-	-	-	-	-	-	-	-	-	-	-	-
Total	2	5	-	1	1	-	1	-	-	10	650,535	65,053
Total Salary	112,586	415,720	-	6,100	6,100	-	110,029	-	-			
Average Salary	56,293	83,144	-	6,100	6,100	-	110,029	-	-			

Average Age: 49.8 Average Service: 11.1



SECTION 7 - PLAN MEMBER INFORMATION

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

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

Average Age: 71.2

In addition, there are 3 retirees, survivors and covered spouses that are not covered under any medical plan but are covered under either a life insurance policy and/or a dental plan which the District contributes to and/or receive a reimbursement from the District for a Medicare late-enrollment penalty.

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.

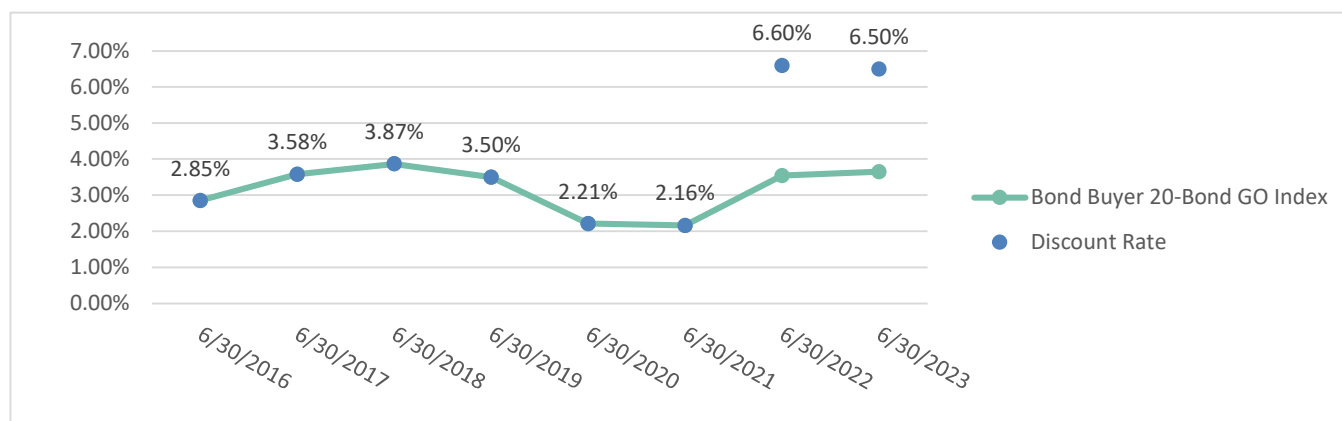
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period.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

Below are the historical Bond Buyer 20-Bond GO Indices and the 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

