



# Municipality of Central Elgin

---

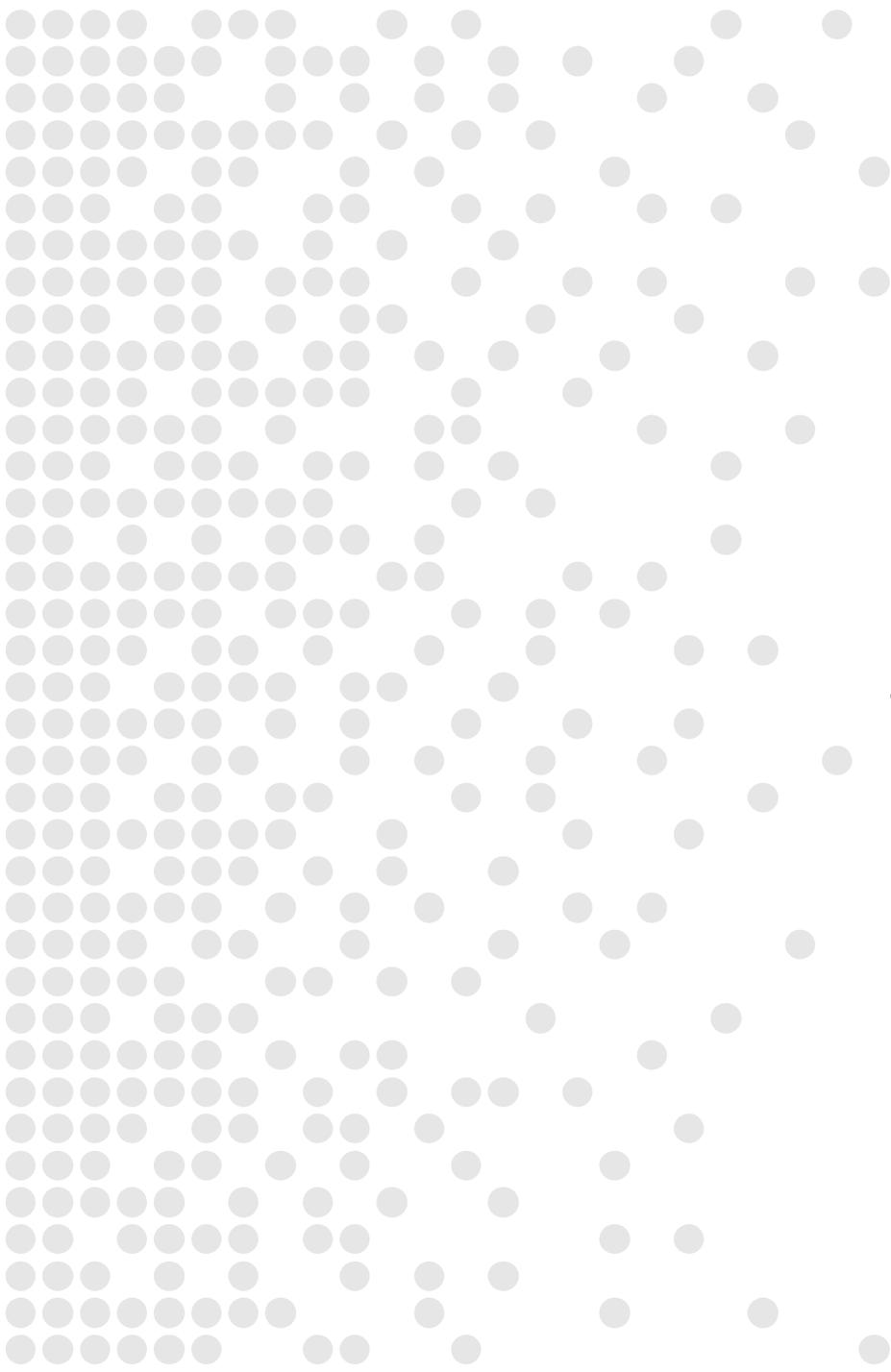
Water and Wastewater Rate Update  
– Public Information Session

January 13, 2021



## Areas of Discussion

- Study Purpose and Legislation for Water and Wastewater;
- Existing and Forecasted Customers and Volumes;
- Capital Needs and Financing;
- Lifecycle Costs (Existing Infrastructure);
- Operating Expenditures;
- Cost of Water and Wastewater Services;
- Rate Structures;
- Draft Water and Wastewater Rates;
- Factors Resulting in Calculated Rates and Observations
- Comparison of Rates; and
- Next Steps.



# Study Purpose and Legislation for Water and Wastewater

---

Municipality of Central Elgin



# Study Purpose

- To update the water and wastewater rate forecast
- Update all current and future water and wastewater system capital needs and recovery options;
- Estimate future operating costs over the next 10 years;
- Recommend new rates to recover the cost of the water and wastewater systems.



