

#### ERIE COUNTY WATER AUTHORITY

#### INTEROFFICE MEMORANDUM

February 8, 2021

To: Jerome D. Schad, Chair

Mark S. Carney, Vice Chair Peggy A. LaGree, Treasurer

From: Karen A. Prendergast, Chief Financial Officer

Subject: Actuarial Valuation of Other Post-Employment Benefits (OPEB)

The attached report was prepared by Benefit Plans Administrative Services, Inc. (BPAS) in compliance with Government Accounting Standards Board (GASB) Statement 75 — Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (OPEB).

The Authority is required to account for its commitment to provide health insurance to employees in retirement. Health insurance benefits are provided to retirees meeting the eligibility requirements based on policy or the applicable collective bargaining agreement.

Retirement benefits are recognized as they are earned during each year of employment. For the year ended December 31, 2020 the Authority's liability was calculated at \$89,032,011, as compared to \$90,082,536 in 2019 – a decrease of \$1,050,525.

Factors contributing to the change are summarized below.

- Annual service and interest costs increase our liability;
- > Improved mortality assumptions decreased our liability; and
- Less than expected increases in claims cost decreased our liability

Our OPEB expense for the year ending December 31, 2020 was \$1,807,715, compared to \$3,344,867, in 2019. The decrease is largely due to lower claims costs.

If you have any questions or would like BPAS to make a formal report the Board, please let me know and I will reach out to them.

cc T. McCracken

M. Murphy

R. Stoll

J. Tomaka

# **Erie County Water Authority**

Actuarial Valuation of
Retiree Group Health Benefits
Determined in Accordance with Statement No. 75
of the Governmental Accounting Standards Board
For the Reporting Period January 1, 2020 – December 31, 2020

- Including -

Notes to Financial Statements Reported as of December 31, 2020

**Issued February 2021** 



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#### **Solving Tomorrow's Benefit Challenges Today**

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The information contained in this report was prepared for the use of Erie County Water Authority and its auditors in connection with our actuarial valuation. It is not intended or necessarily suitable for other purposes. To avoid misrepresentation, it is intended to be used in its entirety.

#### **Plan Description**

The objective of the Governmental Accounting Standards Board (GASB) Accounting Standard No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, is to improve the faithfulness of representations and usefulness of information included in the financial reports of employers regarding other postemployment benefits. The Statement is designed to provide decision-useful information such that the financial report may be used to assess accountability and interperiod equity in a consistent and transparent format. GASB 75 replaces the requirements of Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended, and No. 57, OPEB Measurements by Agent Employers and Multiple-Employer Plans.

Postemployment benefits include healthcare benefits, life insurance benefits, and, in some cases, sick pay accrual. These benefits arise from an exchange of salaries and benefits for employee services rendered and constitute part of the compensation for those services. The goal is to measure and recognize the cost of postemployment benefits during the period when employees render the services and to provide relevant information about obligations and the extent to which progress is being made in funding these obligations.

The projection of benefits is based on the types of benefits provided under the substantive plan at the plan's measurement date and on the pattern of cost-sharing between the employer and plan participants. The projections do not explicitly incorporate the potential effects of legal or contractual funding limitations on the pattern of cost-sharing between the employer and plan participants in the future.

Erie County Water Authority administers their Retiree Group Health Benefits Program as a singleemployer defined benefit Other Postemployment Benefit plan. The Program provides for continuation of Retiree Group Health Benefits for certain retirees and their spouses and can be amended by action of Erie County Water Authority subject to applicable collective bargaining and employment agreements. Details of the Program design are described in Section VII. The Program does not issue a stand alone financial report as there are no legally segregated assets for the sole purpose of paying benefits under the Program.

#### **Measurement & Reporting Dates**

In the calculation of the GASB 75 liabilities, Erie County Water Authority has elected to use the same measurement period as the reporting period (no offset). The information in this report is based on the following:

Valuation Date: January 1, 2020

Measurement Period: January 1, 2020 – December 31, 2020

Reporting Period: January 1, 2020 – December 31, 2020

#### **Summary of Changes From Prior Valuation**

Actuarial Assumptions and Methods for the Measurement Period January 1, 2020 – December 31, 2020:

The rate used to discount future plan cash flows was updated from 2.75% to 2.00% as of December 31, 2020 based on a review of the Fidelity General Obligation 20-Year AA Municipal Bond Index. The change in discount rate resulted in an increase in liabilities.

The mortality assumption was revised as of December 31, 2020 to the sex-distinct headcount-weighted Pri.H-2012 Mortality Tables for employees, healthy annuitants, and contingent survivors adjusted for mortality improvements using Scale MP-2020 on a fully generational basis in order to reflect the most recent experience available. The revised assumption resulted in a decrease in liabilities.

The annual rate of increase in healthcare costs was revised as of December 31, 2020 to better reflect future expectations, including updating long-term rates based on the SOA Long Term Healthcare Cost Trends Model v2021\_b (the Getzen model). A review of published National trend survey data in relation to the retiree health plan offerings was the basis for this change. The revised assumption resulted in an increase in liabilities.

Rates of turnover and retirement were determined based on the April 1, 2015 to March 31, 2020 experience study released by the Retirement Systems Actuary in August 2020 for the New York State Employees' Retirement System (ERS) and the New York Police and Fire Retirement System (PFRS). Revised tables have been utilized for employees as of December 31, 2020 to reflect the most recent experience study. The revised assumption resulted in a net increase in liabilities.

All other actuarial assumptions and methods remain the same as those in the January 1, 2019 – December 31, 2019 measurement period valuation utilized for the Authority's reporting period of January 1, 2019 – December 31, 2019. For more details regarding the information and analysis used in the selection of each assumption, please refer to Section VI.

Plan Provisions for the Measurement Period January 1, 2020 – December 31, 2020:

As of April 2020, the Authority amended the eligibility for retiree group health benefits for non-represented employees to a minimum of five (5) years of full-time service with the Authority and whose age and years of services combined is at least equal to sixty-five (65). Previously, an employee was extended eligibility with a minimum of ten (10) years of full-time service and whose age and years of services combined is at least equal to seventy (70). The Authority also amended the medical waiver benefit amount for non-represented employees to be capped at \$3,000 for a single plan and \$8,000 for a family plan. These amendments resulted in an increase in liabilities.

