

Municipality of Lakeshore – Report to Council

Finance

Financial Planning & Analysis



To: Mayor & Members of Council
From: Justin Rousseau, Corporate Leader-Chief Financial Officer
Date: October 24, 2022
Subject: Water and Wastewater Rate Study Update

Recommendation

Approve the update to the Water and Wastewater Rate Study; Approve the updated water and wastewater rates; and Direct administration to prepare the 2023 draft Budgets and User Fee By-law to reflect the updated rates, as presented at the November 29, 2022 Council Meeting.

Background

In 2018, Watson & Associates (Watson) undertook a Water and Wastewater Rate Study for the Municipality. This study calculated the water and wastewater rates for 2019 through to 2028. The rate forecast was prepared to fund both projected operating and capital expenditures while beginning to build water and wastewater reserve/reserve fund balances to provide for future asset replacement needs.

At the October 12th, 2021, Council Meeting the following recommendation was approved:

1. Approve external debt to be taken in the principal amount of \$ 45,281,428 for the Plant Expansion,
2. Update the Development Charge Study related to wastewater to reflect the costs according to the tender results, and
3. Update the 2018 Wastewater User Rates Study as the capital and operating expenditures have considerably changed since the previous study.

Following the resolution of Council, Administration worked with Watson & Associates to update the Water & Wastewater User Rates Study.

The Municipality is in the process of undertaking a plant expansion to the Denis St. Pierre Water Pollution Control Plant. The 2018 Water and Wastewater Rate Study identified capital costs of approximately \$18 million (2018 dollars). This was based on construction and associated tender prices at that time. The COVID-19 pandemic has been a significant factor in the increase in tender prices for construction. The revised estimate based on current tender prices is \$53.90 million. Although this project is included in the D.C. Background Study as a growth-related project, 10% of the costs are to be funded from wastewater rates. As a result, this report provides an update to the wastewater rates to reflect these updated costs. The analysis provided herein reflects 2022 budget information and updated volume and customer data.

In addition to updating the wastewater rates, the water rates are also being updated through this undertaking to reflect 2022 operating and capital budget information (as well as the current volume/customer information).

Comments

The key factors that have been updated in the study are growth forecast, volume, rates, capital infrastructure cost, operating cost and revenues.

Forecasted Growth

The Municipality of Lakeshore currently services 14,625 metered water customers and 10,180 wastewater customers (relative to 2018, this represents an increase of 528 customers for water and 629 for wastewater).

The 2018 rate study forecast assumed the addition of 630 water customers and 540 wastewater customers between 2019 to 2021. The actual number of customers added to the system was 528 water customers and 629 wastewater customers. This equates to 102 less water customers and 89 more wastewater customers relative to the forecast in the 2018 rate study.

The following is the forecasted growth into 2028:

2022 to 2028 New and Existing Customers

Water Customer Forecast

Water Customer Forecast	22	23	24	25	26	27	28
Existing	14,625	14,625	14,625	14,625	14,625	14,625	14,625
New - Growth	101	302	504	706	896	1,074	1,251
Total	14,726	14,927	15,129	15,331	15,521	15,699	15,876

Wastewater Customer Forecast

Wastewater Customer Forecast	22	23	24	25	26	27	28
Existing	10,180	10,180	10,180	10,180	10,180	10,180	10,180
New - Growth	101	302	504	706	896	1,074	1,251
Total	10,281	10,482	10,684	10,886	11,076	11,254	11,431

Water Usage Volumes

For water, the prior rate study forecasted 3,612,821 cubic metres of total billable water volumes for 2021. Based on a review of actual data the total billable water volumes were 3,593,476 cubic metres, which represents a decrease of 0.5% relative to the forecast.

With respect to wastewater, the prior forecast provided for 2,591,840 cubic metres of wastewater billable volumes. Actual data provided for total wastewater billable volumes of 2,678,595 cubic metres in 2021, which represents an increase of 3.4%.