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.79%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2023	650,535	-	650,535	56,776	100,000	-	156,776
2024	605,769	67,535	673,304	54,667	100,000	3,912	150,755
2025	558,029	138,841	696,870	67,864	100,000	8,043	159,821
2026	508,488	212,772	721,260	86,525	100,000	12,326	174,199
2027	432,172	314,332	746,504	101,273	100,000	18,209	183,064
2028	387,052	385,580	772,632	101,498	100,000	22,337	179,161
2029	351,664	448,010	799,674	122,529	100,000	25,954	196,575
2030	328,900	498,763	827,663	125,340	100,000	28,894	196,446
2031	303,561	553,070	856,631	128,977	100,000	32,040	196,937
2032	248,301	638,312	886,613	139,876	100,000	36,978	202,898
2033	236,430	681,214	917,644	139,254	100,000	39,463	199,791
2034	225,452	724,310	949,762	135,188	100,000	41,960	193,228
2035	220,744	762,260	983,004	141,892	100,000	44,158	197,734
2036	213,627	803,782	1,017,409	145,072	100,000	46,564	198,508
2037	211,488	841,530	1,053,018	131,354	100,000	48,750	182,604
2038	209,788	880,086	1,089,874	135,264	100,000	50,984	184,280
2039	210,336	917,684	1,128,020	147,556	100,000	53,162	194,394
2040	210,669	956,832	1,167,501	149,918	100,000	55,430	194,488
2041	211,221	997,143	1,208,364	148,799	100,000	57,765	191,034
2042	211,711	1,038,946	1,250,657	147,232	100,000	60,187	187,045
2043	212,377	1,082,053	1,294,430	154,359	100,000	62,684	191,675
2044	195,532	1,144,203	1,339,735	165,523	100,000	66,285	199,238
2045	168,608	1,218,018	1,386,626	175,481	100,000	70,561	204,920
2046	147,920	1,287,238	1,435,158	181,367	100,000	74,571	206,796
2047	129,527	1,355,862	1,485,389	167,422	100,000	78,546	188,876
2048	111,406	1,425,972	1,537,378	167,826	100,000	82,608	185,218
2049	103,969	1,487,217	1,591,186	152,550	100,000	86,156	166,394
2050	95,765	1,551,113	1,646,878	132,219	100,000	89,857	142,362
2051	91,608	1,612,911	1,704,519	126,289	100,000	93,437	132,852
2052	88,969	1,675,208	1,764,177	110,257	100,000	97,046	113,211
2053	83,482	1,742,441	1,825,923	103,974	100,000	100,941	103,033
2054	84,006	1,805,824	1,889,830	99,574	100,000	104,613	94,961

