



UP-ISLAND REGIONAL SCHOOL 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. Jocelyn Broadley
Financial Administrative Assistant
Up-Island Regional School District
4 Pine Street
Vineyard Haven, MA 02568

Dear Jocelyn:

We are pleased to present the enclosed report of the July 1, 2022 actuarial valuation of the retiree health care benefits for the Up-Island Regional School 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 Up-Island Regional School 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 and Massachusetts Teachers Retirement Systems' 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 Up-Island Regional School 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 Up-Island Regional School 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 Up-Island Regional School 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.

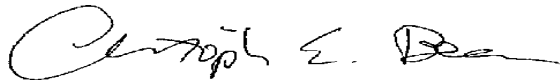
Respectfully submitted,



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EXECUTIVE SUMMARY

Purpose of Report

This report presents the results of the actuarial valuation of the Up-Island Regional School 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 Up-Island Regional School 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 Up-Island Regional School 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

Up-Island Regional School District Other Postemployment Benefits Program

The Up-Island Regional School 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	95	108	(12.0%)
Inactive Plan Members (excludes covered spouses)	59	58	1.7%
Total Plan Members	154	166	(7.2%)
Covered Spouses	25	24	4.2%
Covered Payroll	\$6,432,993	\$6,807,193	(5.5%)
Net OPEB Liability			
Discount Rate	6.50%	6.60%	
Total OPEB Liability (TOL)	\$11,960,955	\$11,808,979	1.3%
Fiduciary Net Position (FNP)	\$5,529,352	\$4,377,151	26.3%
Net OPEB Liability	\$6,431,603	\$7,431,828	(13.5%)
FNP as % of TOL	46.2%	37.1%	24.5%
OPEB Expense (Income)			
OPEB Expense (Income)	(\$207,396)	(\$111,768)	
Deferred Outflows	\$1,010,481	\$986,927	
Deferred Inflows	\$3,077,716	\$3,390,871	
Recognition Period	6.64	6.87	

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 \$1,056,000. This gain is primarily attributable to:

- ◆ a gain due to lower than expected medical premiums since the prior valuation
- ◆ a gain due to active employee turnover replaced by lower service employees
- ◆ a loss due to a retiree being ineligible for Medicare that was previously assumed to be eligible
- ◆ a loss due to fewer inactive participant deaths than expected since the prior valuation

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	(15,000)
◆ Increase due to change in Trend Assumption	379,000
◆ Decrease due to change in Mortality Improvement Rates	(65,000)
◆ Increase due to change in Participation Rate	11,000
◆ Increase due to change in Discount Rate	149,000
Total	\$ 459,000

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 \$11,960,955. The Total OPEB Liability as of the prior measurement date, June 30, 2022, was \$11,808,979. During the current measurement period ending June 30, 2023, the Total OPEB Liability increased by \$151,976, or 1.3%. 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 \$5,529,352. The Fiduciary Net Position as of the prior measurement date, June 30, 2022, was \$4,377,151. During the plan years ended June 30, 2023 and June 30, 2022, the actual rates of return were 10.39% and -11.13%, 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 contributed \$587,386 in FY2021, \$637,386 in FY2022, and \$658,286 in FY2023. Future contributions are assumed to be equal to the FY2023 contribution as the District's previous policy of increases of \$50,000 per year over the prior year has been paused due to budget constraints.

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 (Income)

The OPEB Income for the current measurement period ending June 30, 2023, is \$207,396. Benefit changes are recognized immediately, and experience gains and losses and assumption changes developed in this valuation are recognized over 6.64 years. Investment gains and losses are recognized over 5 years. The OPEB Income for the prior measurement period was \$111,768. 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	\$952,602	\$883,862
Cash & Equivalents	2,957	3,699
Large Cap Equity	2,012,456	1,440,915
Mid Cap Equity	544,367	394,984
Small Cap Equity	542,667	389,540
International Equity	822,856	587,853
Real Estate	651,447	676,298
Total Market Value of Assets	\$5,529,352	\$4,377,151
Asset Activity		
Market value, beginning of year	\$4,377,151	\$4,242,464
Employer Premiums	471,252	475,129
OPEB Trust Contributions	658,286	637,386
Benefit Payments	(471,252)	(475,129)
Administrative Expenses	-	-
Investment Return	493,915	(502,699)
Market value, end of year	\$5,529,352	\$4,377,151
Money-Weighted Rate of Return	10.39%	-11.13%
(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$313,937	\$297,205
Actual earnings	493,915	(502,699)
(Gain) / Loss on OPEB plan investments	(\$179,978)	\$799,904

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	\$5,780,347
b. Retirees, Covered Spouses and Survivors	6,028,632
c. Total OPEB Liability at 6.6% (a. + b.)	\$11,808,979
2. Service Cost	\$427,865
3. Expected Benefit Payments	
a. Current retirees	(\$435,381)
b. Future retirees	(35,871)
c. Total (a. + b.)	(\$471,252)
4. Interest [6.6% x (1.c. + 2. + .5 x 3.c)]	\$792,080
5. Changes of benefit terms	\$0
6. Differences between expected and actual experience	(\$1,056,414)
7. Changes of assumptions or other inputs	\$459,697
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)	
a. Actives	\$5,189,306
b. Retirees, Covered Spouses and Survivors	6,771,649
c. Total OPEB Liability at 6.5% (a. + b.)	\$11,960,955

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

The District contributed \$587,386 in FY2021, \$637,386 in FY2022, and \$658,286 in FY2023. Future contributions are assumed to be equal to the FY2023 contribution as the District's previous policy of increases of \$50,000 per year over the prior year has been paused due to budget constraints.

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	\$427,865	\$392,346
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$11,808,979	\$11,960,955
b. Actuarial Value of Plan Assets	\$4,377,151	\$5,529,352
c. Unfunded Actuarial Accrued Liability (a. - b.)	\$7,431,828	\$6,431,603
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$7,431,828	\$6,431,603
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.)	\$367,912	\$314,658
4. Interest on 1. and 3.e.	\$52,521	\$45,955
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$848,298	\$752,959
6. Actual Employer Contribution to OPEB Trust	\$658,286	TBD
7. Expected Benefit Payments	\$471,252	
8. Total Contribution (6. + 7.)	\$1,129,538	

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.1 - Plan Description

Plan Administration

The Up-Island Regional School 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	59
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	95
	<u>154</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 contributed \$587,386 in FY2021, \$637,386 in FY2022, and \$658,286 in FY2023. Future contributions are assumed to be equal to the FY2023 contribution as the District's previous policy of increases of \$50,000 per year over the prior year has been paused due to budget constraints.