All other Plan provisions remain the same as those in the January 1, 2019 – December 31, 2019 measurement period valuation utilized for the Authority's reporting period of January 1, 2019 – December 31, 2019. For a description of the Plan provisions used in the valuation, please refer to Section VII.

#### **Results**

The following exhibit illustrates the Total OPEB Liability, Net OPEB Liability, and the calculation of the Annual OPEB Expense. The Present Value of Projected Future Benefit Payments is illustrated for informational purposes only; it is not required to be disclosed. Please refer to Section VIII for a description of GASB 75 terminology.

All results have been calculated utilizing actuarial assumptions and plan provisions in effect for the plan's measurement period of January 1, 2020 – December 31, 2020. Any plan provision changes ratified or adopted by the Authority after the measurement period will be reflected in future valuations. The results are intended to be utilized for the Erie County Water Authority's reporting period of January 1, 2020 – December 31, 2020.

# Erie County Water Authority Retiree Group Health Benefits Program Measured Using a Discount Rate of 2.75% as of January 1, 2020 and 2.00% as of December 31, 2020 For the Reporting Period January 1, 2020 – December 31, 2020

Total OPEB Liability (TOL)	ECWA
Retirees & Dependents	\$36,534,254
Actives	\$36,534,254 38,713,829
Disableds	0
Total OPEB Liability	\$75,248,083
Additional Obligation attributable to future service	32,017,143
Present Value of Projected Future Benefit Payments	\$107,265,226

Net OPEB Liability	
Total OPEB Liability (TOL)	\$75,248,083
Plan Fiduciary Net Position	N/A
Net OPEB Liability	\$75,248,083

Calculation of Annual OPEB Expense		
Service Cost	\$2,785,643	
Interest Cost	2,121,823	
Projected Earnings on Plan Investments	0	
Change of Benefit Terms	463,249	
Recognition of Deferred (Inflows)/Outflows		
Differences between Expected and Actual Experience	(4,637,831)	
Changes of Assumptions or Other Inputs	1,074,831	
Differences in Investment Experience	0	
Annual OPEB Expense	\$1,807,715	

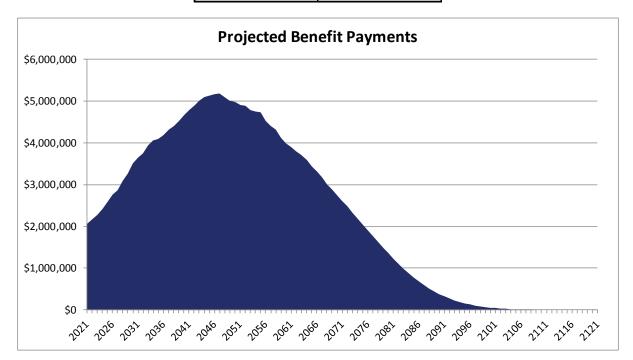
Actual Benefit Payments	\$1,753,051

<sup>\*</sup> The results are based on a valuation date of January 1, 2020 for a measurement period of January 1, 2020 – December 31, 2020. The reporting period is January 1, 2020 – December 31, 2020.

#### **Projection of Future Cash Flows**

The table below displays the current fiscal year expected cash flow along with a ten year projection of future cash flows. The graph illustrates all projected future cash flows of the retiree group health benefits program. We assume the plan will continue to be open to new participants, however, the projection of future cash flow is based on a closed group valuation and actuarial assumptions as of the measurement date December 31, 2020. It does not consider the impact of future new hires.

Measurement Period Ending 12/31	ECWA
2021	\$2,052,047
2022	2,154,481
2023	2,276,866
2024	2,412,171
2025	2,594,350
2026	2,767,899
2027	2,870,091
2028	3,086,140
2029	3,267,603
2030	3,503,295



SECTION II CERTIFICATION

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. The actuaries involved in this engagement are members of the American Academy of Actuaries and other professional actuarial organizations and meet the "Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States" to render the actuarial opinion outlined herein.

In preparing the results presented in this report, we have relied upon information provided to us regarding plan provisions, plan participants, and benefit payments. While the scope of our engagement did not call for us to perform an audit or independent verification of this information, we have reviewed this information for reasonableness, but have not audited it. The accuracy of the results is dependent upon the accuracy and completeness of the underlying information which is the responsibility of those who supply the data.

The calculations reported herein have been made on a basis consistent with our understanding of GASB 75. Determinations for purposes other than meeting the Erie County Water Authority's financial accounting requirements may be significantly different from the results reported.

For purposes of determining benefit obligations and costs as of the measurement date, participant data as of January 1, 2020 is used. Benefit obligations are projected to the measurement date using roll forward techniques by assuming no actuarial gains or losses in the interim, except for those assumption changes necessary to reflect the assumptions as of the measurement date.

Section VI of this report provides a summary of the assumptions and methods used in our valuation. These assumptions represent anticipated future experience under the Plan and were selected based on Erie County Water Authority's expectation with regard to each assumption with the exception of the discount rate, which was selected as discussed in Section VI of this report. We believe the assumptions are reasonable for the purposes for which they are being used.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. Due to the limited scope of the engagement, an analysis of the potential range of future measurements was not completed. Results that differ from those shown in this report, within a reasonable range, could also be considered appropriate.

SECTION II CERTIFICATION

Respectfully submitted,

#### **BPAS ACTUARIAL AND PENSION SERVICES, LLC**

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NRM:JAS:bjw

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**Recognition of Deferred (Inflows)/Outflows:** Differences in actual experience and actuarial assumptions are reflected in the deferred (inflows)/outflows. Differences must be amortized over the average expected remaining service period of the active and inactive plan participants.

The calculation of the recognition of (inflows)/outflows for changes occurring during the measurement period January 1, 2020 - December 31, 2020 is detailed below.