The following is the forecasted volumes into 2028

**Forecasted and Billable Volumes
Water Volumes**

Water Billable Volume Forecast (cu.m.)	22	23	24	25	26	27	28
Existing	3,593,476	3,593,476	3,593,476	3,593,476	3,593,476	3,593,476	3,593,476
New	17,675	52,850	88,200	123,550	156,800	187,950	218,925
Total Billable Volume	3,611,151	3,646,326	3,681,676	3,717,026	3,750,276	3,781,426	3,812,401

Wastewater Billable Volumes

Wastewater Flows Forecast (cu.m.)	22	23	24	25	26	27	28
Existing	2,678,595	2,678,595	2,678,595	2,678,595	2,678,595	2,678,595	2,678,595
New	17,675	52,850	88,200	123,550	156,800	187,950	218,925
Total	2,696,270	2,731,445	2,766,795	2,802,145	2,835,395	2,866,545	2,897,520

Capital Infrastructure Cost

Capital forecasts for the water and wastewater systems were updated as part of this study. The 2018 rate study provided for water expenditures of \$34.99 million and wastewater expenditures of \$36.06 million over the 2022 to 2028 forecast period. These costs have now been updated and provide for water expenditures of \$44.14 million and wastewater expenditures of \$79.99 million. This represents an increase of \$9.15 million for water and \$43.93 million for wastewater. The bulk of the increase in capital cost is the expansion of the Dennis St Pierre Plant.

Cost in the detailed forecast also had an inflation factor added in each year of the study.

Operating Cost and Revenues

a) Water Operating Expenditures

The operating budget provides for two distinct components. The first component provides for the day to day operating expenditures related to staffing costs, hydro, materials, fuel, etc. The second component provides for capital related expenditures i.e., debt charges and reserve/reserve fund transfers.

Regarding the first component, the forecast budget figures (2023 to 2028) are based on the Municipality's 2022 operating budget. Each budget component was reviewed with staff to establish forecast adjustments, including inflationary adjustments. Most of the expenditures have been assumed to increase at a rate of 2.0% annually. Operating expenditures that involve utilities and fuel have been inflated by 8.0% annually. Water purchases from Tecumseh and Union Water have been inflated by 3.0% annually. Further, additional wages and benefits have been assumed for new full-time equivalents beginning in 2023. For much needed locate services work.

With respect to the second component, existing debt charges have been continued across the entire forecast period. Annual contributions to the capital reserve fund have been increased above inflation in order to provide adequate amounts to fund the capital program and to offset any deficits expected in the development charge reserve fund.

b) Water Operating Revenues

There are three main components to the operating revenues: base charge, volume rates, and miscellaneous revenues. In regard to the latter, all miscellaneous revenues except for meter sales have been assumed to remain constant each year over the forecast period. The meter sales revenue is assumed to increase by 2.0% on an annual basis.

The base charges are forecast to increase as a result of additional customers over the forecast period, plus a 4.0% annual increase to the base charge rate. Lastly the volume rates are also forecasted to increase in conjunction with new customers and with a 4.0% annual rate increase.

c) Wastewater Operating Expenditures

Similar to the discussion on water operating expenditures, the budget has two components. In regard to the first component, the forecast budget figures (2023 to 2028) are based on the Municipality's 2022 operating budget. Each budget component was reviewed to establish forecast adjustments, including inflationary adjustments. Most of the expenditures have been assumed to increase at a rate of 2.0% annually. Operating expenditures that involve utilities, and fuel have been inflated by 8.0% annually.

Additional costs related to the O.C.W.A. operating contract have been assumed beginning in 2023. These costs are a result of the new Denis St. Pierre Treatment Plant. Only a portion of the full costs for the new infrastructure are included when the treatment plant begins operations as it will not be operating at full capacity until additional growth is in place. As a result, the full costs for operation are phased in over a ten year period beginning in 2023.

With respect to the second component, existing debt charges have been continued across the entire forecast period. Annual contributions to the capital reserve fund have been increased above inflation in order to provide adequate amounts to fund the capital program and to offset any deficits expected in the development charge reserve fund.

d) Wastewater Operating Revenues

The operating revenues for wastewater are very similar to that of water. Miscellaneous revenues have been assumed to increase at 2% each year over the forecast period whereas frontage and connection fees and collected on taxes fees are assumed to remain constant over the forecast period.

The base charges are forecast to increase as a result of additional customers over the forecast period, plus a 9% annual increase to the base charge rate. Lastly the volume rates are also forecast to increase in conjunction with new customers and with a 9% annual rate increase.

Recommendation

The recommendation is to move from the previously approved 1.2 % annual increase for water to 4% and the previously approved 5% annual increase for wastewater to 9%.

The update to the plan represents 2.8% annually for water and 4% annually for wastewater.