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	\$ 11,960,955
Fiduciary net position	(5,529,352)
Net OPEB liability	\$ 6,431,603

Fiduciary net position as a percentage of the total OPEB liability 46.23%

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 - General employees	RP-2014 Blue Collar Mortality Table, projected with generational mortality improvement using scale MP-2020.
Healthy Retiree Mortality - General employees	RP-2014 Blue Collar Mortality Table, projected with generational mortality improvement using scale MP-2020.
Disabled Retiree Mortality - General employees	RP-2014 Blue Collar Mortality Table set forward one year with full generational mortality improvement using Scale MP-2020.
Pre-Retirement Mortality - Teachers	PUB-2010 Teachers Headcount-Weighted Employee Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2020.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

Healthy Retiree Mortality - Teachers

PUB-2010 Teachers Headcount-Weighted Retiree Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2020.

Disabled Retiree Mortality - Teachers

PUB-2010 Teachers Headcount-Weighted Disabled Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2020.

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	Long-Term Expected Real Rates of Return ¹
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	\$ 13,635,634	\$ 11,960,955	\$ 10,591,571
Fiduciary Net Position	(5,529,352)	(5,529,352)	(5,529,352)
Net OPEB Liability	\$ 8,106,282	\$ 6,431,603	\$ 5,062,219
% Change in Net OPEB Liability	26.0%		-21.3%

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	\$ 10,403,569	\$ 11,960,955	\$ 13,895,167
Fiduciary Net Position	(5,529,352)	(5,529,352)	(5,529,352)
Net OPEB Liability	\$ 4,874,217	\$ 6,431,603	\$ 8,365,815
% Change in Net OPEB Liability	-24.2%		30.1%

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	\$ 427,865	\$ 414,515	\$ 356,567	\$ 321,605	\$ 700,947
Interest	792,080	747,883	807,575	778,987	662,798
Changes of benefit terms	-	-	-	(265,149)	-
Differences between expected and actual experience	(1,056,414)	-	(1,355,902)	-	(1,422,579)
Changes of assumptions	459,697	(32,898)	411,731	741,668	(3,817,213)
Benefit payments	(471,252)	(475,129)	(491,166)	(432,390)	(411,024)
Net change in total OPEB liability	\$ 151,976	\$ 654,371	\$ (271,195)	\$ 1,144,721	\$ (4,287,071)
Total OPEB liability—beginning	\$ 11,808,979	\$ 11,154,608	\$ 11,425,803	\$ 10,281,082	\$ 14,568,153
Total OPEB liability—ending (a)	\$ 11,960,955	\$ 11,808,979	\$ 11,154,608	\$ 11,425,803	\$ 10,281,082
Plan Fiduciary Net Position					
Contributions—employer	\$ 1,129,538	\$ 1,112,515	\$ 1,078,552	\$ 976,926	\$ 981,517
Net investment income	493,915	(502,699)	871,957	97,065	97,869
Benefit payments	(471,252)	(475,129)	(491,166)	(432,390)	(411,024)
Administrative expenses	-	-	-	-	-
Other	-	-	-	-	-
Net change in plan fiduciary net position	\$ 1,152,201	\$ 134,687	\$ 1,459,343	\$ 641,601	\$ 668,362
Plan fiduciary net position—beginning	\$ 4,377,151	\$ 4,242,464	\$ 2,783,121	\$ 2,141,520	\$ 1,473,158
Plan fiduciary net position—ending (b)	\$ 5,529,352	\$ 4,377,151	\$ 4,242,464	\$ 2,783,121	\$ 2,141,520
Net OPEB liability—ending (a) – (b)	\$ 6,431,603	\$ 7,431,828	\$ 6,912,144	\$ 8,642,682	\$ 8,139,562
Plan fiduciary net position as a percentage of the total OPEB liability	46.23%	37.07%	38.03%	24.36%	20.83%
Covered payroll	\$ 6,432,993	\$ 6,807,193	\$ 6,285,792	\$ 6,472,701	\$ 5,911,370
Net OPEB liability as a percentage of covered payroll	99.98%	109.18%	109.96%	133.53%	137.69%
Discount Rate	6.50%	6.60%	6.60%	7.00%	7.50%

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	\$ 789,617	\$ 932,538
Interest	596,981	515,525
Changes of benefit terms	(11,731)	-
Differences between expected and actual experience	-	-
Changes of assumptions	(1,427,115)	(1,973,857)
Benefit payments	(353,895)	(287,526)
Net change in total OPEB liability	\$ (406,143)	\$ (813,320)
Total OPEB liability—beginning	\$ 14,974,296	\$ 15,787,616
Total OPEB liability—ending (a)	\$ 14,568,153	\$ 14,974,296
Plan Fiduciary Net Position		
Contributions—employer	\$ 924,572	\$ 552,492
Net investment income	33,662	31,969
Benefit payments	(353,895)	(287,526)
Administrative expenses	-	-
Other	-	-
Net change in plan fiduciary net position	\$ 604,339	\$ 296,935
Plan fiduciary net position—beginning	\$ 868,819	\$ 571,884
Plan fiduciary net position—ending (b)	\$ 1,473,158	\$ 868,819
Net OPEB liability—ending (a) – (b)	\$ 13,094,995	\$ 14,105,477
Plan fiduciary net position as a percentage of the total OPEB liability	10.11%	5.80%
Covered payroll	\$ 5,309,048	\$ 5,605,623
Net OPEB liability as a percentage of covered payroll	246.65%	251.63%
Discount Rate	4.40%	3.83%

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	10.39%	-11.13%	30.11%	3.95%	5.06%	2.76%	4.12%			

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	\$ 4,377,151	12	1.00	\$ 4,831,900
Monthly net external cash flows:				
July	-	11	0.92	-
August	-	10	0.83	-
September	329,143	9	0.75	354,470
October	-	8	0.67	-
November	-	7	0.58	-
December	-	6	0.50	-
January	329,143	5	0.42	342,981
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				\$ 5,529,352
Money-weighted rate of return:				10.39%