# Issues to be Considered as part of the Study

- The water reserve is running significant deficits (\$1.16 million as of end of 2020)
- Address enhanced revenue stability
- Provide for change in billing cycle (monthly vs. bi-monthly)
- Address growth-related capital funding

# Legislation for Water and Wastewater

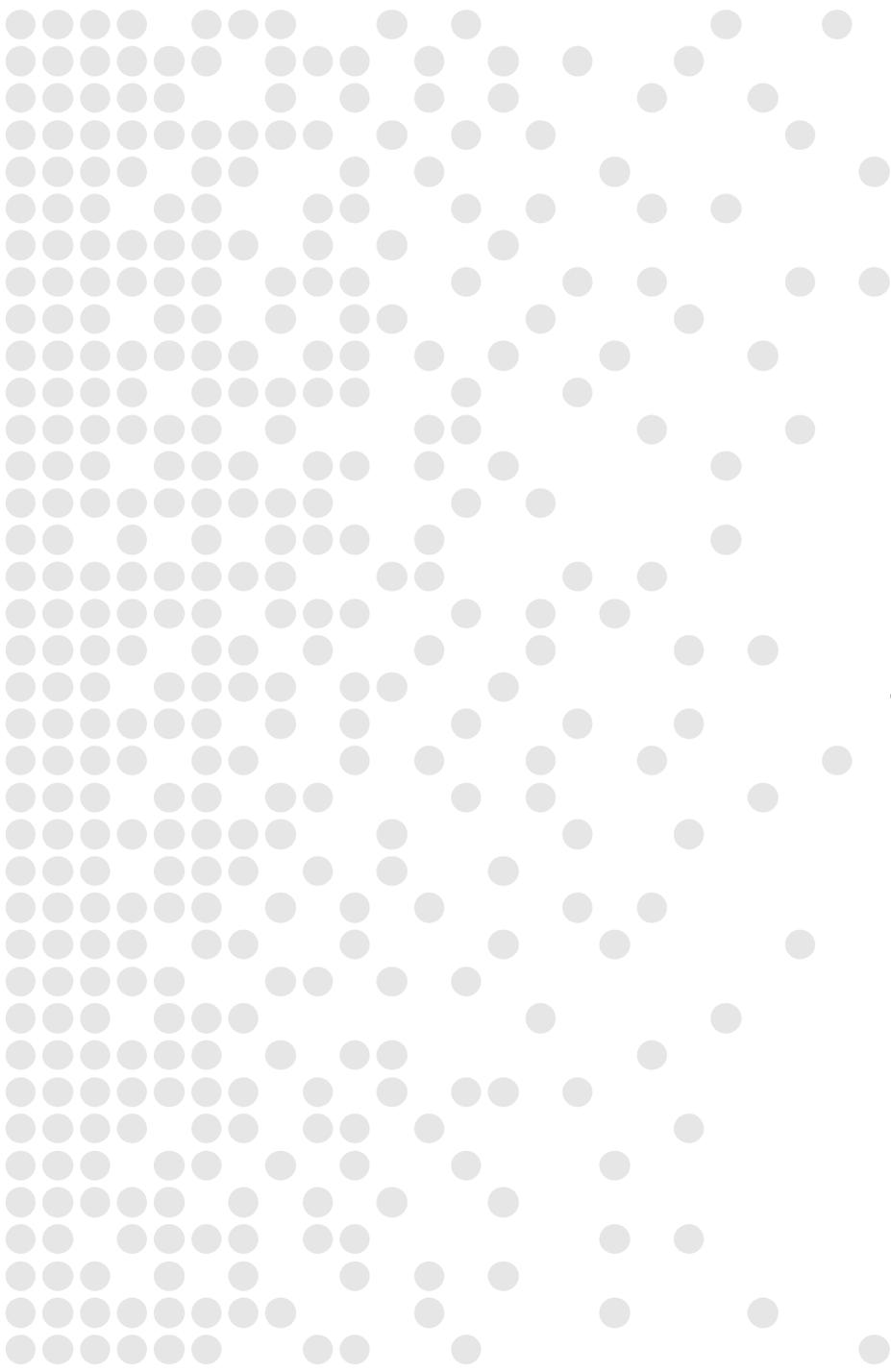


Since Walkerton, new legislation has been passed by the Province to enhance the provision of services. These include the following:

- Safe Drinking Water Act;
- Sustainable Water and Sewage Systems Act;
- O.Reg. 453/07 - Safe Drinking Water Act;
- Clean Water Act; and
- Water Opportunities Act.