Calculation of Experience Change Deferred (Inflows)/Outflows	FCVAVA
measured at January 1, 2020	ECWA
Total OPEB Liability (TOL) as of 12/31/2019 prior to Experience Changes	90,082,536
Total OPEB Liability (TOL) as of 1/1/2020 after Experience Changes	75,248,083
Differences due to Experience Changes measured 1/1/2020	(14,834,453)
Amortization Period (years)	6.207
Recognition of New Experience Change (Inflows)/Outflows	(2,389,955)
Recognition of Prior Experience Change (Inflows)/Outflows	(2,210,744)
Recognition of Experience Change (Inflows)/Outflows for current year	(4,600,699)

Calculation of Experience Deferred (Inflows)/Outflows arising from the difference	ECWA
between actual and expected benefit payments	Letta
Expected Benefit Payments used to calculate OPEB liability	2,007,635
Actual Benefit Payments	1,777,156
Differences due to Experience Changes measured 12/31/2020 adjusted with interest	(230,479)
Amortization Period (years)	6.207
Annual Recognition of new Experience (Inflows)/Outflows	(37,132)

Calculation of Assumption/Input Change Deferred (Inflows)/Outflows	FCMA
measured at December 31, 2020	ECWA
Total OPEB Liability (TOL) as of 12/31/2020 prior to Assumption/Input Changes	78,172,019
Total OPEB Liability (TOL) as of 12/31/2020 after Assumption/Input Changes	88,568,762
Differences due to Assumption/Input Changes measured 12/31/2020	10,396,743
Amortization Period (years)	6.207
Recognition of New Assumption/Input Change (Inflows)/Outflows	1,675,003
Recognition of Total New Assumption/Input Change (Inflows)/Outflows	1,675,003
Recognition of Prior Assumption/Input Change (Inflows)/Outflows	(600,172)
Recognition of Assumption/Input Change (Inflows)/Outflows for current year	1,074,831

Since the plan is not funded, there are no (inflows)/outflows due to differences in investment experience.

For detailed information on each prior amortization base, please see Section X of this report.

**Changes in Benefit Terms:** A change to the provisions of the retiree group health benefits program is reflected at the first measurement date after adoption and/or ratification. It is shown as a change in benefit terms in the Annual OPEB Expense and recognized in full immediately.

A summary of the effect of plan changes occurring during the measurement period January 1, 2020 – December 31, 2020 is shown below.

Calculation of Change in Benefit Terms measured at December 31, 2020	ECWA
Total OPEB Liability (TOL) as of 12/31/2020 under prior Benefit Terms	88,568,762
Total OPEB Liability (TOL) as of 12/31/2020 after change in Benefit Terms	89,032,011
Change in Liability due to change in Benefit Terms	463,249

Change in Total OPEB Liability (TOL)	FY 2020	FY 2019	FY 2018
Total OPEB Liability at Beginning of Year	\$90,082,536	\$89,646,879	\$99,640,307
Service Cost	2,785,643	2,766,281	3,378,431
Interest Cost	2,121,823	3,389,502	3,372,947
Change of Benefit Terms	463,249	0	119,294
Differences between Expected and Actual Experience	(15,064,932)	(13,271,429)	191,341
Change of Assumptions or Other Inputs	10,396,743	9,655,142	(14,821,432)
Actual Benefit Payments	(1,753,051)	(2,103,839)	(2,234,009)
Total OPEB Liability (TOL) at End of Year	\$89,032,011	90,082,536	89,646,879

Change in Plan Fiduciary Net Position	FY 2020	FY 2019	FY 2018
Plan Fiduciary Net Position - Beginning of Year	\$0	\$0	\$0
Contributions from the Employer	1,753,051	2,103,839	2,234,009
Net Investment Income	0	0	0
Actual Benefit Payments	(1,753,051)	(2,103,839)	(2,234,009)
Administrative Expenses	0	0	0
Plan Fiduciary Net Position - End of Year	\$0	0	0

Funded Status	12/31/2020	12/31/2019	12/31/2018
Total OPEB Liability (TOL)	\$89,032,011	\$90,082,536	\$89,646,879
Plan Fiduciary Net Position	0	0	0
Net OPEB Liability (NOL)	\$89,032,011	\$90,082,536	\$89,646,879

Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	0%	0%	0%
Annual Covered Employee Payroll	\$18,402,790	\$16,908,970	\$16,271,826
Sponsor's Net OPEB Liability as a Percentage of			
Annual Covered Employee Payroll	483.80%	532.75%	550.93%
Annual OPEB Expense			
Service Cost	\$2,785,643	\$2,766,281	\$3,378,431
Interest Cost	2,121,823	3,389,502	3,372,947
Projected Earnings on Plan Investments	0	0	0
Change of Benefit Terms	463,249	0	119,294
Recognition of Deferred (Inflows)/Outflows			
Differences between Expected and Actual Experience	(4,637,831)	(2,210,744)	28,782
<ul> <li>Changes of Assumptions or Other Inputs</li> </ul>	1,074,831	(600,172)	(2,229,457)
Differences in Investment Experience	0	0	0
Annual OPEB Expense	\$1,807,715	\$3,344,867	\$4,669,997

Actuarial Methods and Assumptions			
Reporting Date	12/31/2020	12/31/2019	12/31/2018
Measurement Date	12/31/2020	12/31/2019	12/31/2018
Actuarial Valuation Date	1/1/2020	1/1/2018	1/1/2018
Discount Rate	2.00%	2.75%	3.71%
Rate of Compensation Increase	2.50%	2.50%	2.50%
Inflation Rate (CPI)	2.25%	2.25%	2.25%
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Level Percentage	Level Percentage	Level Percentage
Amortization Period	6.207 years	5.926 years	6.648 years
Method used to determine Actuarial Value of Assets	N/A	N/A	N/A

Deferred (Inflows) and Outflows of Resources as of December 31,	Deferred Outflows	Deferred (Inflows)
2020	of Resources	of Resources
Differences between Expected and Actual Experience	\$104,995	(\$21,430,222)
Change of Assumptions	15,118,312	(8,133,061)
Net difference between Projected and Actual Earnings on OPEB Plan	0	٥
Investments	U	U
Total	\$15,223,307	(\$29,563,283)

#### Increase/(Decrease) in Collective OPEB Expense Arising from Changes in Assumptions (Measurement Period Ended December 31, 2020):