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	\$ 848,298	\$ 806,642	\$ 860,680	\$ 824,916	\$ 1,247,099
Contributions in relation to the actuarially determined contribution	1,129,538	1,112,515	1,078,552	976,926	981,517
Contribution deficiency (excess)	\$ (281,240)	\$ (305,873)	\$ (217,872)	\$ (152,010)	\$ 265,582
Covered payroll	\$ 6,432,993	\$ 6,807,193	\$ 6,285,792	\$ 6,472,701	\$ 5,911,370
Contributions as a percentage of covered payroll	17.56%	16.34%	17.16%	15.09%	16.60%
Discount rate	6.60%	6.60%	7.00%	7.50%	4.40%
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	\$ 1,296,608	\$ 838,450
Contributions in relation to the actuarially determined contribution	<u>924,572</u>	<u>552,492</u>
Contribution deficiency (excess)	<u>\$ 372,036</u>	<u>\$ 285,958</u>
Covered payroll	\$ 5,309,048	\$ 5,605,623
Contributions as a percentage of covered payroll	17.42%	9.86%
Discount rate	3.83%	6.15%
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	-	1,422,579	(1,053,760)	-	368,819
2020	-	-	-	-	-
2021	-	1,355,902	(592,098)	-	763,804
2022	-	-	-	-	-
2023	-	1,056,414	(159,098)	-	897,316
Total				<u>\$ -</u>	<u>\$ 2,029,939</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	\$ -	\$ 1,427,115	\$ (1,392,306)	\$ -	\$ 34,809
2019	-	3,817,213	(2,827,565)	-	989,648
2020	741,668	-	439,508	302,160	-
2021	411,731	-	179,796	231,935	-
2022	-	32,898	(9,578)	-	23,320
2023	459,697	-	69,231	390,466	-
Total				<u>\$ 924,561</u>	<u>\$ 1,047,777</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	\$ 52,900	\$ -	\$ 52,900	\$ -	\$ -	
2019	47,155	-	47,155	-	-	
2020	87,286	-	69,828	17,458	-	
2021	-	668,742	(401,244)	-	267,498	
2022	799,904	-	319,962	479,942	-	
2023	-	179,978	(35,996)	-	143,982	
Subtotal				\$ 497,400	\$ 411,480	
Net				\$ 85,920	\$ -	

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	\$	(925,593)
2025	\$	(714,179)
2026	\$	(25,699)
2027	\$	(250,218)
2028	\$	(94,031)
Thereafter		(57,515)
Deferred Outflows	\$	1,010,481
Deferred Inflows	\$	3,077,716

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	\$ 427,865
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	11,808,979
b. Service cost, beginning of year	427,865
c. Benefit payments	(471,252)
d. Interest on total OPEB liability = 6.6% times (a. + b. + .5 times c.)	792,080
3. Differences between expected and actual experience	(567,216)
4. Changes of benefit terms	-
5. Changes of assumptions	(563,313)
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	4,377,151
b. Contributions - Employer	1,129,538
c. Benefit payments	(471,252)
d. Administrative expenses and other	-
e. Total projected earnings	(313,937)
7. Differences between projected and actual earnings on OPEB plan investments	17,125
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense (Income)	\$ (207,396)

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 and Massachusetts Teachers Retirement Systems.

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

Medicare Penalty Reimbursement

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

Dental Coverage

Dental coverage is provided. The total monthly costs are \$42.00 and \$109.00 for individual and family plans, respectively. Retirees contribute 50% of the monthly premiums.

Life Insurance Coverage

Retirees are eligible for a \$2,000 life insurance benefit. The total monthly cost is \$0.60. Retirees contribute \$0.15 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.

Medicare Trend Rates

5.5% 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 - 85% of eligible retirees will elect to participate.

Life - 70% of eligible retirees will elect to participate.

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

Dependent Status

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

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

For current retirees, the actual census information is used.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Per Capita Costs

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

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

Retiree Contributions

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

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

Actuarial Cost Method

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

Actuarial Value of Assets

Market value of assets as of the disclosure date.

Census Data

Employee and retiree data were compiled and submitted by the 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 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Teachers

Pre-Retirement Mortality

Pre-retirement mortality rates for Teachers are based on the PUB-2010 Teachers Headcount-Weighted Employee Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2020.

Healthy Retiree Mortality

Healthy retiree mortality rates for Teachers are based on the PUB-2010 Teachers Headcount-Weighted Retiree Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2020.

Disabled Retiree Mortality

Disabled retiree mortality rates for Teachers are based on the PUB-2010 Teachers Headcount-Weighted Disabled Mortality Table, base year 2010, projected with generational mortality improvement using Scale MP-2020.

Turnover Rates

Turnover rates for Teachers are as follows:

Service						
0			5		10+	
Age	Male	Female	Male	Female	Male	Female
20	13.0%	10.0%	5.5%	7.0%	1.5%	5.0%
30	15.0%	15.0%	5.4%	8.8%	1.5%	4.5%
40	13.3%	10.5%	5.2%	5.0%	1.7%	2.2%
50	16.2%	9.8%	7.0%	5.0%	2.3%	2.0%

Disability Rates

Disability rates for Teachers are as follows:

Age	Rate
20	0.004%
30	0.006%
40	0.010%
50	0.050%
60	0.070%

35% of the disabilities are job-related.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Teachers

Retirement Rates

Retirement rates for Teachers are as follows:

Age	Years of Service					
	Less than 20		20-29		30+	
	Male	Female	Male	Female	Male	Female
50	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
51	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
52	0.0%	0.0%	1.0%	1.0%	2.0%	1.5%
53	0.0%	0.0%	1.5%	1.0%	2.0%	1.5%
54	0.0%	0.0%	2.5%	1.0%	2.0%	2.0%
55	5.0%	3.0%	3.0%	3.0%	6.0%	5.0%
56	5.0%	3.0%	6.0%	5.0%	20.0%	15.0%
57	5.0%	4.0%	10.0%	8.0%	40.0%	35.0%
58	5.0%	8.0%	15.0%	10.0%	50.0%	35.0%
59	10.0%	8.0%	20.0%	15.0%	50.0%	35.0%
60	10.0%	10.0%	25.0%	20.0%	40.0%	35.0%
61	20.0%	12.0%	30.0%	25.0%	40.0%	35.0%
62	20.0%	12.0%	35.0%	30.0%	35.0%	35.0%
63	25.0%	15.0%	40.0%	30.0%	35.0%	35.0%
64	25.0%	20.0%	40.0%	30.0%	35.0%	35.0%
65	25.0%	25.0%	40.0%	40.0%	35.0%	35.0%
66	30.0%	25.0%	30.0%	30.0%	40.0%	35.0%
67	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
68	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
69	30.0%	30.0%	30.0%	30.0%	40.0%	30.0%
70	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

