



ERIE COUNTY WATER AUTHORITY INTEROFFICE MEMORANDUM

February 12, 2019

To: Commissioners Schad, Carney and Jones

From: Karen A. Prendergast, Chief Financial Officer *KAP*

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, 2019 the Authority's liability was calculated at \$90,082,536, as compared to \$89,646,879 in 2018 – an increase of \$435,657.

Factors contributing to the change are summarized below.

- Annual service and interest costs increase our liability;
- Improved mortality assumptions and health care cost trends decreased our liability; and
- The repeal of the ACA's high-cost plan tax (Cadillac tax) and the Health Insurer Fee on December 20, 2019 decreased our liability.

Our OPEB expense for the year ending December 31, 2019 was \$3,344,867, \$1,327,720 lower than our 2018 OPEB expense of \$4,669,997. The decrease is largely due to the change in the Affordable Care Act taxes.

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



PRIVATE AND CONFIDENTIAL

January 2020

Ms. Karen Prendergast
Chief Financial Officer
Erie County Water Authority
350 Ellicott Square Building
Buffalo, NY 14203

Actuarial Certification

Dear Karen:

The enclosed exhibit presents the interim actuarial valuation and final Notes to Financial Statements for Erie County Water Authority's retiree group health benefits program for the fiscal year ending December 31, 2019 in accordance with Statement No. 75 of the Governmental Accounting Standards Board.

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.

Our calculations were based upon plan data submitted as of January 1, 2018 and financial data as of the December 31, 2019 measurement date. 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 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 December 31, 2019 measurement date, participant data as of January 1, 2018 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.

Solving Tomorrow's Benefit Challenges Today

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AutoRollovers & MyPlanLoan | Transfer Agency | Fund Administration | Collective Investment Funds
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The Notes to Financial Statements reflect a discount rate of 2.75%, updated mortality and healthcare trend rates, and actual benefit payments made throughout the year. The discount rate was selected based on the Fidelity General Obligation 20-Year AA Municipal Bond Index. The mortality table was selected based on a review of published studies. All other assumptions and plan provisions remain the same as those detailed in our valuation report issued February 2019. 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. We believe the assumptions are reasonable for the purposes for which they are being used.

As of the December 31, 2019 measurement date, the liability no longer includes the projection of costs associated with the "Cadillac Tax" or the Health Insurer Fee. In order to reflect the removal of the Health Insurer Fee, 2019 premiums excluding the Health Insurer Fee were relied on for the calculation of the year-end liability. The year-end spending package signed into law on December 20, 2019 repealed the Patient Protection and Affordable Care Act's high-cost plan tax known as the "Cadillac tax" and the Health Insurer Fee.


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.

The information contained in this exhibit was prepared for the use of Erie County Water Authority and its auditors in connection with our actuarial valuation. It is not intended nor necessarily suitable for other purposes. To avoid misrepresentation, it is intended to be used in its entirety.

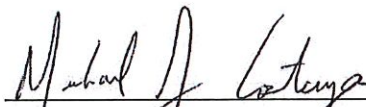
Should you have questions or need additional information, please do not hesitate to contact us.

Respectfully submitted,

BPAS ACTUARIAL AND PENSION SERVICES, L.L.C.



Nicholas Mark, F.S.A., E.A.
Member of the American Academy of Actuaries
(315) 703-8974
nmark@bpas.com



Michael J. Costanza, F.S.A., E.A.
Member of the American Academy of Actuaries
(315) 703-8982
mcostanza@bpas.com

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Enclosures

Erie County Water Authority
GASB 75 Interim Actuarial Valuation
For the Retiree Group Health Benefits Program
Measured Using a Discount Rate of 3.71% as of January 1, 2019 and 2.75% as of December 31, 2019
For the Reporting Period January 1, 2019 – December 31, 2019

	ECWA
Total OPEB Liability (TOL)	
Retirees & Dependents	\$39,573,023
Actives	50,073,856
Disableds	0
Total OPEB Liability	\$89,646,879
Additional Obligation attributable to future service	27,716,970
Present Value of Projected Future Benefit Payments	\$117,363,849

Net OPEB Liability	
Total OPEB Liability (TOL)	\$89,646,879
Plan Fiduciary Net Position	N/A
Net OPEB Liability	\$89,646,879

Calculation of Annual OPEB Expense	
Service Cost	\$2,766,281
Interest Cost	3,389,502
Projected Earnings on Plan Investments	0
Change of Benefit Terms	0
Recognition of Deferred (Inflows)/Outflows	
• Differences between Expected and Actual Experience	(2,210,744)
• Changes of Assumptions or Other Inputs	(600,172)
• Differences in Investment Experience	0
Annual OPEB Expense	\$3,344,867