Measurement Period Ended 12/31	Changes of Inputs / Assumptions	Average Expected Remaining Service Lives (Years)	2018	2019	2020	2021	2022	2023	2024	2	025	2026
2018	\$ (14,821,432)	6.648	\$ (2,229,457)	\$ (2,229,457)	\$ (2,229,457)	\$ (2,229,457)	\$ (2,229,457)	\$ (2,229,457)	\$ (1,444,690)			
2019	9,655,142	5.926		1,629,285	1,629,285	1,629,285	1,629,285	1,629,285	1,508,717			
2020	10,396,743	6.207			1,675,003	1,675,003	1,675,003	1,675,003	1,675,003	1	,675,003	346,725
Net Increase (Decr	ease) in collective OPE	B expense	\$ (2,229,457)	\$ (600,172)	\$ 1,074,831	\$ 1,074,831	\$ 1,074,831	\$ 1,074,831	\$ 1,739,030 \$	1	,675,003	\$ 346,725

#### Collective Deferred (Inflows)/Outflows of Resources Arising from Changes in Assumptions (Measurement Period Ended December 31, 2020):

					es at December 31, 119			es at December 31, 20
Measurement Period Ended 12/31	Assumption / Input Change Losses (a)		Amounts Included in Collective OPEB Expense through December 31, 2019 (c)	Collective Deferred Outflows of Resources (a) – (c)	Collective Deferred (Inflows) of Resources (b) – (c)	Amounts Included in Collective OPEB Expense through December 31, 2020 (d)	Collective Deferred Outflows of Resources (a) – (d)	Collective Deferred (Inflows) of Resources (b) – (d)
2018		(14,821,432)	(4,458,914)		(10,362,518)	(6,688,371)		(8,133,061)
2019	9,655,142		1,629,285	8,025,857		3,258,570	6,396,572	
2020	10,396,743					1,675,003	8,721,740	
				\$ 8,025,857	\$ (10,362,518)	•	\$ 15,118,312	\$ (8,133,061)

#### Increase/(Decrease) in Collective OPEB Expense Arising from Changes in Experience (Measurement Period Ended December 31, 2020):

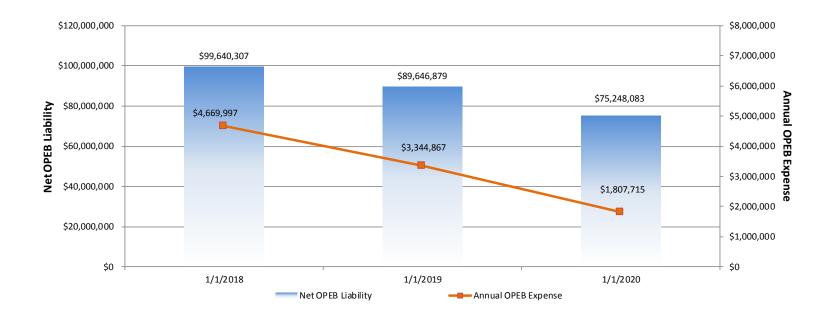
	Differences between Expected and Actual Experience		2018	2019	2020	2021	2022	:	2023	2024	2025	2026
2018	\$ 191,341	6.648	\$ 28,782	\$ 28,782	\$ 28,782	\$ 28,782	\$ 28,782	\$	28,782	\$ 18,649		
2019	(13,271,429)	5.926		(2,239,526)	(2,239,526)	(2,239,526)	(2,239,526)	(	2,239,526)	(2,073,799)		
2020	(15,064,932)	6.207			(2,427,087)	(2,427,087)	(2,427,087)	(	2,427,087)	(2,427,087)	(2,427,087)	(502,410)
Net Increase (Decr	rease) in collective OPE	B expense	\$ 28,782	\$ (2,210,744)	\$ (4,637,831)	\$ (4,637,831)	\$ (4,637,831)	\$ (	4,637,831)	\$ (4,482,237)	\$ (2,427,087)	\$ (502,410)

#### Collective Deferred (Inflows)/Outflows of Resources Arising from Changes in Experience (Measurement Period Ended December 31, 2020):

					s at December 31, 19			es at December 31, 020
Measurement Period Ended 12/31	Experience Losses (a)	Experience Gains (b)	Amounts Included in Collective OPEB Expense through December 31, 2019 (c)	Collective Deferred Outflows of Resources (a) – (c)	Collective Deferred (Inflows) of Resources (b) – (c)	Amounts Included in Collective OPEB Expense through December 31, 2020 (d)	Collective Deferred Outflows of Resources (a) – (d)	Collective Deferred (Inflows) of Resources (b) – (d)
2018	191,341		57,564	133,777		86,346	104,995	`
2019		(13,271,429)	(2,239,526)		(11,031,903)	(4,479,052)		(8,792,377)
2020		(15,064,932)				(2,427,087)		(12,637,845)
			•	\$ 133,777	\$ (11,031,903)	•	\$ 104,995	\$ (21,430,222)

Assumed pre-65 medical trend rates at end of year	
Healthcare cost trend rate assumed for next measurement period	7.000%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	3.784%
Measurement period that the rate reaches the ultimate trend rate	2075
Assumed post-65 Medicare Advantage medical trend rates at end of year	
Healthcare cost trend rate assumed for next measurement period	4.500%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	3.784%
Measurement period that the rate reaches the ultimate trend rate	2075
Assumed prescription drug trend rates at end of year	
Healthcare cost trend rate assumed for next measurement period	7.000%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	3.784%
Measurement period that the rate reaches the ultimate trend rate	2075
Assumed trend rates for additional benefits at end of year	
Trend for administrative fees per annum	3.250%
Sensitivity to Discount Rate and Healthcare Trend Rate	
Discount Rate at Measurement Date	2.00%
Net OPEB Liability (NOL) at Current Discount Rate and Healthcare Trend Rates	\$89,032,011
Net OPEB Liability (NOL) at 1% Decrease in Discount Rate	\$106,346,433
Net OPEB Liability (NOL) at 1% Increase in Discount Rate	\$75,365,109
Net OPEB Liability (NOL) at 1% Decrease in Healthcare Trend Rates	\$74,194,251
Net OPEB Liability (NOL) at 1% Increase in Healthcare Trend Rates	\$108,386,656

#### History of Net OPEB Liability (NOL) and Annual OPEB Expense



#### Change in Liability from December 31, 2019 to December 31, 2020

- Measurement Date
- > Total OPEB Liability

December 31, 2019	January 1, 2020	December 31, 2020
\$90,082,536	\$75,248,083	\$89,032,011