SECTION 7 - PLAN MEMBER INFORMATION

Exhibit 7.1 - Active Members by Age and Years of Service as of July 1, 2022

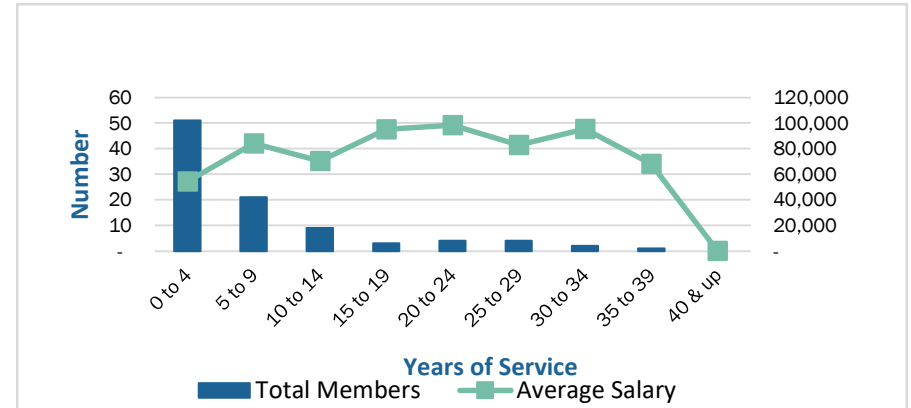
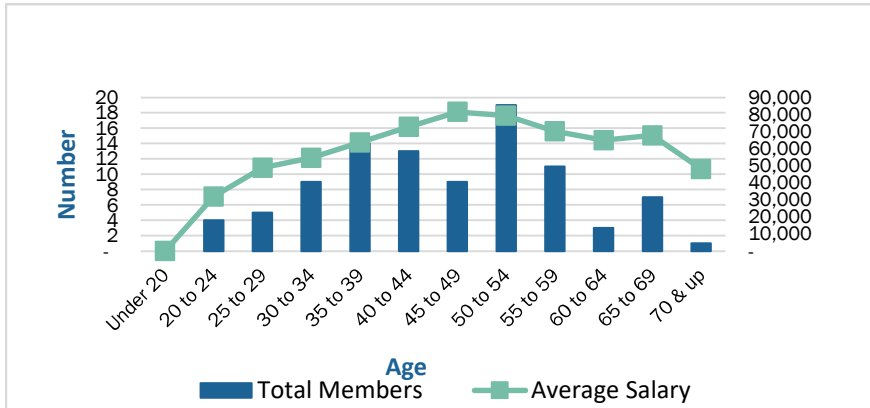
Age	Years of Service										Total	Total Salary	Average Salary
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up				
Under 20	-	-	-	-	-	-	-	-	-	-	-	-	-
20 to 24	4	-	-	-	-	-	-	-	-	4	127,838	31,959	
25 to 29	5	-	-	-	-	-	-	-	-	5	244,023	48,805	
30 to 34	6	3	-	-	-	-	-	-	-	9	491,232	54,581	
35 to 39	8	5	1	-	-	-	-	-	-	14	889,783	63,556	
40 to 44	8	2	2	-	1	-	-	-	-	13	946,165	72,782	
45 to 49	4	1	1	3	-	-	-	-	-	9	733,943	81,549	
50 to 54	9	6	-	-	2	1	1	-	-	19	1,509,813	79,464	
55 to 59	1	2	4	-	1	2	1	-	-	11	772,439	70,222	
60 to 64	1	1	-	-	-	-	-	1	-	3	195,001	65,000	
65 to 69	4	1	1	-	-	1	-	-	-	7	474,702	67,815	
70 & up	1	-	-	-	-	-	-	-	-	1	48,055	48,055	
Total	51	21	9	3	4	4	2	1	-	95	6,432,993	67,716	
Total Salary	2,766,992	1,763,910	633,164	285,442	393,543	331,294	190,487	68,160	-				
Average Salary	54,255	83,996	70,352	95,147	98,386	82,824	95,243	68,160	-				

Average Age:

46.1

Average Service:

7.9



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	2	1	0	0	0	0	0	3
60 to 64	4	0	1	0	0	2	0	7
65 to 69	1	0	0	0	0	13	0	14
70 to 74	0	0	0	0	0	16	1	17
75 to 79	0	0	0	0	0	12	0	12
80 to 84	0	0	0	0	0	1	0	1
85 to 89	0	0	0	0	0	1	0	1
90+	0	0	0	0	0	0	0	0
Total	7	1	1	0	0	45	1	55
Covered Spouses	3	0	0	0	0	17	1	21

Average Age: 70.6

In addition, there are 8 retirees, survivors and covered spouses that are not covered under any medical plan but are covered under a life insurance policy and/or a dental plan which the District contributes to.

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.