Actual Benefit Payments	\$2,103,839
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Erie County Water Authority
GASB 75 Interim Actuarial Valuation
For the Retiree Group Health Benefits Program
Measured Using a Discount Rate of 3.71% as of January 1, 2019 and 2.75% as of December 31, 2019
For the Reporting Period January 1, 2019 – December 31, 2019

Calculation of Assumption Change Deferred (Inflows)/Outflows	ECWA
Total OPEB Liability (TOL) as of 12/31/2019 prior to Assumption/Input Changes	93,580,949
Total OPEB Liability (TOL) as of 12/31/2019 after Assumption/Input Changes	103,236,091
Differences due to Assumptions/Input Changes measured 12/31/2019	9,655,142
Amortization Period (years)	5.926
Recognition of New Assumption Change (Inflows)/Outflows	1,629,285
Recognition of Prior Assumption Change (Inflows)/Outflows	(2,229,457)
Recognition of Assumption/Input Change (Inflow)/Outflow for current year	(600,172)

Calculation of Experience Change Deferred (inflows)/Outflows	ECWA
Total OPEB Liability (TOL) as of 12/31/2019 prior to Experience Changes	103,236,091
Total OPEB Liability (TOL) as of 12/31/2019 after Experience Changes	90,082,536
Expected Benefit Payments, including associated interest cost	2,260,739
Actual benefit payments, including associated interest cost	2,142,865
Differences due to Experience Changes measured 12/31/2019	(13,271,429)
Amortization Period (years)	5.926
Recognition of New Experience Change (Inflows)/Outflows	(2,239,526)
Recognition of Prior Experience Change (Inflows)/Outflows	28,782
Recognition of Experience Change (Inflow)/Outflow for current year	(2,210,744)

Projection of Future Cash Flows

The table below displays a ten year projection of future cash flows. 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, 2019. It does not consider the impact of future new hires.

Measurement Period Ending	ECWA
2020	\$2,221,106
2021	2,346,873
2022	2,471,547
2023	2,632,233
2024	2,810,965
2025	3,028,206
2026	3,193,607
2027	3,352,893
2028	3,604,332
2029	3,800,711

Erie County Water Authority
GASB 75 Notes to Financial Statements
For the Retiree Group Health Benefits Program
Reported as of December 31, 2019

Change in Total OPEB Liability (TOL)	FY 2019	FY 2018
Total OPEB Liability at Beginning of Year	\$89,646,879	\$99,640,307
Service Cost	2,766,281	3,378,431
Interest Cost	3,389,502	3,372,947
Change of Benefit Terms	0	119,294
Differences between Expected and Actual Experience	(13,271,429)	191,341
Change of assumptions or other inputs	9,655,142	(14,821,432)
Actual Benefit Payments	(2,103,839)	(2,234,009)
Total OPEB Liability (TOL) at End of Year	\$90,082,536	\$89,646,879

Change in Plan Fiduciary Net Position	FY 2019	FY 2018
Plan Fiduciary Net Position - beginning of year	\$0	\$0
Contributions from the Employer	2,103,839	2,234,009
Net Investment Income	0	0
Actual Benefit Payments	(2,103,839)	(2,234,009)
Administrative Expenses	0	0
Plan Fiduciary Net Position - end of year	\$0	\$0

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

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

Erie County Water Authority
GASB 75 Notes to Financial Statements
For the Retiree Group Health Benefits Program
Reported as of December 31, 2019, continued

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

Deferred (Inflows) and Outflows of Resources as of December 31, 2019	Deferred Outflows of Resources	Deferred (Inflows) of Resources
Differences between Expected and Actual Experience	\$133,777	(\$11,031,903)
Change of Assumptions	8,025,857	(10,362,518)
Net difference between projected and actual earnings on OPEB plan investments	0	0
Total	\$8,159,634	(21,394,421)

Erie County Water Authority
 GASB 75 Notes to Financial Statements
 For the Retiree Group Health Benefits Program
 Reported as of December 31, 2019, continued

Increase/(Decrease) in Collective OPEB Expense Arising from Changes in Assumptions (Measurement Period Ended December 31, 2019):

Measurement Period Ended 12/31	Changes of Inputs / Assumptions	Average Expected Remaining Service Lives (Years)	2018	2019	2020	2021	2022	2023	2024
2018	\$ (14,821,432)	6.6480	\$ (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	5.9260	1,629,285	1,629,285	1,629,285	1,629,285	1,629,285	1,629,285	1,508,717
Net Increase (Decrease) in collective OPEB expense			\$ (2,229,457)	\$ (600,172)	\$ (600,172)	\$ (600,172)	\$ (600,172)	\$ (600,172)	\$ 64,027

Collective Deferred (Inflows)/Outflows of Resources Arising from Changes in Assumptions (Measurement Period Ended December 31, 2019):