Others Consulted

Watson & Associates

Financial Impacts

Rates

The current rates for both water and wastewater are found in the tables below:

Water and Wastewater Rates – 2022

2022 - Water Billing Rates	
Base Charge per Month	
All Customers	\$20.85
Volume Charge	
\$ 1.560	per m ³

2022 - Wastewater Billing Rates	
Base Charge per Month	
All Customers	\$21.32
Volume Charge	
\$ 1.680	per m ³

The following is the proposed combined impact on the rates:

Description	2022	2023	2024	2025	2026	2027	2028
Monthly Base Rate	\$20.85	\$21.68	\$22.55	\$23.45	\$24.39	\$25.37	\$26.38
Annual Base Rate Bill	\$250.20	\$260.21	\$270.62	\$281.44	\$292.70	\$304.41	\$316.58
Volume Rate	\$1.56	\$1.62	\$1.68	\$1.75	\$1.82	\$1.89	\$1.97
Volume	175	175	175	175	175	175	175
Annual Volume Bill	\$273.00	\$283.50	\$294.00	\$306.25	\$318.50	\$330.75	\$344.75
Total Annual Bill	\$523.20	\$543.71	\$564.62	\$587.69	\$611.20	\$635.16	\$661.33
% Increase - Base Rate		4%	4%	4%	4%	4%	4%
% Increase - Volume Rate		4%	4%	4%	4%	4%	4%
% Increase - Total Annual Bill (rounded)		4%	4%	4%	4%	4%	4%

Description	2022	2023	2024	2025	2026	2027	2028
Monthly Base Rate	\$21.32	\$23.24	\$25.33	\$27.61	\$30.09	\$32.80	\$35.76
Annual Base Rate Bill	\$255.84	\$278.87	\$303.96	\$331.32	\$361.14	\$393.64	\$429.07
Volume Rate	\$1.68	\$1.83	\$1.99	\$2.17	\$2.37	\$2.58	\$2.81
Volume	175	175	175	175	175	175	175
Annual Volume Bill	\$294.00	\$320.25	\$348.25	\$379.75	\$414.75	\$451.50	\$491.75
Total Annual Bill	\$549.84	\$599.12	\$652.21	\$711.07	\$775.89	\$845.14	\$920.82
% Increase - Base Rate		9%	9%	9%	9%	9%	9%
% Increase - Volume Rate		9%	9%	9%	9%	9%	9%
% Increase - Total Annual Bill (rounded)		9%	9%	9%	9%	9%	9%

Description	2022	2023	2024	2025	2026	2027	2028
Water							
Base Monthly Charge	\$20.85	\$21.68	\$22.55	\$23.45	\$24.39	\$25.37	\$26.38
Volume Rate	\$1.56	\$1.62	\$1.68	\$1.75	\$1.82	\$1.89	\$1.97
Annual Base Charge	\$250.20	\$260.21	\$270.62	\$281.44	\$292.70	\$304.41	\$316.58
Annual Volume Charge	\$273.00	\$283.50	\$294.00	\$306.25	\$318.50	\$330.75	\$344.75
Total Water Bill	\$523.20	\$543.71	\$564.62	\$587.69	\$611.20	\$635.16	\$661.33
Wastewater							
Base Monthly Charge	\$21.32	\$23.24	\$25.33	\$27.61	\$30.09	\$32.80	\$35.76
Volume Rate	\$1.68	\$1.83	\$1.99	\$2.17	\$2.37	\$2.58	\$2.81
Annual Base Charge	\$255.84	\$278.87	\$303.96	\$331.32	\$361.14	\$393.64	\$429.07
Annual Volume Charge	\$294.00	\$320.25	\$348.25	\$379.75	\$414.75	\$451.50	\$491.75
Total Wastewater Bill	\$549.84	\$599.12	\$652.21	\$711.07	\$775.89	\$845.14	\$920.82
Total Water and Wastewater Bill	\$1,073.04	\$1,142.82	\$1,216.83	\$1,298.76	\$1,387.09	\$1,480.30	\$1,582.15
Annual % Increase (rounded)		6.5%	6.5%	6.7%	6.8%	6.7%	6.9%