## Further Requirements:

- Municipal Infrastructure Strategy
- Infrastructure for Jobs and Prosperity Act, 2015



## Existing Rates

---

Municipality of Central Elgin

# Present 2020 Rates

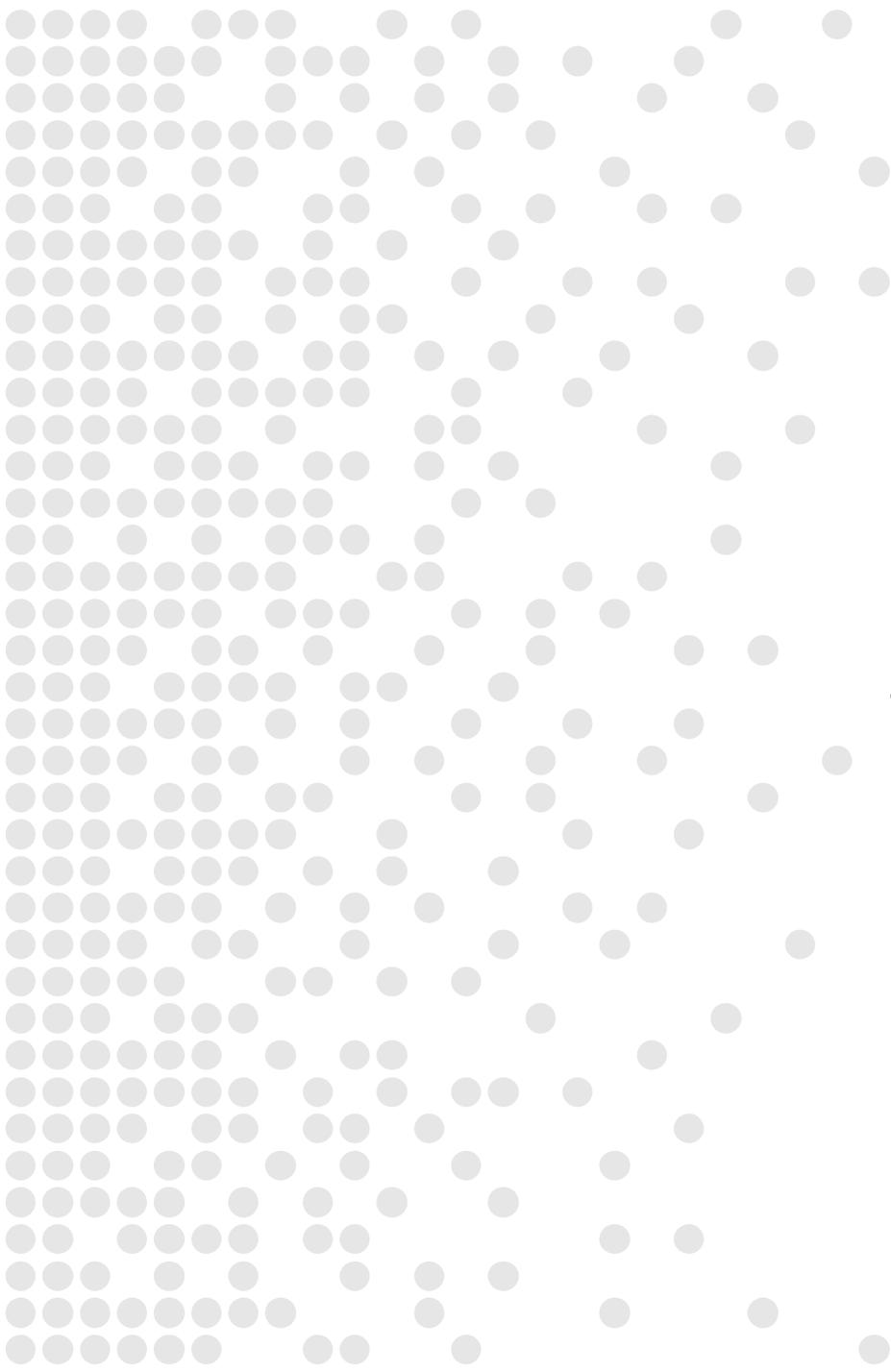


Municipality of Central Elgin		
2020 - Water Billing Rates		
Base Charge		
All Meter Sizes	\$	18.50
Volume Charge		
\$	3.40	per m <sup>3</sup>

Municipality of Central Elgin		
2020 - Wastewater Billing Rates		
Base Charge		
All Meter Sizes	\$	22.06
Volume Charge		
\$	2.85	per m <sup>3</sup>

City of St. Thomas		
2020 - Water Billing Rates		
Base Charge		
5/8"	\$	17.75
3/4"	\$	25.02
1"	\$	35.31
1 1/2"	\$	56.46
2"	\$	91.86
4"	\$	293.15
6"	\$	507.75
Volume Charge		
\$	1.1562	per m <sup>3</sup>

City of St. Thomas		
2020 - Wastewater Billing Rates		
Volume Charge		
\$	2.27	per Residential m <sup>3</sup>
\$	0.75	per Commercial m <sup>3</sup>