Measurement Period Ended 12/31	Assumption / Input Change Losses (a)	Assumption / Input Change Gains (b)	Amounts Included in Collective OPEB Expense through December 31, 2018 (c)	Collective Balances at December 31, 2018		Amounts Included in Collective OPEB Expense through December 31, 2019 (d)	Collective Balances at December 31, 2019	
				Collective Deferred Outflows of Resources (a) - (c)	Collective Deferred (Inflows) of Resources (b) - (c)		Collective Deferred Outflows of Resources (a) - (d)	Collective Deferred (Inflows) of Resources (b) - (d)
2018		(14,821,432)	(2,229,457)		(12,591,975)	(4,458,914)		(10,362,518)
2019	9,655,142			-	(12,591,975)	1,629,285	8,025,857	(10,362,518)
				\$ -	\$ (12,591,975)		\$ 8,025,857	\$ (10,362,518)

Erie County Water Authority
 GASB 75 Notes to Financial Statements
 For the Retiree Group Health Benefits Program
 Reported as of December 31, 2019, continued

Increase/(Decrease) in Collective OPEB Expense Arising from Changes in Experience (Measurement Period Ended December 31, 2019):

Measurement Period Ended 12/31	Differences between Expected and Actual Experience	Average Expected Remaining Service Lives (Years)	2018	2019	2020	2021	2022	2023	2024
2018	\$ 191,341	6.6480	\$ 28,782	\$ 28,782	\$ 28,782	\$ 28,782	\$ 28,782	\$ 28,782	\$ 18,649
2019	(13,271,429)	5.9260	(2,239,526)	(2,239,526)	(2,239,526)	(2,239,526)	(2,239,526)	(2,239,526)	(2,073,799)
Net Increase (Decrease) in collective OPEB expense			\$ 28,782	\$ (2,210,744)	\$ (2,210,744)	\$ (2,210,744)	\$ (2,210,744)	\$ (2,210,744)	\$ (2,055,150)

Collective Deferred (Inflows)/Outflows of Resources Arising from Changes in Experience (Measurement Period Ended December 31, 2019):

Measurement Period Ended 12/31	Experience Losses (a)	Experience Gains (b)	Amounts Included in Collective OPEB Expense through December 31, 2018 (c)	Collective Balances at December 31, 2018		Amounts Included in Collective OPEB Expense through December 31, 2019 (d)	Collective Balances at December 31, 2019	
				Collective Deferred Outflows of Resources (a) - (c)	Collective Deferred (Inflows) of Resources (b) - (c)		Collective Deferred Outflows of Resources (a) - (d)	Collective Deferred (Inflows) of Resources (b) - (d)
2018	191,341		28,782	162,559		57,564	133,777	(11,031,903)
2019		(13,271,429)				(2,239,526)		(11,031,903)
				\$ 162,559	\$ -		\$ 133,777	\$ (11,031,903)

Erie County Water Authority
GASB 75 Notes to Financial Statements
For the Retiree Group Health Benefits Program
Measured as of December 31, 2019; Reported as of December 31, 2019(continued)

Assumed pre-65 medical trend rates at end of year	
Healthcare cost trend rate assumed for next measurement period	6.750%
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 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	2.75%
Net OPEB Liability (NOL) at Current Discount Rate and Healthcare Trend Rates	\$90,082,536
Net OPEB Liability (NOL) at 1% Decrease in Discount Rate	\$108,354,454
Net OPEB Liability (NOL) at 1% Increase in Discount Rate	\$76,088,814
Net OPEB Liability (NOL) at 1% Decrease in Healthcare Trend Rates	\$75,235,186
Net OPEB Liability (NOL) at 1% Increase in Healthcare Trend Rates	\$109,157,347

As of the December 31, 2019 measurement date, the discount rate was updated from 3.71% to 2.75%. The change in discount rate resulted in an increase in liabilities.

As of December 31, 2019, the mortality assumption was revised to the sex-distinct Pri.H-2012 Mortality Tables for employees and healthy annuitants adjusted for mortality improvements with the Scale MP-2019 mortality improvement scale on a generational basis. The revised assumption resulted in a decrease in liabilities.

As of the December 31, 2019 measurement date, the annual rate of increase in healthcare costs was revised to better reflect future expectations, including updating long-term rates based on the SOA Long Term Healthcare Cost Trends Model v2020_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 a decrease in liabilities.

As of the December 31, 2019 measurement date, the liability no longer includes the projection of costs associated with the "Cadillac Tax" or the Health Insurer Fee (HIF). In order to reflect the removal of the Health Insurer Fee, 2019 premiums excluding the Health Insurer Fee were relied on for the calculation of the year-end liability. The year-end spending package signed into law on December 20, 2019 repealed the Patient Protection and Affordable Care Act's high-cost plan tax known as the "Cadillac tax" and the Health Insurer Fee. The result of these changes is a decrease in liabilities.