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.79%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2055	83,058	1,872,916	1,955,974	94,196	100,000	108,499	85,697
2056	84,671	1,939,762	2,024,433	88,213	100,000	112,372	75,841
2057	86,288	2,009,000	2,095,288	91,330	100,000	116,383	74,947
2058	80,129	2,088,494	2,168,623	95,230	100,000	120,988	74,242
2059	70,000	2,174,525	2,244,525	103,186	100,000	125,972	77,214
2060	57,127	2,265,956	2,323,083	109,500	100,000	131,269	78,231
2061	49,786	2,354,605	2,404,391	110,906	100,000	136,404	74,502
2062	45,067	2,443,478	2,488,545	90,133	100,000	141,553	48,580
2063	37,816	2,537,828	2,575,644	88,632	100,000	147,018	41,614
2064	35,429	2,630,363	2,665,792	97,070	100,000	152,379	44,691
2065	28,300	2,730,795	2,759,095	86,507	100,000	158,197	28,310
2066	20,058	2,835,605	2,855,663	93,031	100,000	164,269	28,762
2067	14,986	2,940,625	2,955,611	100,559	100,000	170,353	30,206
2068	9,176	3,049,881	3,059,057	82,405	100,000	176,682	5,723
2069	5,556	3,160,568	3,166,124	83,358	100,000	183,094	264
2070	4,215	3,272,723	3,276,938	85,171	100,000	189,591	-
2071	3,195	3,388,436	3,391,631	66,939	100,000	196,295	-
2072	2,257	3,508,081	3,510,338	69,492	100,000	203,226	-
2073	1,592	3,631,608	3,633,200	69,567	100,000	210,382	-
2074	-	3,760,362	3,760,362	68,602	100,000	217,841	-
2075	-	3,891,975	3,891,975	68,549	100,000	225,465	-
2076	-	4,028,194	4,028,194	67,323	100,000	233,356	-
2077	-	4,169,181	4,169,181	68,468	100,000	241,524	-
2078	-	4,315,102	4,315,102	67,937	100,000	249,977	-
2079	-	4,466,131	4,466,131	65,948	100,000	258,726	-
2080	-	4,622,446	4,622,446	64,770	100,000	267,782	-
2081	-	4,784,232	4,784,232	63,442	100,000	277,154	-
2082	-	4,951,680	4,951,680	62,954	100,000	286,855	-
2083	-	5,124,989	5,124,989	62,621	100,000	296,895	-
2084	-	5,304,364	5,304,364	60,346	100,000	307,286	-
2085	-	5,490,017	5,490,017	59,621	100,000	318,041	-
2086	-	5,682,168	5,682,168	58,697	100,000	329,172	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.79%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2087	-	5,881,044	5,881,044	57,995	100,000	340,693	-
2088	-	6,086,881	6,086,881	57,382	100,000	352,618	-
2089	-	6,299,922	6,299,922	54,867	100,000	364,959	-
2090	-	6,520,419	6,520,419	53,145	100,000	377,733	-
2091	-	6,748,634	6,748,634	51,639	100,000	390,954	-
2092	-	6,984,836	6,984,836	49,432	100,000	404,637	-
2093	-	7,229,305	7,229,305	47,560	100,000	418,799	-
2094	-	7,482,331	7,482,331	44,105	100,000	433,457	-
2095	-	7,744,213	7,744,213	40,182	100,000	448,628	-
2096	-	8,015,260	8,015,260	37,360	100,000	464,330	-
2097	-	8,295,794	8,295,794	33,675	100,000	480,582	-
2098	-	8,586,147	8,586,147	30,697	100,000	497,402	-
2099	-	8,886,662	8,886,662	26,999	100,000	514,811	-
2100	-	9,197,695	9,197,695	23,438	100,000	532,830	-
2101	-	9,519,614	9,519,614	19,758	100,000	551,479	-
2102	-	9,852,800	9,852,800	16,653	100,000	570,780	-
2103	-	10,197,648	10,197,648	13,834	100,000	590,758	-
2104	-	10,554,566	10,554,566	11,316	100,000	611,434	-
2105	-	10,923,976	10,923,976	9,100	100,000	632,834	-
2106	-	11,306,315	11,306,315	7,185	100,000	654,984	-
2107	-	11,702,036	11,702,036	5,566	100,000	677,908	-
2108	-	12,111,607	12,111,607	4,224	100,000	701,635	-
2109	-	12,535,513	12,535,513	3,138	100,000	726,192	-
2110	-	12,974,256	12,974,256	2,279	100,000	751,609	-
2111	-	13,428,355	13,428,355	1,615	100,000	777,915	-
2112	-	13,898,347	13,898,347	1,115	100,000	805,142	-
2113	-	14,384,789	14,384,789	749	100,000	833,322	-
2114	-	14,888,257	14,888,257	489	100,000	862,488	-
2115	-	15,409,346	15,409,346	310	100,000	892,675	-
2116	-	15,948,673	15,948,673	191	100,000	923,919	-
2117	-	16,506,877	16,506,877	114	100,000	956,256	-
2118	-	17,084,618	17,084,618	65	100,000	989,725	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * 5.79%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2119	-	17,682,580	17,682,580	36	100,000	1,024,366	-
2120	-	18,301,470	18,301,470	20	100,000	1,060,218	-
2121	-	18,942,021	18,942,021	10	100,000	1,097,326	-
2122	-	19,604,992	19,604,992	5	100,000	1,135,732	-
2123	-	20,291,167	20,291,167	3	100,000	1,175,483	-
2124	-	21,001,358	21,001,358	1	100,000	1,216,625	-
2125	-	21,736,406	21,736,406	1	100,000	1,259,207	-
2126	-	22,497,180	22,497,180	-	100,000	1,303,279	-
2127	-	23,284,581	23,284,581	-	100,000	1,348,894	-