# Reserves and Reserve Funds

---

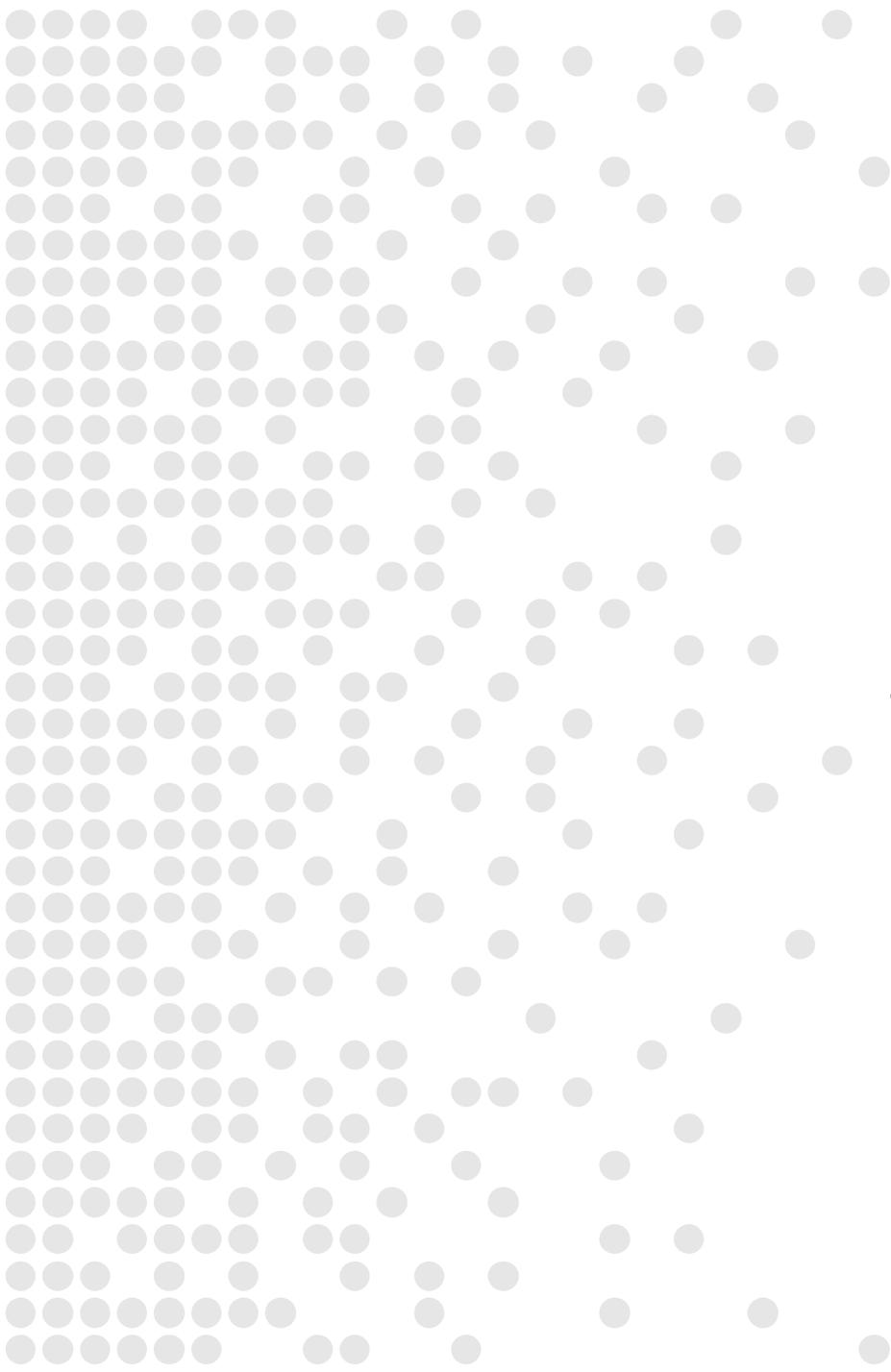
Municipality of Central Elgin

## Reserve Balances – December 31, 2019



<b>Reserve</b>	<b>Dec. 31 2019</b>
<b>Water</b>	
Rate Stabilization Reserve	<b>(829,729)</b>
Development Charges Reserve Fund	-
<b>Wastewater</b>	
Rate Stabilization Reserve	<b>1,601,933</b>
Development Charges Reserve Fund	-

- Note that by the end of 2020, the water rate reserve balance is anticipated to be in a deficit of \$1.16 million.
- In addition, the water development charge reserve fund draws are anticipated to exceed the D.C. revenues providing a significant deficit by the end of the forecast period.