- Percent Change
- Reasons for Increase

**Reasons for Decrease** 

in premiums

-16.47%

• Less than expected increase | • Accumulation of interest on **Total OPEB Liability** 

18.32%

- Accrual of additional benefits for actives
- Revised discount rate from 2.75% to 2.00%.
- Updated turnover and retirement assumptions
- Plan Amendment to Non-Represented Employees
- Revised healthcare trend rates
- Less than expected increase Benefit payments made to in claims costs
- Demographic changes different than those assumed
- current retirees
- Updated mortality improvement scale from MP-2019 to MP-2020

#### SECTION V COMPARISON OF RESULTS & PARTICIPANT SUMMARY

#### **Reconciliation of Plan Participants**

Participant data was provided by Erie County Water Authority. We reviewed the data for reasonableness, but did not independently verify or audit it. The participant data was reconciled with information received in conjunction with prior actuarial studies. In the event that significant changes or discrepancies were found, they were discussed with Erie County Water Authority. In some circumstances routine corrections or modifications were made, in part by referencing other source documents. No material defects are believed to exist in the data. A reconciliation of the participant data is detailed below:

		Reconciliati	on of Plan Parti	cipant Data	
	Active Employees	Retirees*	Survivors	Disableds	Total
Total as of January 1, 2018	227	154	27	0	408
New entrants	30	0	0	0	30
New surviving spouses	0	0	3	0	3
Terminations	(17)	(12)	(2)	0	(31)
Retirements	(16)	16	0	0	0
Disablements	0	0	0	0	0
Data adjustments	0	0	0	0	0
Total as of January 1, 2020	224	158	28	0	410

<sup>\*</sup> As of January 1, 2020 there are 107 spouses of current retirees covered under the retiree's medical plan, compared to 101 spouses as of January 1, 2018.

As of January 1, 2020, 94 retirees have only medical benefits, 7 retirees are being reimbursed for waiving healthcare coverage, 4 retirees have only life insurance benefits, and 52 retirees have both medical and life insurance benefits.

# SECTION V COMPARISON OF RESULTS & PARTICIPANT SUMMARY

#### **Summary of Active Plan Participants**

Ago				Years o	of Service			
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total
Under 25	5	0	0	0	0	0	0	5
25-29	8	3	0	0	0	0	0	11
30-34	5	6	0	0	0	0	0	11
35-39	10	11	5	1	0	0	0	27
40-44	7	5	7	2	0	0	0	21
45-49	5	2	9	5	2	0	0	23
50-54	7	4	14	7	4	6	3	45
55-59	8	5	7	4	4	11	3	42
60-64	4	3	10	0	5	7	2	31
65 and over	2	3	1	2	0	0	0	8
Total	61	42	53	21	15	24	8	224

Average age	49.3
Average years of service	12.1

#### **Summary of Inactive Plan Participants**

	Inactive Participants			
		Survivors and		
Age	Retirees	Spouses of Retirees	Disableds	Total
Under 55	0	2	0	2
55-59	5	3	0	8
60-64	24	33	0	57
65-69	46	27	0	73
70-74	36	32	0	68
75-79	24	13	0	37
80-84	10	12	0	22
85 and over	13	13	0	26
Total	158	135	0	293

#### **SECTION VI**

#### **ASSUMPTIONS & METHODOLOGY**

The valuation of retiree group health benefits involves estimates and assumptions about the probability of events occurring far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Calculations are based on the types of benefits provided under the terms of the substantive plan at the time of the valuation and on the pattern of cost sharing between the employer and plan members. Calculations reflect a long-term perspective, so methods and assumptions used include techniques that are designed to reduce short-term volatility. Below is a description of the actuarial assumptions and methodology used in the actuarial valuation.

Valuation Date: January 1, 2020

Measurement Period: January 1, 2020 - December 31, 2020

Reporting Period: January 1, 2020 - December 31, 2020

Actuarial Cost Method: Entry Age Normal

**Amortization Method:** Level Percent of Pay

**Discount Rate:** 2.75% as of January 1, 2020 measurement 2.00% as of December 31, 2020 measurement

An analysis of returns on the Fidelity General Obligation 20-Year AA Municipal Bond Index as of December 31, 2019 and December 31, 2020 yielded discount rates of 2.75% and 2.00%, respectively. In our opinion, the plan sponsor's selection of 2.75% and 2.00% is not unreasonable given the Fidelity Index yields.

**Rate of Compensation Increase:** Salaries are assumed to increase at 2.50% per year. The salary scale was based on the Authority's review of historical experience as well as future expectations.

**Mortality:** As of January 1, 2020 measurement: The sex-distinct headcount-weighted Pri.H-2012 Mortality Tables for employees and healthy annuitants adjusted for mortality improvements using Scale MP-2019 on a fully generational basis. This assumption was based on a review of published mortality tables and the demographics of the Plan.

As of December 31, 2020 measurement: The sex-distinct headcount-weighted Pri.H-2012 Mortality Tables for employees, healthy annuitants, and contingent survivors adjusted for mortality improvements using Scale MP-2020 on a fully generational basis. This assumption was based on a review of published mortality tables and the demographics of the Plan.

**Disability:** Rates of decrement due to disability are assumed to be 0%.

**Turnover:** As of January 1, 2020 measurement: Rates of turnover are based on the experience under the New York State Employees' Retirement System (ERS). The ERS rates are based on the April 1, 2010 to March 31, 2015 experience study released by the Retirement Systems Actuary and published in their August 2015 report. Erie County Water Authority's experience is not expected to deviate significantly from the experience of the Retirement System as a whole. We have relied on the Retirement System rates, but were unable to assess reasonableness as an independent examination of the underlying experience would require a substantial amount of additional work beyond the scope of this valuation.

As of December 31, 2020 measurement: Rates of turnover are based on the experience under the New York State Employees' Retirement System (ERS). The ERS rates are based on the April 1, 2015 to March 31, 2020 experience study released by the Retirement Systems Actuary and published in their August August 2020 report Annual Report to the Comptroller on Actuarial Assumptions. Erie County Water Authority's experience is not expected to deviate significantly from the experience of the Retirement System as a whole. We have relied on the Retirement System rates, but were unable to assess reasonableness as an independent examination of the underlying experience would require a substantial amount of additional work beyond the scope of this valuation.