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	486,424	156,776	56,776	-	52,449	638,873
2024	638,873	150,755	54,667	-	44,650	779,611
2025	779,611	159,821	67,864	-	53,663	925,231
2026	925,231	174,199	86,525	-	62,989	1,075,894
2027	1,075,894	183,064	101,273	-	72,591	1,230,276
2028	1,230,276	179,161	101,498	-	82,492	1,390,431
2029	1,390,431	196,575	122,529	-	92,785	1,557,262
2030	1,557,262	196,446	125,340	-	103,533	1,731,901
2031	1,731,901	196,937	128,977	-	114,782	1,914,643
2032	1,914,643	202,898	139,876	-	126,500	2,104,165
2033	2,104,165	199,791	139,254	-	138,738	2,303,440
2034	2,303,440	193,228	135,188	-	151,610	2,513,090
2035	2,513,090	197,734	141,892	-	165,166	2,734,098
2036	2,734,098	198,508	145,072	-	179,453	2,966,987
2037	2,966,987	182,604	131,354	-	194,520	3,212,757
2038	3,212,757	184,280	135,264	-	210,422	3,472,195
2039	3,472,195	194,394	147,556	-	227,215	3,746,248
2040	3,746,248	194,488	149,918	-	244,955	4,035,773
2041	4,035,773	191,034	148,799	-	263,698	4,341,706
2042	4,341,706	187,045	147,232	-	283,505	4,665,024
2043	4,665,024	191,675	154,359	-	304,439	5,006,779
2044	5,006,779	199,238	165,523	-	326,536	5,367,030
2045	5,367,030	204,920	175,481	-	349,814	5,746,283
2046	5,746,283	206,796	181,367	-	374,335	6,146,047
2047	6,146,047	188,876	167,422	-	400,190	6,567,691
2048	6,567,691	185,218	167,826	-	427,465	7,012,548
2049	7,012,548	166,394	152,550	-	456,266	7,482,658
2050	7,482,658	142,362	132,219	-	486,702	7,979,503
2051	7,979,503	132,852	126,289	-	518,881	8,504,947
2052	8,504,947	113,211	110,257	-	552,918	9,060,819
2053	9,060,819	103,033	103,974	-	588,923	9,648,801
2054	9,648,801	94,961	99,574	-	627,022	10,271,210
2055	10,271,210	85,697	94,196	-	667,352	10,930,063
2056	10,930,063	75,841	88,213	-	710,052	11,627,743

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	11,627,743	74,947	91,330	-	755,271	12,366,631
2058	12,366,631	74,242	95,230	-	803,149	13,148,792
2059	13,148,792	77,214	103,186	-	853,827	13,976,647
2060	13,976,647	78,231	109,500	-	907,466	14,852,844
2061	14,852,844	74,502	110,906	-	964,252	15,780,692
2062	15,780,692	48,580	90,133	-	1,024,395	16,763,534
2063	16,763,534	41,614	88,632	-	1,088,102	17,804,618
2064	17,804,618	44,691	97,070	-	1,155,598	18,907,837
2065	18,907,837	28,310	86,507	-	1,227,118	20,076,758
2066	20,076,758	28,762	93,031	-	1,302,901	21,315,390
2067	21,315,390	30,206	100,559	-	1,383,214	22,628,251
2068	22,628,251	5,723	82,405	-	1,468,344	24,019,913
2069	24,019,913	264	83,358	-	1,558,594	25,495,413
2070	25,495,413	-	85,171	-	1,654,434	27,064,676
2071	27,064,676	-	66,939	-	1,757,028	28,754,765
2072	28,754,765	-	69,492	-	1,866,801	30,552,074
2073	30,552,074	-	69,567	-	1,983,624	32,466,131
2074	32,466,131	-	68,602	-	2,108,069	34,505,598
2075	34,505,598	-	68,549	-	2,240,636	36,677,685
2076	36,677,685	-	67,323	-	2,381,862	38,992,224
2077	38,992,224	-	68,468	-	2,532,269	41,456,025
2078	41,456,025	-	67,937	-	2,692,434	44,080,522
2079	44,080,522	-	65,948	-	2,863,091	46,877,665
2080	46,877,665	-	64,770	-	3,044,943	49,857,838
2081	49,857,838	-	63,442	-	3,238,698	53,033,094
2082	53,033,094	-	62,954	-	3,445,105	56,415,245
2083	56,415,245	-	62,621	-	3,664,956	60,017,580
2084	60,017,580	-	60,346	-	3,899,181	63,856,415
2085	63,856,415	-	59,621	-	4,148,729	67,945,523
2086	67,945,523	-	58,697	-	4,414,551	72,301,377
2087	72,301,377	-	57,995	-	4,697,705	76,941,087
2088	76,941,087	-	57,382	-	4,999,306	81,883,011
2089	81,883,011	-	54,867	-	5,320,613	87,148,757
2090	87,148,757	-	53,145	-	5,662,942	92,758,554