# Capital Needs and Financing

---

Municipality of Central Elgin



# Capital Infrastructure Needs

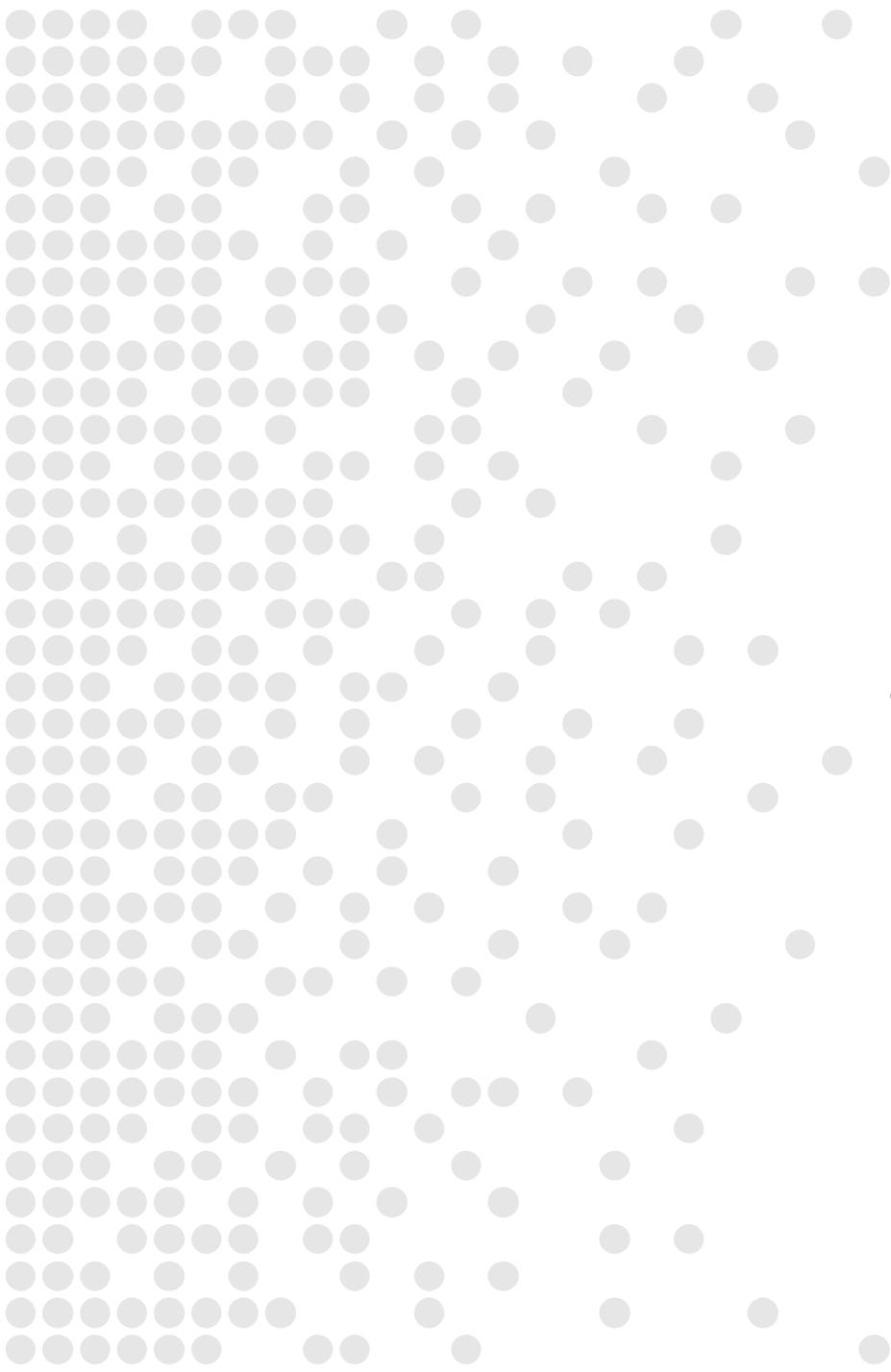
- Capital needs were developed by Municipal staff based on Council approved documents such as the Asset Management Plan, Long Range Capital Forecast, and Development Charges Study
- Works were identified based on the 2020 budget and 2021 to 2030 capital forecast and review of capital infrastructure replacement
- Capital works were identified by
  - Need;
  - Timing; and
  - Costs.
- Total Capital Systems Needs 2020-2030 (Inflated):
  - Water = \$7.85 million
  - Wastewater = \$12.35 million



# Capital Financing Options

- ✓ Reserves
- ✓ Development Charges
- ✓ Debt
- ✓ Grants
- Operating Budget Transfers (Funding Reserves)
- Municipal Act (Part 12)

Description	2020-2030	
	Water	Wastewater
Provincial/Federal Grants	-	-
Development Charges Reserve Fund	-	-
Non-Growth Related Debenture Requirements	3,315,500	459,000
Growth Related Debenture Requirements	1,941,600	9,308,681
Operating Contributions	-	-
Lifecycle Reserve Fund	-	-
Water Reserve	2,591,000	-
Wastewater Reserve	-	2,584,519
<b>Total Capital Expenditures</b>	<b>7,848,100</b>	<b>12,352,200</b>