**Retirement Incidence:** As of January 1, 2020 measurement: Rates of retirement are based on the experience under the New York State Employees' Retirement System (ERS). The ERS rates are based on the April 1, 2010 to March 31, 2015 experience study released by the Retirement Systems Actuary and published in their August 2015 report. Erie County's Water Authority's experience is not expected to deviate significantly from the experience of the Retirement System as a whole. We have relied on the Retirement System rates, but were unable to assess reasonableness as an independent examination of the underlying experience would require a substantial amount of additional work beyond the scope of this valuation.

As of December 31, 2020 measurement: Rates of retirement are based on the experience under the New York State Employees' Retirement System (ERS). The ERS rates are based on the April 1, 2015 to March 31, 2020 experience study released by the Retirement Systems Actuary and published in their August 2020 report Annual Report to the Comptroller on Actuarial Assumptions. Erie County's Water Authority's experience is not expected to deviate significantly from the experience of the Retirement System as a whole. We have relied on the Retirement System rates, but were unable to assess reasonableness as an independent examination of the underlying experience would require a substantial amount of additional work beyond the scope of this valuation.

**Election Percentage:** Future retirees were assumed to elect coverage in medical plans at the following rates:

	Medical Plan	% of Retirees Electing Coverage
Dro 6E	Core POS 203	97%
Pre-65	Waiver	3%
	Encompass 65 HMO (formerly 401 & 402)	70%
Post-65	Passport PPO (formerly PPO 201)	30%
	Traditional Blue PPO 812	0%

Current retirees under age 65 are assumed to elect the post-65 coverage according to the chart above. Current retirees over age 65 were assumed to continue participation in their current plans.

A weighted average of the plan elections based on Erie County Water Authority's actual retiree participation was the basis for the plan elections for future retirees. However, no future retirees were assumed to enter the Traditional Blue PPO 812 Plan as the Traditional Blue PPO 812 Plan will require employee contributions for retirees enrolling after June 1, 2004.

**Spousal Coverage:** 80% of future retirees are assumed to elect spousal coverage upon retirement, with male spouses assumed to be three years older and female spouses assumed to be three years younger than the retiree. This assumption was determined based on valuation data from January 1, 2010 through January 1, 2020. Future experience is not expected to deviate significantly from these results.

**Surviving Spouse Coverage:** 100% of dependents are assumed to elect surviving spouse coverage upon the death of the retiree. Due to limited available experience, this assumption was based on the provisions of the plan, as well as the Authority's future expectations.

**Per Capita Costs:** All retiree health plans are offered through Labor Management Healthcare Fund (LMHF). Erie County Water Authority's retiree population is not large enough for the group's claims experience to be considered sufficiently credible. Therefore, actual claims experience from LMHF was used to develop retiree claim costs for ECWA. We used the Society of Actuaries Study "Health Care Costs — From Birth to Death" to apply mathematical smoothing techniques and develop reasonable assumptions for estimating age-specific retiree costs.

The Core POS 203 Plan and the Traditional Blue PPO 812 (OT06) Plan are experience-rated health care plans. The following table presents the average expected medical costs per capita for fiscal year 2020:

Pre65 203/812, Post65 203/812 Medical Only					
Incurred Annu	Incurred Annual Claim Cost Per Retiree or Dependent				
Age	Age Male Female				
55-59	\$6,267	\$6,597			
60-64	\$8,034	\$7,856			
65-69	\$5,210	\$4,724			
70-74	\$5,394	\$4,894			
75-79	\$5,779	\$5,411			
80-84	\$6,307	\$5,948			
85-89	\$6,922	\$6,447			
90-94	\$7,402	\$6,788			
95-99	\$7,547	\$6,131			

The Prescription Drug portion of the Core POS 203 Plan and the Traditional Blue PPO 812 Plan (OT06) are experience-rated. The following presents the average expected prescription drug per capital claim cost for fiscal year 2020:

Core POS 203 and Traditional Blue PPO 812 Pre-65 Prescription Drug Plan				
Incurred Annual Claim Cost Per Retiree or Dependent				
Age Male Female				
55-59 \$2,528 \$2,702				
60-64 \$3,146 \$3,262				

Core POS 203 and Traditional Blue PPO 812 Post-65 Prescription Drug					
Incurred Annu	Incurred Annual Claim Cost Per Retiree or Dependent				
Age	Age Male Female				
65-69	\$2,472	\$2,440			
70-74	\$2,952	\$2,887			
75-79	\$3,160	\$3,063			
80-84	\$3,139	\$3,045			
85-89	\$2,800	\$2,836			
90-94	\$2,442	\$2,591			
95-99	95-99 \$2,186 \$2,399				

The medical portions of the Encompass 65 HMO and Passport PPO Plans are experienced-rated Medicare Advantage health care plans that are available to all Medicare-eligible retirees, dependents and surviving spouses. To develop baseline cost assumptions for the Independent Health Encompass 65 HMO and Independent Health Passport PPO, the actual premiums for calendar year 2020 were age-adjusted using average ages of 72 and 76 for medical, and 71 and 76 for prescription drug, respectively. We used the Society of Actuaries Study "Health Care Costs – From Birth to Death" to apply mathematical smoothing techniques and develop assumptions for estimating age-specific retiree costs.

The following tables present the average expected medical costs, excluding administrative fees, per capita for the Encompass 65 HMO and Passport PPO Plans for fiscal year 2020:

Independent Health's LMHF Passport PPO (formerly MA 201)					
Incurred Annu	Incurred Annual Claim Cost Per Retiree or Dependent				
Age	Male	Female			
65-69	\$1,995	\$1,933			
70-74	\$2,413	\$2,298			
75-79	\$2,933	\$2,741			
80-84	\$3,504	\$3,259			
85-89	\$4,084	\$3,800			
90-94	\$4,629	\$4,214			
95-99	\$5,010	\$4,115			

Independent Health's LMHF Encompass 65 HMO					
Incurred Annu	Incurred Annual Claim Cost Per Retiree or Dependent				
Age	Age Male Female				
65-69	\$1,602	\$1,552			
70-74	\$1,937	\$1,845			
75-79	\$2,355	\$2,200			
80-84	\$2,813	\$2,617			
85-89	\$3,279	\$3,051			
90-94	\$3,717	\$3,383			
95-99	\$4,022	\$3,304			

The Prescription Drug portion of the Encompass 65 HMO and Passport PPO Plans are experience-rated provided via an Employee Group Waiver Plan (EGWP). The expected EGWP subsidies were reflected in the development of the average expected prescription drug costs.