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	92,758,554	-	51,639	-	6,027,628	98,734,543
2092	98,734,543	-	49,432	-	6,416,139	105,101,250
2093	105,101,250	-	47,560	-	6,830,036	111,883,726
2094	111,883,726	-	44,105	-	7,271,009	119,110,630
2095	119,110,630	-	40,182	-	7,740,885	126,811,333
2096	126,811,333	-	37,360	-	8,241,522	135,015,495
2097	135,015,495	-	33,675	-	8,774,913	143,756,733
2098	143,756,733	-	30,697	-	9,343,190	153,069,226
2099	153,069,226	-	26,999	-	9,948,622	162,990,849
2100	162,990,849	-	23,438	-	10,593,643	173,561,054
2101	173,561,054	-	19,758	-	11,280,826	184,822,122
2102	184,822,122	-	16,653	-	12,012,897	196,818,366
2103	196,818,366	-	13,834	-	12,792,744	209,597,276
2104	209,597,276	-	11,316	-	13,623,455	223,209,415
2105	223,209,415	-	9,100	-	14,508,316	237,708,631
2106	237,708,631	-	7,185	-	15,450,828	253,152,274
2107	253,152,274	-	5,566	-	16,454,717	269,601,425
2108	269,601,425	-	4,224	-	17,523,955	287,121,156
2109	287,121,156	-	3,138	-	18,662,773	305,780,791
2110	305,780,791	-	2,279	-	19,875,677	325,654,189
2111	325,654,189	-	1,615	-	21,167,470	346,820,044
2112	346,820,044	-	1,115	-	22,543,267	369,362,196
2113	369,362,196	-	749	-	24,008,518	393,369,965
2114	393,369,965	-	489	-	25,569,032	418,938,508
2115	418,938,508	-	310	-	27,230,993	446,169,191
2116	446,169,191	-	191	-	29,000,991	475,169,991
2117	475,169,991	-	114	-	30,886,046	506,055,923
2118	506,055,923	-	65	-	32,893,633	538,949,491
2119	538,949,491	-	36	-	35,031,716	573,981,171
2120	573,981,171	-	20	-	37,308,775	611,289,926
2121	611,289,926	-	10	-	39,733,845	651,023,761
2122	651,023,761	-	5	-	42,316,544	693,340,300
2123	693,340,300	-	3	-	45,067,119	738,407,416
2124	738,407,416	-	1	-	47,996,482	786,403,897

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)
2125	786,403,897	-	1	-	51,116,253	837,520,149
2126	837,520,149	-	-	-	54,438,810	891,958,959
2127	891,958,959	-	-	-	57,977,332	949,936,291