## Lifecycle Costs (Existing Infrastructure)

---

Municipality of Central Elgin



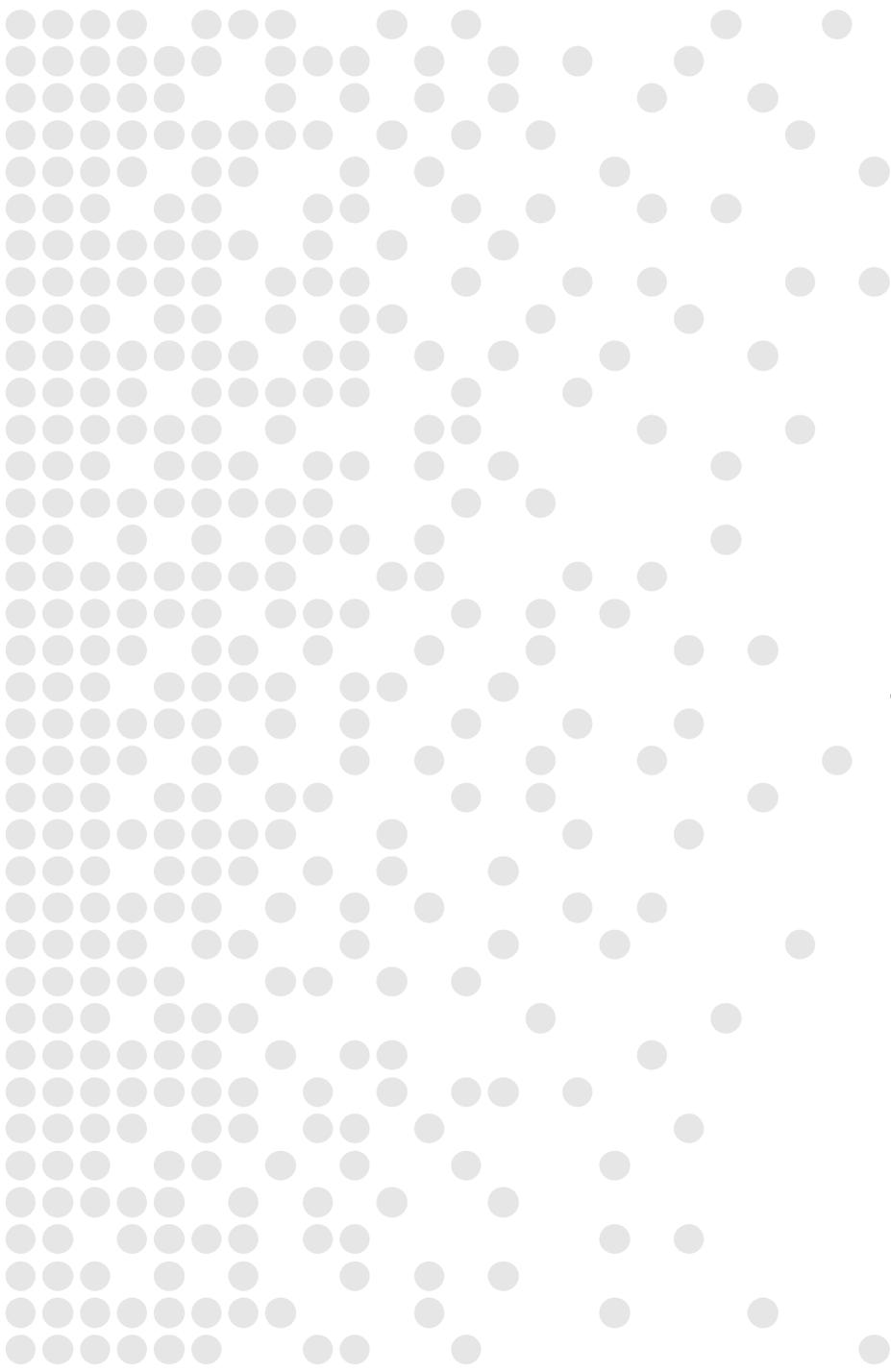
# Lifecycle Infrastructure Costs

- The age of the water system dates back to the early 1950's;
- The age of the wastewater system date back to the early 1970's;
- Total value of existing water infrastructure is \$55.08 million;
- Total value of existing wastewater infrastructure is \$75.78 million;
- This provides for a “per customer” investment by the Town of \$17,047 for water and \$27,963 for wastewater.

Area	Total Replacement Value	Amount included in 2020-2030 forecast (Excluding Growth-Related)	Net Replacement for Future Lifecycle	Annual Lifecycle Replacement
<b>Water</b>				
Water Facilities	9,499,000		9,062,000	325,975
Watermains	42,527,300	2,786,000	41,849,700	1,167,198
Water Chambers	2,279,800		2,279,800	68,397
Water Meters	772,200	1,650,000	66,100	4,216
<b>Total Water</b>	<b>55,078,300</b>	<b>4,436,000</b>	<b>53,257,600</b>	<b>1,565,787</b>
<b>Wastewater</b>				
Wastewater Facilities	24,863,900		24,348,000	977,538
Sanitary Sewers	38,262,800	1,233,600	38,262,800	1,126,544
Manholes	12,652,200		12,652,200	481,768
<b>Total Wastewater</b>	<b>75,778,900</b>	<b>1,233,600</b>	<b>75,263,000</b>	<b>2,585,850</b>
<b>Total Water &amp; Wastewater</b>	<b>130,857,200</b>	<b>5,669,600</b>	<b>128,520,600</b>	<b>4,151,636</b>