The following table presents the average expected prescription drug per capita claim cost for fiscal year 2020:

Passport PPO Plan (Formerly Traditional PPO 201) Prescription Drug Plan					
Incurred Annual Claim Cost Per Retiree or Dependent					
Age	Age Male Female				
65-69	\$2,259	\$2,230			
70-74	\$2,698	\$2,639			
75-79	75-79 \$2,888 \$2,799				
80-84 \$2,869 \$2,783					
85-89 \$2,559 \$2,592					
90-94 \$2,232 \$2,368					
95-99	\$1,998	\$2,193			

Encompass 65 HMO Plan (Formerly Senior Blue 401) Prescription Drug					
Incurred Annเ	Incurred Annual Claim Cost Per Retiree or Dependent				
Age	Age Male Female				
65-69	\$3,176	\$3,135			
70-74	\$3,793	\$3,710			
75-79	\$4,061	\$3,935			
80-84	\$4,033	\$3,912			
85-89	\$3,598	\$3,644			
90-94	\$3,137	\$3,330			
95-99	\$2,809	\$3,083			

Administrative costs for the 2020 plan year were expected to be \$741.59 annually per contract for non-Medicare Advantage plans. Administrative costs for retirees participating in Medicare Advantage plans were assumed to be \$87.64 annually per contract.

#### **Annual Rate of Increase in Healthcare Costs:**

As of January 1, 2020 measurement: The assumed rates of increase in healthcare costs are presented in the table below:

Measurement Period Ending	Pre-65 Medical Non-Indemnity	Post-65 Medical	Prescription Drug
2020	6.750%	4.500%	7.000%
2021	6.500%	4.400%	6.750%
2022	6.250%	4.300%	6.500%
2023	6.000%	4.200%	6.250%
2024	5.804%	4.200%	6.012%
2025	5.607%	4.200%	5.774%
2035	4.822%	4.200%	4.822%
2045	4.720%	4.200%	4.720%
2055	4.507%	4.200%	4.507%
2065	4.400%	4.200%	4.400%
2075+	3.784%	3.784%	3.784%

The annual rate of increase in healthcare costs developed based on a review of published National trend survey data in relation to the retiree health plan offerings and updated long-term rates based on the Society of Actuaries Long Term Healthcare Cost Trends Model v2020\_b (the Getzen model), as well as Labor Management Healthcare Fund's expectations. We reviewed, and in some cases modified, the default assumptions of the model based on information available to us from other health studies, surveys, and client experience. We believe this externally developed model and the selected inputs are appropriate, were used for their intended purpose, and did not produce unreasonable results.

Administrative fees were assumed to increase at 3.25% per year.

As of December 31, 2020 measurement: The assumed rates of increase in healthcare costs are presented in the table below:

Measurement Period Ending	Pre-65 Medical	Post-65 Medical	Prescription Drug
2021	7.000%	4.500%	7.000%
2022	6.750%	4.400%	6.750%
2023	6.500%	4.300%	6.500%
2024	6.250%	4.200%	6.250%
2025	6.012%	4.200%	6.012%
2035	4.822%	4.200%	4.822%
2045	4.720%	4.200%	4.720%
2055	4.507%	4.200%	4.507%
2065	4.400%	4.200%	4.400%
2075+	3.784%	3.784%	3.784%

The annual rate of increase in healthcare costs developed based on a review of published National trend survey data in relation to the retiree health plan offerings and updated long-term rates based on the Society of Actuaries Long Term Healthcare Cost Trends Model v2021\_b (the Getzen model), as well as Labor Management Healthcare Fund's expectations. We reviewed, and in some cases modified, the default assumptions of the model based on information available to us from other health studies, surveys, and client experience. We believe this externally developed model and the selected inputs are appropriate, were used for their intended purpose, and did not produce unreasonable results.

Administrative fees were assumed to increase at 3.25% per year.

Annual Rate of Increase in the Consumer Price Index: CPI of 2.25% was assumed for purposes of developing the rate of increase in healthcare costs. This assumption is consistent with historical CPI data as well as future expectations.

**Actuarial Valuation Software:** For purposes of developing the projected future retiree benefit payments as well as determining attributed liabilities, service costs, and amortization periods as of the valuation date, we utilized the ProVal software platform developed by Winklevoss Technologies. We believe this externally developed valuation system is appropriate, was used for its intended purpose, and did not produce unreasonable results.

**Plan Eligibility**: Eligibility for retiree group health benefits is as follows:

Employee Crown	Eligibility for Retiree Health Benefits		
Employee Group	Age	Years of Service	
CSEA	55	10	
Hired before 1/1/2008	55	10	
CSEA	58	15	
Hired on or after 1/1/2008	36	15	
NON REP	55	15	
NON REP	Rule of 65 with minimum of 5 years of service		
Brotherhood of WNY Water Workers			
Hired before 1/1/1984	56	35	
(Effective December 2018)			
Brotherhood of WNY Water Workers	го	15	
Hired after 1/1/1984 and before 1/1/2006	58	15	
Brotherhood of WNY Water Workers Hired on or after 1/1/2006	58	20	

**Duration of Coverage:** Retiree benefits continue for the life of the retiree. Spousal benefits continue for the life of the spouse.

**Surviving Spouse Coverage:** Surviving spouses are permitted to continue coverage after the death of the retiree, but are responsible for continuing to pay the same percentage of the premium that they paid while their spouse was alive.