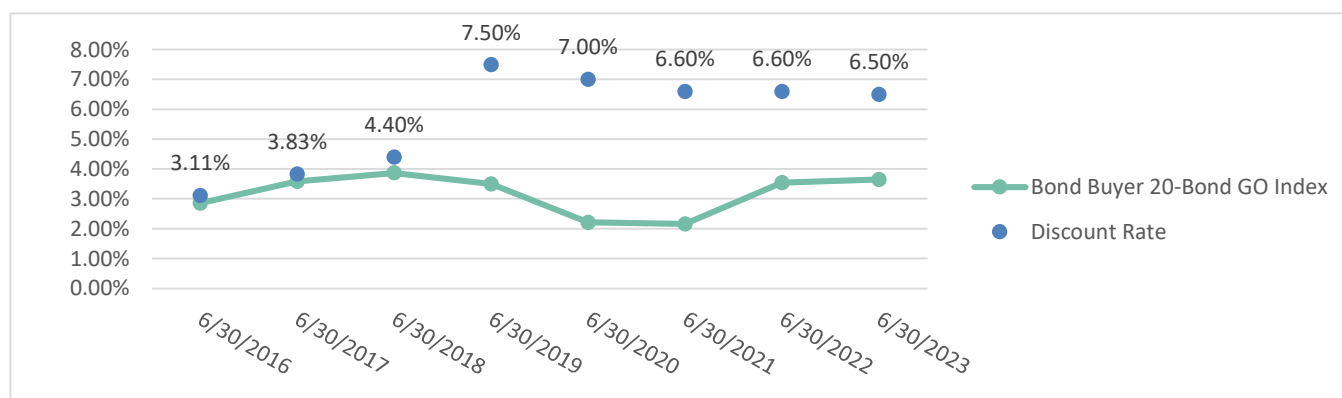
Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. 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	6,549,060	-	6,549,060	471,252	658,286	-	1,129,538
2024	6,115,281	662,996	6,778,277	538,293	658,286	38,376	1,158,203
2025	5,811,718	1,203,799	7,015,517	598,944	658,286	69,679	1,187,551
2026	5,509,575	1,751,485	7,261,060	616,537	658,286	101,381	1,173,442
2027	5,198,151	2,317,046	7,515,197	704,019	658,286	134,117	1,228,188
2028	4,993,008	2,785,221	7,778,229	750,745	658,286	161,216	1,247,815
2029	4,812,433	3,238,034	8,050,467	731,178	658,286	187,427	1,202,037
2030	4,585,571	3,746,662	8,332,233	766,903	658,286	216,867	1,208,322
2031	4,387,557	4,236,304	8,623,861	788,338	658,286	245,209	1,201,415
2032	4,192,828	4,732,868	8,925,696	818,829	658,286	273,952	1,203,163
2033	3,947,035	5,291,060	9,238,095	898,248	658,286	306,261	1,250,273
2034	3,586,970	5,974,458	9,561,428	993,810	658,286	345,818	1,306,278
2035	3,335,969	6,560,109	9,896,078	1,002,292	658,286	379,718	1,280,860
2036	3,106,707	7,135,734	10,242,441	1,030,241	658,286	413,036	1,275,491
2037	2,856,563	7,744,363	10,600,926	1,092,876	658,286	448,265	1,302,897
2038	2,649,972	8,321,986	10,971,958	1,117,690	658,286	481,700	1,294,276
2039	2,456,991	8,898,986	11,355,977	1,172,542	658,286	515,098	1,315,730
2040	2,289,740	9,463,696	11,753,436	1,246,681	658,286	547,785	1,357,182
2041	2,139,360	10,025,446	12,164,806	1,217,321	658,286	580,301	1,295,306
2042	1,976,359	10,614,215	12,590,574	1,210,601	658,286	614,381	1,254,506
2043	1,843,768	11,187,476	13,031,244	1,287,747	658,286	647,563	1,298,470
2044	1,713,491	11,773,847	13,487,338	1,285,711	658,286	681,503	1,262,494
2045	1,577,743	12,381,652	13,959,395	1,305,103	658,286	716,685	1,246,704
2046	1,428,698	13,019,276	14,447,974	1,305,327	658,286	753,592	1,210,021
2047	1,284,355	13,669,298	14,953,653	1,376,443	658,286	791,217	1,243,512
2048	1,123,888	14,353,143	15,477,031	1,383,390	658,286	830,800	1,210,876
2049	977,154	15,041,573	16,018,727	1,353,383	658,286	870,649	1,141,020
2050	848,050	15,731,332	16,579,382	1,341,765	658,286	910,574	1,089,477
2051	737,001	16,422,659	17,159,660	1,344,897	658,286	950,590	1,052,593
2052	623,492	17,136,756	17,760,248	1,378,689	658,286	991,924	1,045,051
2053	505,260	17,876,597	18,381,857	1,348,051	658,286	1,034,748	971,589
2054	424,483	18,600,739	19,025,222	1,325,051	658,286	1,076,663	906,674
2055	349,726	19,341,379	19,691,105	1,335,547	658,286	1,119,533	874,300
2056	308,709	20,071,585	20,380,294	1,277,407	658,286	1,161,800	773,893

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)
2057	272,404	20,821,200	21,093,604	1,279,683	658,286	1,205,190	732,779
2058	230,898	21,600,982	21,831,880	1,273,824	658,286	1,250,326	681,784
2059	196,555	22,399,441	22,595,996	1,255,961	658,286	1,296,543	617,704
2060	169,134	23,217,722	23,386,856	1,248,693	658,286	1,343,907	563,072
2061	144,886	24,060,510	24,205,396	1,256,733	658,286	1,392,690	522,329
2062	119,614	24,932,971	25,052,585	1,231,635	658,286	1,443,190	446,731
2063	98,499	25,830,926	25,929,425	1,224,286	658,286	1,495,167	387,405
2064	74,087	26,762,868	26,836,955	1,211,178	658,286	1,549,110	320,354
2065	61,593	27,714,655	27,776,248	1,176,634	658,286	1,604,202	230,718
2066	43,966	28,704,451	28,748,417	1,162,873	658,286	1,661,494	159,665
2067	32,464	29,722,148	29,754,612	1,141,991	658,286	1,720,401	79,876
2068	25,486	30,770,537	30,796,023	1,128,331	658,286	1,781,085	5,532
2069	17,528	31,856,356	31,873,884	1,113,077	658,286	1,843,935	-
2070	11,273	32,978,197	32,989,470	1,090,895	658,286	1,908,871	-
2071	2,766	34,141,335	34,144,101	1,070,165	658,286	1,976,196	-
2072	-	35,339,145	35,339,145	1,033,412	658,286	2,045,529	-
2073	-	36,576,015	36,576,015	1,004,287	658,286	2,117,123	-
2074	-	37,856,176	37,856,176	967,187	658,286	2,191,222	-
2075	-	39,181,142	39,181,142	926,103	658,286	2,267,915	-
2076	-	40,552,482	40,552,482	887,784	658,286	2,347,292	-
2077	-	41,971,819	41,971,819	840,810	658,286	2,429,447	-
2078	-	43,440,833	43,440,833	794,625	658,286	2,514,478	-
2079	-	44,961,262	44,961,262	744,178	658,286	2,602,484	-
2080	-	46,534,906	46,534,906	695,700	658,286	2,693,571	-
2081	-	48,163,628	48,163,628	647,714	658,286	2,787,846	-
2082	-	49,849,355	49,849,355	596,861	658,286	2,885,421	-
2083	-	51,594,082	51,594,082	547,008	658,286	2,986,410	-
2084	-	53,399,875	53,399,875	497,633	658,286	3,090,935	-
2085	-	55,268,871	55,268,871	452,946	658,286	3,199,118	-
2086	-	57,203,281	57,203,281	408,259	658,286	3,311,087	-
2087	-	59,205,396	59,205,396	365,333	658,286	3,426,975	-
2088	-	61,277,585	61,277,585	323,914	658,286	3,546,919	-
2089	-	63,422,300	63,422,300	285,416	658,286	3,671,061	-
2090	-	65,642,081	65,642,081	250,636	658,286	3,799,548	-