\* Based on Estimated Useful life of assets only

Investment per customer is \$17,047 for water and \$27,963 for wastewater



# Operating Expenditures

---

Municipality of Central Elgin



# Operating Budgets

- Operating expenditures are increasing over the forecast to recognize:
  - Monthly Billing and Collection Impacts
    - Adjustments to water and wastewater billing and collection expenditures for 2021 to reflect moving to a monthly billing cycle (\$19,700 increase to water and \$39,800 increase to wastewater)
    - Adjustments to salaries for 2021 budget (increase of \$18,900 to water and \$143,400 to wastewater)
    - Removal of \$32,000 recovery from wastewater to water related to salary chargebacks
  - Purchased water assumptions (annual inflation)
    - 5.1% for Malahide Secondary Water Supply System
    - 4.8% for Aylmer Secondary Water Supply System
    - For the Elgin Area Primary Water Supply System, annual rate increases of 3% for 2021 and 2022 and 2.5% thereafter, in addition to increased purchases required for new customers.
    - For St. Thomas Secondary Water Supply System, annual rate increase of 9% for 2021-2024, 8.5% for 2025 and 0% thereafter, in addition to increased purchases required for new customers.



# Forecast Refinements 2020 – 2030

- Inflationary Impacts
  - 5% for operating expenditures related to Chemicals & Utilities
  - 2% for all other operating expenditures except purchased water and payment to St. Thomas
- Annual Payment to St. Thomas
  - For customers that are serviced through the City’s water system based the rates have been based on St. Thomas Rate Forecast (vs. 2% annual inflation)

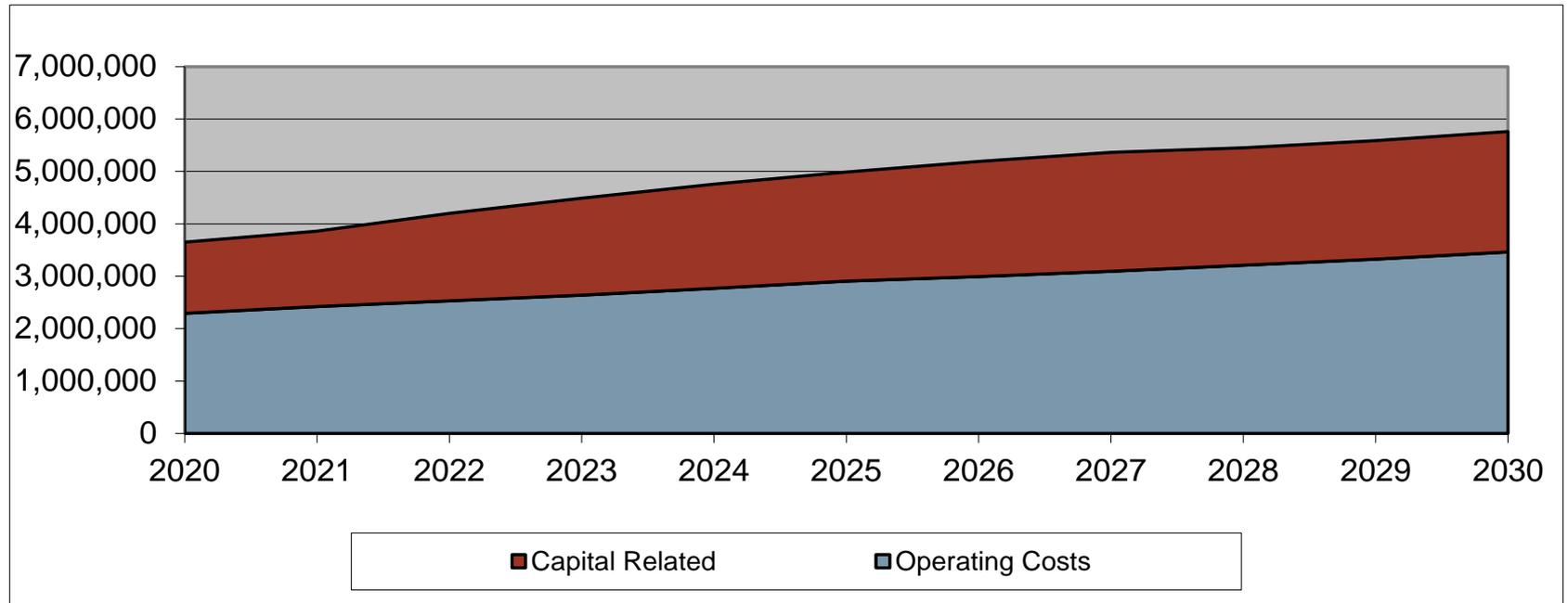
**St. Thomas Rate Study (2021-2031) - Rate Forecast for St. Thomas and Suburban Area Rate:**