**Retiree Contributions:** Annual contributions are as follows:

Employee Group	Coverage Level	Required Retiree Contribution	
CSEA	Single	0% of premium	
Hired on or before 7/26/2012	Dual	0% of premium	
CSEA	Single	15% of premium	
Hired after 7/26/2012	Dual	15% of premium	
Brotherhood of WNY Water Workers	Single	0% of premium	
Hired on or before 7/26/2012*	Dual	0% of premium	
Brotherhood of WNY Water Workers	Single	15% of premium	
Hired after 7/26/2012*	Dual	15% of premium	
Non-Represented	Single	0% of premium	
Retired on or before 3/31/2012	Dual	0% of premium	
Non-Represented	Single	15% of premium	
Retired after 3/31/2012**	Dual	15% of premium	

<sup>\*</sup> Prior to the ratification of the Brotherhood of WNY Water Workers collective bargaining contract, this date was November 24, 2011.

New retirees enrolling in the Traditional Blue PPO 812 plan after June 1, 2004 will be required to pay contributions equal to the difference between the Traditional Blue PPO 812 plan premium and the highest premium of any other plan offered to that retiree.

**Medicare Part B:** Medicare Part B premiums are not reimbursed for post-65 retirees, dependents, and surviving spouses.

**Healthcare Benefits:** Retiree healthcare benefits are provided through Labor Management Healthcare Fund. The main features of the plans are detailed below.

The Core POS 203 Plan and the Traditional Blue PPO 812 (OT06) Plan are self-insured healthcare plans.

The Encompass 65 HMO (formerly 401 & 402) and the Passport PPO (formerly 201) are self-insured prescription drug EGWP plans.

<sup>\*\*</sup> As of April 2017 and January 2018, the Authority entered into an agreement with the Deputy Director and Executive Director, respectively, in which no contributions are required in retirement. Previously each individual would have contributed 15%. In June 2018, the Authority voided these contracts for the Deputy Director and Executive Director. The Deputy Director and Executive Director are required to contribute 15% toward the premium cost after the contracts were voided.

Monthly premiums for the plan year from January 1, 2020 through December 31, 2020 are presented in the following table:

Tier	Core POS 203	Traditional Blue PPO 812 (OT06)
Pre-65		
Single	\$ 739.37	N/A
2-Person	1,614.52	N/A
Post-65		
Single	N/A	\$1,055.90
2-Person	N/A	\$2,089.91

The monthly Medicare Advantage and EGWP premiums for the plan year from January 1, 2020 through December 31, 2020 are presented in the following table.

Tier	Independent Health's Passport PPO	Independent Health's Encompass 65 HMO	
Post-65	Formerly Forever Blue 201	Formerly Senior Blue 401 & 402	
Medical Portion	\$231.53	\$161.73	
Drug Portion	\$237.62	\$308.97	
Single Total	\$469.15	\$470.70	

**Medical Waiver Benefit:** Retirees under the following employee groups are eligible to waive medical coverage and receive an annual amount equal to the percentage of the active Core POS203 Plan premium. Health insurance waivers are offered to all employees eligible for health insurance benefits at retirement until they are Medicare eligible.

Employee Group	% of Active Core POS	Annual Waiver Amount*	
Employee Group	203 Premium	Single	Family
CSEA	35%	\$3,000.00	\$8,000.00
Brotherhood of WNY Water	40%	\$3,000.00	\$8,000.00
Workers			
Non-Represented	55%	\$3,000.00	\$8,000.00

<sup>\*</sup>The maximum waiver is limited to the highest cost product available to the retiree and capped at \$3,000 for single and \$8,000 for family coverage.

**Life Insurance Benefits:** Life insurance benefits are offered to current participants hired prior to May 1, 1979. Upon retirement, life insurance benefits are equal to 50% of the life insurance benefit offered while actively employed, where active employee benefit amounts vary for each individual. Retirees are not required to contribute towards life insurance benefits.

#### **SUMMARY OF GASB 75**

#### **GASB 75 Statement**

The Governmental Accounting Standards Board (GASB) Accounting Standard No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, covers postemployment benefits including healthcare benefits, life insurance benefits, and, in some cases, sick pay accrual. GASB 75 requires employers to recognize these benefits on an accrual basis rather than pay-as-you-go.

#### **Effective Date**

Statement 75 is effective for fiscal years beginning after June 15, 2017.

#### **Valuation Frequency**

For financial reporting purposes, a full actuarial valuation should be performed biennially. Interim valuations, or roll-forwards, may be performed in years in which a full valuation is not required.

The Total OPEB Liability is required to be measured as of a date no earlier than the end of the employer's prior fiscal year and no later than the end of the employer's current fiscal year (the measurement date), consistently applied from period to period.

#### **GASB 75 Terminology:**

**Present Value of Projected Future Benefit Payments** – The present value of projected future benefit payments represent the total future benefits expected to be paid to current and future retirees as a result of their service through the valuation date as well as any expected future service. The present value of total future liability is 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.

**Total OPEB Liability (TOL)** - The TOL is the actuarial present value of projected benefit payments based on employees' service rendered to the measurement date in conformity with the requirements of the GASB 75 Statement.

Retirees & Dependents – former employees who have satisfied the age and service requirement and are currently receiving retiree group health benefits.

Actives— active employees who may become eligible for retiree group health benefits upon satisfying the age and service requirements.

**Net OPEB Liability (NOL)** - The excess of the Total OPEB Liability over the Fiduciary Net Position. For an unfunded plan, the NOL is equal to the TOL.

**Fiduciary Net Position** – The market value of plan assets held in a trust that meets the criteria in paragraph 4 of the GASB 75 statement.

**Annual OPEB Expense** – An accrual-basis measure of the periodic cost of an employer's participation in a defined benefit OPEB plan. The Annual OPEB Expense is recorded as an expense and disclosed on the government-wide financial statement. It is the sum of the service cost, interest cost, projected earnings on assets, differences in Total OPEB Liability due to changes in benefit terms, and the recognition of deferred (inflows)/outflows for the year.

Service Cost – The present value of future benefits earned by employees during the current fiscal year.

Interest Cost – The increase in the liability attributable to the passage of time.

Deferred (Inflows)/Outflows – Differences between actual and expected experience, changes in demographic or economic assumptions, and differences between actual and expected investment experience to be recognized as OPEB Expense over time. Differences between actual and expected experience and changes in demographic or economic assumptions are amortized over the average expected remaining service period of active and inactive plan participants. Differences between actual and expected investment experience are amortized over a closed period of five years.