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

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

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.5%
2024	638,873	54,667	54,667	-	52,972	-	52,972
2025	779,611	67,864	67,864	-	61,747	-	61,747
2026	925,231	86,525	86,525	-	73,921	-	73,921
2027	1,075,894	101,273	101,273	-	81,240	-	81,240
2028	1,230,276	101,498	101,498	-	76,451	-	76,451
2029	1,390,431	122,529	122,529	-	86,659	-	86,659
2030	1,557,262	125,340	125,340	-	83,237	-	83,237
2031	1,731,901	128,977	128,977	-	80,425	-	80,425
2032	1,914,643	139,876	139,876	-	81,898	-	81,898
2033	2,104,165	139,254	139,254	-	76,557	-	76,557
2034	2,303,440	135,188	135,188	-	69,786	-	69,786
2035	2,513,090	141,892	141,892	-	68,776	-	68,776
2036	2,734,098	145,072	145,072	-	66,026	-	66,026
2037	2,966,987	131,354	131,354	-	56,134	-	56,134
2038	3,212,757	135,264	135,264	-	54,277	-	54,277
2039	3,472,195	147,556	147,556	-	55,595	-	55,595
2040	3,746,248	149,918	149,918	-	53,038	-	53,038
2041	4,035,773	148,799	148,799	-	49,429	-	49,429
2042	4,341,706	147,232	147,232	-	45,923	-	45,923
2043	4,665,024	154,359	154,359	-	45,208	-	45,208
2044	5,006,779	165,523	165,523	-	45,519	-	45,519
2045	5,367,030	175,481	175,481	-	45,312	-	45,312
2046	5,746,283	181,367	181,367	-	43,974	-	43,974
2047	6,146,047	167,422	167,422	-	38,115	-	38,115
2048	6,567,691	167,826	167,826	-	35,875	-	35,875
2049	7,012,548	152,550	152,550	-	30,619	-	30,619
2050	7,482,658	132,219	132,219	-	24,919	-	24,919
2051	7,979,503	126,289	126,289	-	22,349	-	22,349
2052	8,504,947	110,257	110,257	-	18,321	-	18,321
2053	9,060,819	103,974	103,974	-	16,222	-	16,222
2054	9,648,801	99,574	99,574	-	14,588	-	14,588
2055	10,271,210	94,196	94,196	-	12,957	-	12,957

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

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

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.5%
2056	10,930,063	88,213	88,213	-	11,394	-	11,394
2057	11,627,743	91,330	91,330	-	11,076	-	11,076
2058	12,366,631	95,230	95,230	-	10,845	-	10,845
2059	13,148,792	103,186	103,186	-	11,033	-	11,033
2060	13,976,647	109,500	109,500	-	10,994	-	10,994
2061	14,852,844	110,906	110,906	-	10,455	-	10,455
2062	15,780,692	90,133	90,133	-	7,979	-	7,979
2063	16,763,534	88,632	88,632	-	7,367	-	7,367
2064	17,804,618	97,070	97,070	-	7,576	-	7,576
2065	18,907,837	86,507	86,507	-	6,339	-	6,339
2066	20,076,758	93,031	93,031	-	6,401	-	6,401
2067	21,315,390	100,559	100,559	-	6,497	-	6,497
2068	22,628,251	82,405	82,405	-	4,999	-	4,999
2069	24,019,913	83,358	83,358	-	4,748	-	4,748
2070	25,495,413	85,171	85,171	-	4,555	-	4,555
2071	27,064,676	66,939	66,939	-	3,362	-	3,362
2072	28,754,765	69,492	69,492	-	3,277	-	3,277
2073	30,552,074	69,567	69,567	-	3,080	-	3,080
2074	32,466,131	68,602	68,602	-	2,852	-	2,852
2075	34,505,598	68,549	68,549	-	2,676	-	2,676
2076	36,677,685	67,323	67,323	-	2,468	-	2,468
2077	38,992,224	68,468	68,468	-	2,357	-	2,357
2078	41,456,025	67,937	67,937	-	2,196	-	2,196
2079	44,080,522	65,948	65,948	-	2,001	-	2,001
2080	46,877,665	64,770	64,770	-	1,846	-	1,846
2081	49,857,838	63,442	63,442	-	1,697	-	1,697
2082	53,033,094	62,954	62,954	-	1,582	-	1,582
2083	56,415,245	62,621	62,621	-	1,477	-	1,477
2084	60,017,580	60,346	60,346	-	1,337	-	1,337
2085	63,856,415	59,621	59,621	-	1,240	-	1,240
2086	67,945,523	58,697	58,697	-	1,146	-	1,146
2087	72,301,377	57,995	57,995	-	1,063	-	1,063