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)
2091	-	67,939,554	67,939,554	217,962	658,286	3,932,532	-
2092	-	70,317,438	70,317,438	187,456	658,286	4,070,171	-
2093	-	72,778,548	72,778,548	159,626	658,286	4,212,627	-
2094	-	75,325,797	75,325,797	134,270	658,286	4,360,069	-
2095	-	77,962,200	77,962,200	111,386	658,286	4,512,671	-
2096	-	80,690,877	80,690,877	91,596	658,286	4,670,615	-
2097	-	83,515,058	83,515,058	74,709	658,286	4,834,086	-
2098	-	86,438,085	86,438,085	60,162	658,286	5,003,279	-
2099	-	89,463,418	89,463,418	47,765	658,286	5,178,394	-
2100	-	92,594,638	92,594,638	37,326	658,286	5,359,638	-
2101	-	95,835,450	95,835,450	28,667	658,286	5,547,225	-
2102	-	99,189,691	99,189,691	21,606	658,286	5,741,378	-
2103	-	102,661,330	102,661,330	15,954	658,286	5,942,326	-
2104	-	106,254,477	106,254,477	11,524	658,286	6,150,308	-
2105	-	109,973,384	109,973,384	8,128	658,286	6,365,569	-
2106	-	113,822,452	113,822,452	5,589	658,286	6,588,363	-
2107	-	117,806,238	117,806,238	3,742	658,286	6,818,956	-
2108	-	121,929,456	121,929,456	2,436	658,286	7,057,620	-
2109	-	126,196,987	126,196,987	1,539	658,286	7,304,636	-
2110	-	130,613,882	130,613,882	944	658,286	7,560,299	-
2111	-	135,185,368	135,185,368	561	658,286	7,824,909	-
2112	-	139,916,856	139,916,856	322	658,286	8,098,781	-
2113	-	144,813,946	144,813,946	179	658,286	8,382,238	-
2114	-	149,882,434	149,882,434	97	658,286	8,675,617	-
2115	-	155,128,319	155,128,319	51	658,286	8,979,263	-
2116	-	160,557,810	160,557,810	27	658,286	9,293,537	-
2117	-	166,177,333	166,177,333	14	658,286	9,618,811	-
2118	-	171,993,540	171,993,540	7	658,286	9,955,470	-
2119	-	178,013,314	178,013,314	3	658,286	10,303,911	-
2120	-	184,243,780	184,243,780	1	658,286	10,664,548	-
2121	-	190,692,312	190,692,312	-	658,286	11,037,807	-
2122	-	197,366,543	197,366,543	-	658,286	11,424,130	-

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	4,377,151	1,129,538	471,252	-	493,915	5,529,352
2024	5,529,352	1,158,203	538,293	-	379,555	6,528,817
2025	6,528,817	1,187,551	598,944	-	443,503	7,560,927
2026	7,560,927	1,173,442	616,537	-	509,560	8,627,392
2027	8,627,392	1,228,188	704,019	-	577,816	9,729,377
2028	9,729,377	1,247,815	750,745	-	648,564	10,875,011
2029	10,875,011	1,202,037	731,178	-	722,179	12,068,049
2030	12,068,049	1,208,322	766,903	-	798,769	13,308,237
2031	13,308,237	1,201,415	788,338	-	878,460	14,599,774
2032	14,599,774	1,203,163	818,829	-	961,476	15,945,584
2033	15,945,584	1,250,273	898,248	-	1,047,904	17,345,513
2034	17,345,513	1,306,278	993,810	-	1,137,614	18,795,595
2035	18,795,595	1,280,860	1,002,292	-	1,230,767	20,304,930
2036	20,304,930	1,275,491	1,030,241	-	1,327,791	21,877,971
2037	21,877,971	1,302,897	1,092,876	-	1,428,894	23,516,886
2038	23,516,886	1,294,276	1,117,690	-	1,534,337	25,227,809
2039	25,227,809	1,315,730	1,172,542	-	1,644,461	27,015,458
2040	27,015,458	1,357,182	1,246,681	-	1,759,596	28,885,555
2041	28,885,555	1,295,306	1,217,321	-	1,880,096	30,843,636
2042	30,843,636	1,254,506	1,210,601	-	2,006,263	32,893,804
2043	32,893,804	1,298,470	1,287,747	-	2,138,446	35,042,973
2044	35,042,973	1,262,494	1,285,711	-	2,277,039	37,296,795
2045	37,296,795	1,246,704	1,305,103	-	2,422,394	39,660,790
2046	39,660,790	1,210,021	1,305,327	-	2,574,854	42,140,338
2047	42,140,338	1,243,512	1,376,443	-	2,734,802	44,742,209
2048	44,742,209	1,210,876	1,383,390	-	2,902,637	47,472,332
2049	47,472,332	1,141,020	1,353,383	-	3,078,800	50,338,769
2050	50,338,769	1,089,477	1,341,765	-	3,263,821	53,350,302
2051	53,350,302	1,052,593	1,344,897	-	3,458,270	56,516,268
2052	56,516,268	1,045,051	1,378,689	-	3,662,714	59,845,344
2053	59,845,344	971,589	1,348,051	-	3,877,712	63,346,594
2054	63,346,594	906,674	1,325,051	-	4,103,931	67,032,148
2055	67,032,148	874,300	1,335,547	-	4,342,099	70,913,000
2056	70,913,000	773,893	1,277,407	-	4,592,981	75,002,467

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	75,002,467	732,779	1,279,683	-	4,857,386	79,312,949
2058	79,312,949	681,784	1,273,824	-	5,136,100	83,857,009
2059	83,857,009	617,704	1,255,961	-	5,429,962	88,648,714
2060	88,648,714	563,072	1,248,693	-	5,739,884	93,702,977
2061	93,702,977	522,329	1,256,733	-	6,066,825	99,035,398
2062	99,035,398	446,731	1,231,635	-	6,411,791	104,662,285
2063	104,662,285	387,405	1,224,286	-	6,775,850	110,601,254
2064	110,601,254	320,354	1,211,178	-	7,160,130	116,870,560
2065	116,870,560	230,718	1,176,634	-	7,565,844	123,490,488
2066	123,490,488	159,665	1,162,873	-	7,994,277	130,481,557
2067	130,481,557	79,876	1,141,991	-	8,446,782	137,866,224
2068	137,866,224	5,532	1,128,331	-	8,924,814	145,668,239
2069	145,668,239	-	1,113,077	-	9,432,261	153,987,423
2070	153,987,423	-	1,090,895	-	9,973,728	162,870,256
2071	162,870,256	-	1,070,165	-	10,551,786	172,351,877
2072	172,351,877	-	1,033,412	-	11,169,286	182,487,751
2073	182,487,751	-	1,004,287	-	11,829,064	193,312,528
2074	193,312,528	-	967,187	-	12,533,881	204,879,222
2075	204,879,222	-	926,103	-	13,287,051	217,240,170
2076	217,240,170	-	887,784	-	14,091,758	230,444,144
2077	230,444,144	-	840,810	-	14,951,543	244,554,877
2078	244,554,877	-	794,625	-	15,870,242	259,630,494
2079	259,630,494	-	744,178	-	16,851,796	275,738,112
2080	275,738,112	-	695,700	-	17,900,367	292,942,779
2081	292,942,779	-	647,714	-	19,020,230	311,315,295
2082	311,315,295	-	596,861	-	20,216,096	330,934,530
2083	330,934,530	-	547,008	-	21,492,967	351,880,489
2084	351,880,489	-	497,633	-	22,856,059	374,238,915
2085	374,238,915	-	452,946	-	24,310,809	398,096,778
2086	398,096,778	-	408,259	-	25,863,022	423,551,541
2087	423,551,541	-	365,333	-	27,518,977	450,705,185
2088	450,705,185	-	323,914	-	29,285,310	479,666,581
2089	479,666,581	-	285,416	-	31,169,052	510,550,217
2090	510,550,217	-	250,636	-	33,177,618	543,477,199