* Average Annual Water and Wastewater Bill Based on 175 cu.m. of Volume

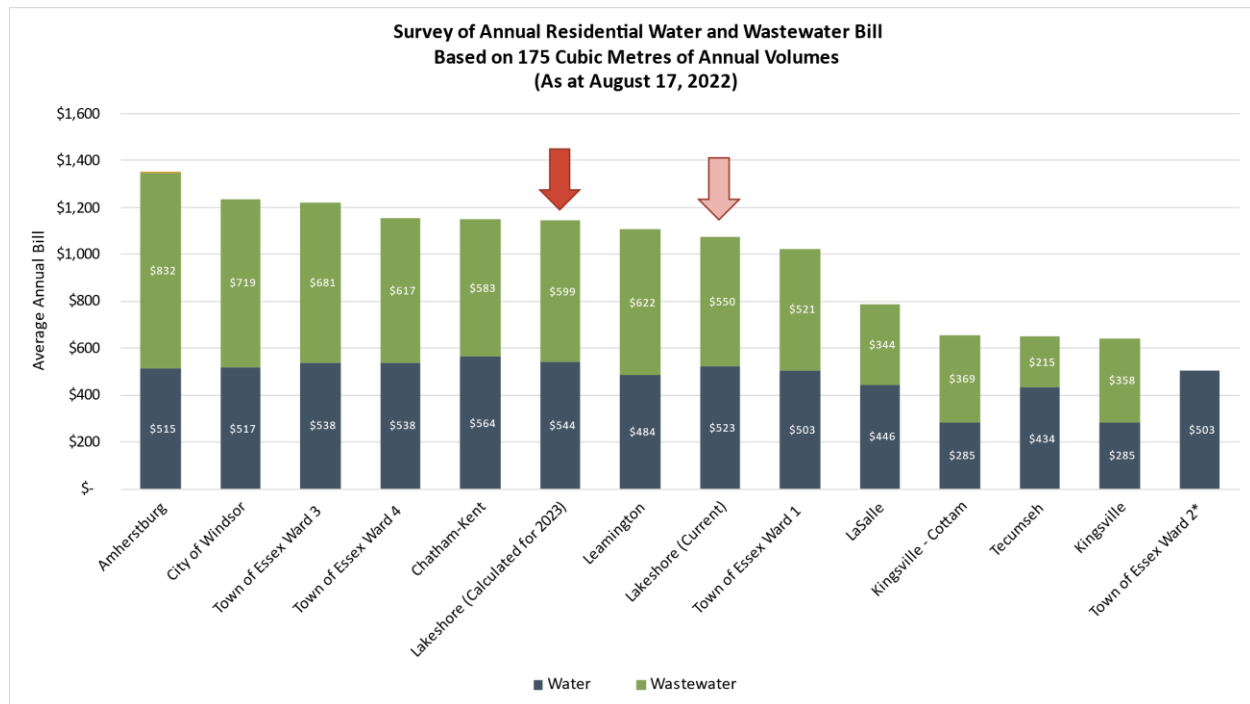
Reserve Forecast

Reserve/Reserve Fund	2021 Projected	2021 Actual	2028 Forecast
Water Working Fund Reserve	\$1,061,541	\$1,061,541	\$1,061,541
Water General Reserve Fund	\$12,884,165	\$10,592,714	\$9,104,140
Water D.C. Reserve Fund	\$98,956	\$1,680,249	\$1,114,624
Water Contingency Reserve	\$319,172	\$319,172	\$319,172
Water Plant Filter Reserve Fund	\$1,091,439	\$1,092,162	\$1,976,759
Sub-Total Water	\$15,455,273	\$14,745,838	\$13,288,236

Reserve/Reserve Fund	2021 Projected	2021 Actual	2028 Forecast
Wastewater General Reserve Fund	\$211,015	(\$1,761,601)	\$3,902,175
Wastewater D.C. Reserve Fund	\$0	\$910,167	\$5,485
Wastewater Capital Reserve	\$521,690	\$1,279,262	\$1,440,656
Sub-Total Wastewater	\$732,705	\$427,828	\$5,348,316
Combined Total	\$16,187,978	\$15,173,666	\$18,636,552

The following reserves are forecast to grow to \$18,636,552 from the current \$15,173,666 and the growth comes primarily in wastewater reserves which are currently very low at a balance of \$427,828.

The following is a regional scan of water and wastewater combined rates:



With the proposed plan Lakeshore' 2023 rate with move from 8th out of 14 possible different rates in the region to 6th assuming no increases in our comparator municipalities

Residents can expect to see an increase to \$1,142 dollars annually from \$1,073 or \$69 dollars a year for both services.

Residents can expect to see an average annual cost increase of \$73 dollars from 2023-2028 for both services.

The combined annual percentage increase in annual billing of 6.7% is currently below annual inflationary pressures being experienced across the economy.

Attachments

Watson and Associates presentation and memo

Report Approval Details

Document Title:	Water and Wastewater Rates Update.docx
Attachments:	- Rate Study Update Memo - Final.pdf
Final Approval Date:	Nov 24, 2022

This report and all of its attachments were approved and signed as outlined below:

Prepared by Justin Rousseau

Approved by Truper McBride