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

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

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.5%
2088	76,941,087	57,382	57,382	-	988	-	988
2089	81,883,011	54,867	54,867	-	887	-	887
2090	87,148,757	53,145	53,145	-	807	-	807
2091	92,758,554	51,639	51,639	-	736	-	736
2092	98,734,543	49,432	49,432	-	662	-	662
2093	105,101,250	47,560	47,560	-	598	-	598
2094	111,883,726	44,105	44,105	-	520	-	520
2095	119,110,630	40,182	40,182	-	445	-	445
2096	126,811,333	37,360	37,360	-	389	-	389
2097	135,015,495	33,675	33,675	-	329	-	329
2098	143,756,733	30,697	30,697	-	282	-	282
2099	153,069,226	26,999	26,999	-	233	-	233
2100	162,990,849	23,438	23,438	-	190	-	190
2101	173,561,054	19,758	19,758	-	150	-	150
2102	184,822,122	16,653	16,653	-	119	-	119
2103	196,818,366	13,834	13,834	-	93	-	93
2104	209,597,276	11,316	11,316	-	71	-	71
2105	223,209,415	9,100	9,100	-	54	-	54
2106	237,708,631	7,185	7,185	-	40	-	40
2107	253,152,274	5,566	5,566	-	29	-	29
2108	269,601,425	4,224	4,224	-	21	-	21
2109	287,121,156	3,138	3,138	-	14	-	14
2110	305,780,791	2,279	2,279	-	10	-	10
2111	325,654,189	1,615	1,615	-	7	-	7
2112	346,820,044	1,115	1,115	-	4	-	4
2113	369,362,196	749	749	-	3	-	3
2114	393,369,965	489	489	-	2	-	2
2115	418,938,508	310	310	-	1	-	1
2116	446,169,191	191	191	-	1	-	1
2117	475,169,991	114	114	-	-	-	-
2118	506,055,923	65	65	-	-	-	-
2119	538,949,491	36	36	-	-	-	-

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

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

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g) = 6.5%
2120	573,981,171	20	20	-	-	-	-
2121	611,289,926	10	10	-	-	-	-
2122	651,023,761	5	5	-	-	-	-
2123	693,340,300	3	3	-	-	-	-
2124	738,407,416	1	1	-	-	-	-
2125	786,403,897	1	1	-	-	-	-
2126	837,520,149	-	-	-	-	-	-
2127	891,958,959	-	-	-	-	-	-

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	-	6.37	-	-	-	-	-	-	-	-	-	-
2019	594,329	5.85	101,595	86,354	-	-	-	-	-	-	-	-
2020	-	5.85	-	-	-	-	-	-	-	-	-	-
2021	(159,346)	5.43	(29,345)	(29,345)	(29,345)	(12,621)	-	-	-	-	-	-
2022	-	5.43	-	-	-	-	-	-	-	-	-	-
2023	(189,056)	5.53	(34,187)	(34,187)	(34,187)	(34,187)	(34,187)	(18,121)	-	-	-	-
Net Increase (Decrease) in OPEB Expense			38,063	22,822	(63,532)	(46,808)	(34,187)	(18,121)	-	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	(72,832)	6.37	(11,434)	(4,228)	-	-	-	-	-	-	-	-
2019	390,125	5.85	66,688	56,685	-	-	-	-	-	-	-	-
2020	625,018	5.85	106,841	106,841	90,813	-	-	-	-	-	-	-
2021	143,110	5.43	26,355	26,355	26,355	11,335	-	-	-	-	-	-
2022	(1,700,074)	5.43	(313,089)	(313,089)	(313,089)	(313,089)	(134,629)	-	-	-	-	-
2023	49,251	5.53	8,906	8,906	8,906	8,906	8,906	4,721	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(115,733)	(118,530)	(187,015)	(292,848)	(125,723)	4,721	-	-	-	-

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	-	5	-	-	-	-	-	-	-	-	-	-
2019	-	5	-	-	-	-	-	-	-	-	-	-
2020	-	5	-	-	-	-	-	-	-	-	-	-
2021	-	5	-	-	-	-	-	-	-	-	-	-
2022	16,246	5	3,249	3,249	3,249	3,250	-	-	-	-	-	-
2023	(20,345)	5	(4,069)	(4,069)	(4,069)	(4,069)	(4,069)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			(820)	(820)	(820)	(819)	(4,069)	-	-	-	-	-