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	543,477,199	-	217,962	-	35,318,934	578,578,171
2092	578,578,171	-	187,456	-	37,601,489	615,992,204
2093	615,992,204	-	159,626	-	40,034,305	655,866,883
2094	655,866,883	-	134,270	-	42,626,984	698,359,597
2095	698,359,597	-	111,386	-	45,389,754	743,637,965
2096	743,637,965	-	91,596	-	48,333,491	791,879,860
2097	791,879,860	-	74,709	-	51,469,763	843,274,914
2098	843,274,914	-	60,162	-	54,810,914	898,025,666
2099	898,025,666	-	47,765	-	58,370,116	956,348,017
2100	956,348,017	-	37,326	-	62,161,408	1,018,472,099
2101	1,018,472,099	-	28,667	-	66,199,755	1,084,643,187
2102	1,084,643,187	-	21,606	-	70,501,105	1,155,122,686
2103	1,155,122,686	-	15,954	-	75,082,456	1,230,189,188
2104	1,230,189,188	-	11,524	-	79,961,923	1,310,139,587
2105	1,310,139,587	-	8,128	-	85,158,809	1,395,290,268
2106	1,395,290,268	-	5,589	-	90,693,686	1,485,978,365
2107	1,485,978,365	-	3,742	-	96,588,472	1,582,563,095
2108	1,582,563,095	-	2,436	-	102,866,522	1,685,427,181
2109	1,685,427,181	-	1,539	-	109,552,717	1,794,978,359
2110	1,794,978,359	-	944	-	116,673,563	1,911,650,978
2111	1,911,650,978	-	561	-	124,257,295	2,035,907,712
2112	2,035,907,712	-	322	-	132,333,991	2,168,241,381
2113	2,168,241,381	-	179	-	140,935,684	2,309,176,886
2114	2,309,176,886	-	97	-	150,096,494	2,459,273,283
2115	2,459,273,283	-	51	-	159,852,762	2,619,125,994
2116	2,619,125,994	-	27	-	170,243,189	2,789,369,156
2117	2,789,369,156	-	14	-	181,308,995	2,970,678,137
2118	2,970,678,137	-	7	-	193,094,079	3,163,772,209
2119	3,163,772,209	-	3	-	205,645,193	3,369,417,399
2120	3,369,417,399	-	1	-	219,012,131	3,588,429,529
2121	3,588,429,529	-	-	-	233,247,919	3,821,677,448
2122	3,821,677,448	-	-	-	248,409,034	4,070,086,482

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	5,529,352	538,293	538,293	-	521,608	-	521,608
2025	6,528,817	598,944	598,944	-	544,956	-	544,956
2026	7,560,927	616,537	616,537	-	526,726	-	526,726
2027	8,627,392	704,019	704,019	-	564,756	-	564,756
2028	9,729,377	750,745	750,745	-	565,483	-	565,483
2029	10,875,011	731,178	731,178	-	517,131	-	517,131
2030	12,068,049	766,903	766,903	-	509,293	-	509,293
2031	13,308,237	788,338	788,338	-	491,576	-	491,576
2032	14,599,774	818,829	818,829	-	479,426	-	479,426
2033	15,945,584	898,248	898,248	-	493,827	-	493,827
2034	17,345,513	993,810	993,810	-	513,018	-	513,018
2035	18,795,595	1,002,292	1,002,292	-	485,818	-	485,818
2036	20,304,930	1,030,241	1,030,241	-	468,888	-	468,888
2037	21,877,971	1,092,876	1,092,876	-	467,037	-	467,037
2038	23,516,886	1,117,690	1,117,690	-	448,489	-	448,489
2039	25,227,809	1,172,542	1,172,542	-	441,783	-	441,783
2040	27,015,458	1,246,681	1,246,681	-	441,049	-	441,049
2041	28,885,555	1,217,321	1,217,321	-	404,377	-	404,377
2042	30,843,636	1,210,601	1,210,601	-	377,601	-	377,601
2043	32,893,804	1,287,747	1,287,747	-	377,149	-	377,149
2044	35,042,973	1,285,711	1,285,711	-	353,571	-	353,571
2045	37,296,795	1,305,103	1,305,103	-	336,999	-	336,999
2046	39,660,790	1,305,327	1,305,327	-	316,485	-	316,485
2047	42,140,338	1,376,443	1,376,443	-	313,359	-	313,359
2048	44,742,209	1,383,390	1,383,390	-	295,719	-	295,719
2049	47,472,332	1,353,383	1,353,383	-	271,648	-	271,647
2050	50,338,769	1,341,765	1,341,765	-	252,878	-	252,878
2051	53,350,302	1,344,897	1,344,897	-	237,999	-	237,999
2052	56,516,268	1,378,689	1,378,689	-	229,088	-	229,088
2053	59,845,344	1,348,051	1,348,051	-	210,326	-	210,326
2054	63,346,594	1,325,051	1,325,051	-	194,120	-	194,120
2055	67,032,148	1,335,547	1,335,547	-	183,716	-	183,716
2056	70,913,000	1,277,407	1,277,407	-	164,994	-	164,994
2057	75,002,467	1,279,683	1,279,683	-	155,200	-	155,200

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%
2058	79,312,949	1,273,824	1,273,824	-	145,060	-	145,060
2059	83,857,009	1,255,961	1,255,961	-	134,297	-	134,297
2060	88,648,714	1,248,693	1,248,693	-	125,370	-	125,370
2061	93,702,977	1,256,733	1,256,733	-	118,477	-	118,477
2062	99,035,398	1,231,635	1,231,635	-	109,024	-	109,024
2063	104,662,285	1,224,286	1,224,286	-	101,759	-	101,759
2064	110,601,254	1,211,178	1,211,178	-	94,525	-	94,525
2065	116,870,560	1,176,634	1,176,634	-	86,225	-	86,225
2066	123,490,488	1,162,873	1,162,873	-	80,015	-	80,015
2067	130,481,557	1,141,991	1,141,991	-	73,783	-	73,783
2068	137,866,224	1,128,331	1,128,331	-	68,451	-	68,451
2069	145,668,239	1,113,077	1,113,077	-	63,404	-	63,404
2070	153,987,423	1,090,895	1,090,895	-	58,348	-	58,348
2071	162,870,256	1,070,165	1,070,165	-	53,746	-	53,746
2072	172,351,877	1,033,412	1,033,412	-	48,732	-	48,732
2073	182,487,751	1,004,287	1,004,287	-	44,468	-	44,468
2074	193,312,528	967,187	967,187	-	40,212	-	40,212
2075	204,879,222	926,103	926,103	-	36,154	-	36,154
2076	217,240,170	887,784	887,784	-	32,543	-	32,543
2077	230,444,144	840,810	840,810	-	28,940	-	28,940
2078	244,554,877	794,625	794,625	-	25,681	-	25,681
2079	259,630,494	744,178	744,178	-	22,583	-	22,583
2080	275,738,112	695,700	695,700	-	19,823	-	19,823
2081	292,942,779	647,714	647,714	-	17,329	-	17,329
2082	311,315,295	596,861	596,861	-	14,994	-	14,994
2083	330,934,530	547,008	547,008	-	12,903	-	12,903
2084	351,880,489	497,633	497,633	-	11,022	-	11,022
2085	374,238,915	452,946	452,946	-	9,420	-	9,420
2086	398,096,778	408,259	408,259	-	7,972	-	7,972
2087	423,551,541	365,333	365,333	-	6,699	-	6,699
2088	450,705,185	323,914	323,914	-	5,577	-	5,577
2089	479,666,581	285,416	285,416	-	4,614	-	4,614
2090	510,550,217	250,636	250,636	-	3,804	-	3,804
2091	543,477,199	217,962	217,962	-	3,107	-	3,107

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%
2092	578,578,171	187,456	187,456	-	2,509	-	2,509
2093	615,992,204	159,626	159,626	-	2,006	-	2,006
2094	655,866,883	134,270	134,270	-	1,584	-	1,584
2095	698,359,597	111,386	111,386	-	1,234	-	1,234
2096	743,637,965	91,596	91,596	-	953	-	953
2097	791,879,860	74,709	74,709	-	730	-	730
2098	843,274,914	60,162	60,162	-	552	-	552
2099	898,025,666	47,765	47,765	-	411	-	411
2100	956,348,017	37,326	37,326	-	302	-	302
2101	1,018,472,099	28,667	28,667	-	218	-	218
2102	1,084,643,187	21,606	21,606	-	154	-	154
2103	1,155,122,686	15,954	15,954	-	107	-	107
2104	1,230,189,188	11,524	11,524	-	72	-	72
2105	1,310,139,587	8,128	8,128	-	48	-	48
2106	1,395,290,268	5,589	5,589	-	31	-	31
2107	1,485,978,365	3,742	3,742	-	19	-	19
2108	1,582,563,095	2,436	2,436	-	12	-	12
2109	1,685,427,181	1,539	1,539	-	7	-	7
2110	1,794,978,359	944	944	-	4	-	4
2111	1,911,650,978	561	561	-	2	-	2
2112	2,035,907,712	322	322	-	1	-	1
2113	2,168,241,381	179	179	-	1	-	1
2114	2,309,176,886	97	97	-	-	-	-
2115	2,459,273,283	51	51	-	-	-	-
2116	2,619,125,994	27	27	-	-	-	-
2117	2,789,369,156	14	14	-	-	-	-
2118	2,970,678,137	7	7	-	-	-	-
2119	3,163,772,209	3	3	-	-	-	-
2120	3,369,417,399	1	1	-	-	-	-
2121	3,588,429,529	-	-	-	-	-	-
2122	3,821,677,448	-	-	-	-	-	-

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	-	6.15	-	-	-	-	-	-	-	-	-	-
2019	(1,422,579)	6.75	(210,752)	(210,752)	(158,067)	-	-	-	-	-	-	-
2020	-	6.75	-	-	-	-	-	-	-	-	-	-
2021	(1,355,902)	6.87	(197,366)	(197,366)	(197,366)	(197,366)	(171,706)	-	-	-	-	-
2022	-	6.87	-	-	-	-	-	-	-	-	-	-
2023	(1,056,414)	6.64	(159,098)	(159,098)	(159,098)	(159,098)	(159,098)	(159,098)	(101,826)	-	-	-
Net Increase (Decrease) in OPEB Expense			(567,216)	(567,216)	(514,531)	(356,464)	(330,804)	(159,098)	(101,826)	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2018	(1,427,115)	6.15	(232,051)	(34,809)	-	-	-	-	-	-	-	-
2019	(3,817,213)	6.75	(565,513)	(565,513)	(424,135)	-	-	-	-	-	-	-
2020	741,668	6.75	109,877	109,877	109,877	82,406	-	-	-	-	-	-
2021	411,731	6.87	59,932	59,932	59,932	59,932	52,139	-	-	-	-	-
2022	(32,898)	6.87	(4,789)	(4,789)	(4,789)	(4,789)	(4,789)	(4,164)	-	-	-	-
2023	459,697	6.64	69,231	69,231	69,231	69,231	69,231	69,231	44,311	-	-	-
Net Increase (Decrease) in OPEB Expense			(563,313)	(366,071)	(189,884)	206,780	116,581	65,067	44,311	-	-	-

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	52,900	5	-	-	-	-	-	-	-	-	-	-
2019	47,155	5	9,431	-	-	-	-	-	-	-	-	-
2020	87,286	5	17,457	17,458	-	-	-	-	-	-	-	-
2021	(668,742)	5	(133,748)	(133,749)	(133,749)	-	-	-	-	-	-	-
2022	799,904	5	159,981	159,981	159,981	159,980	-	-	-	-	-	-
2023	(179,978)	5	(35,996)	(35,996)	(35,996)	(35,995)	(35,995)	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			17,125	7,694	(9,764)	123,985	(35,995)	-	-	-	-	-