Volume Rate /m3	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Common Capital Charge	0.1281	0.1409	0.1550	0.1705	0.1876	0.2063	0.2166	0.2275	0.2388	0.2508	0.2633	0.2686
Water Supply Recovery Rate (blended rate)	1.0281	1.0731	1.1186	1.1660	1.2107	1.2553	1.3016	1.3496	1.3995	1.4472	1.4968	1.5483
St. Thomas and Suburban Area Consumption Rate	1.1562	1.2140	1.2736	1.3365	1.3983	1.4616	1.5182	1.5771	1.6383	1.6980	1.7601	1.8169
Annual Rate Increases (%):												
Common Capital Charge		10%	10%	10%	10%	10%	5%	5%	5%	5%	5%	2%
Water Supply Recover Rate (blended rate)		4%	4%	4%	4%	4%	4%	4%	4%	3%	3%	3%
St. Thomas and Suburban Area Consumption Rate		5%	5%	5%	5%	5%	4%	4%	4%	4%	4%	3%

Monthly Base Charge Forecast by Meter Size	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
5/8"	\$ 17.75	17.75	17.75	17.75	17.75	17.75	17.75	17.75	17.75	17.75	17.75	17.75
3/4"	\$ 25.02	25.02	25.02	25.02	25.02	25.02	25.02	25.02	25.02	25.02	25.02	25.02
1"	\$ 35.31	35.31	35.31	35.31	35.31	35.31	35.31	35.31	35.31	35.31	35.31	35.31
1 1/2"	\$ 56.46	56.46	56.46	56.46	56.46	56.46	56.46	56.46	56.46	56.46	56.46	56.46
2"	\$ 91.86	91.86	91.86	91.86	91.86	91.86	91.86	91.86	91.86	91.86	91.86	91.86
3"	\$ 148.65	148.65	148.65	148.65	148.65	148.65	148.65	148.65	148.65	148.65	148.65	148.65
4"	\$ 293.15	296.15	296.15	296.15	296.15	296.15	296.15	296.15	296.15	296.15	296.15	296.15
6"	\$ 507.75	507.75	507.75	507.75	507.75	507.75	507.75	507.75	507.75	507.75	507.75	507.75
Annual Rate Increases (%):		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

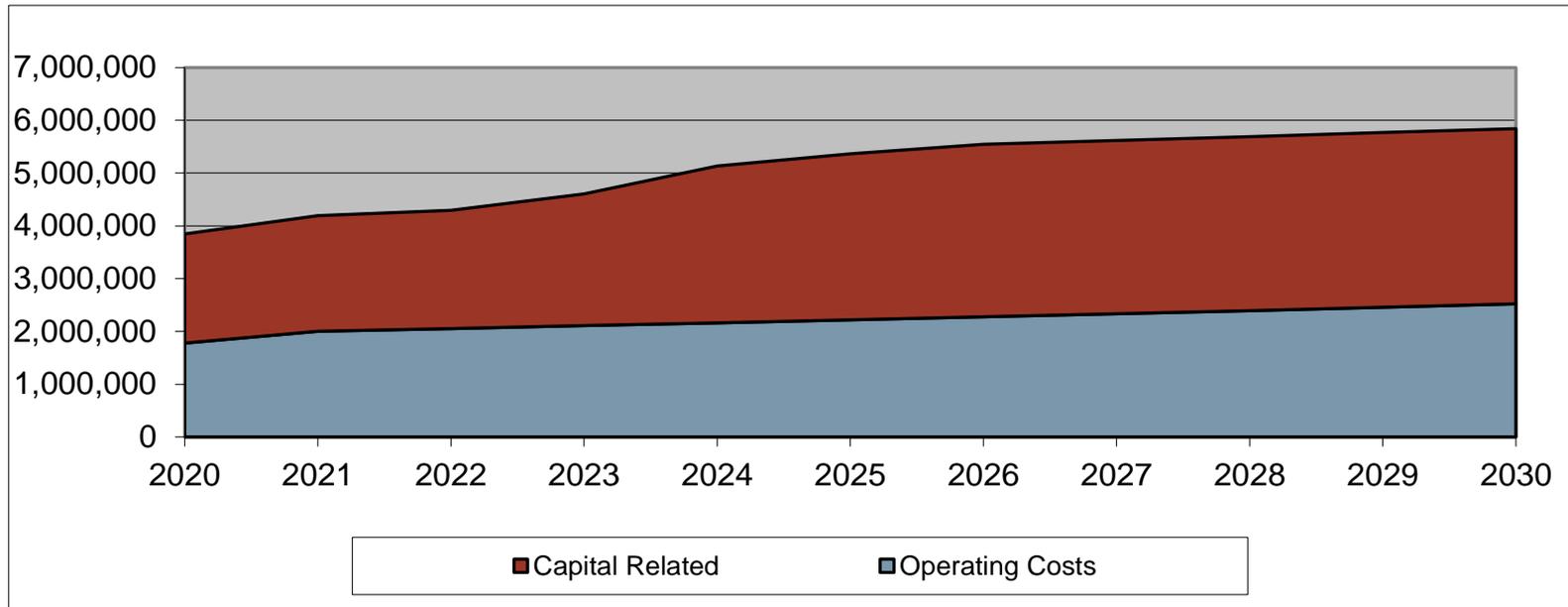
Rate as per Hemson Water and Wastewater Rate Study page 23

# Water Operating Budget

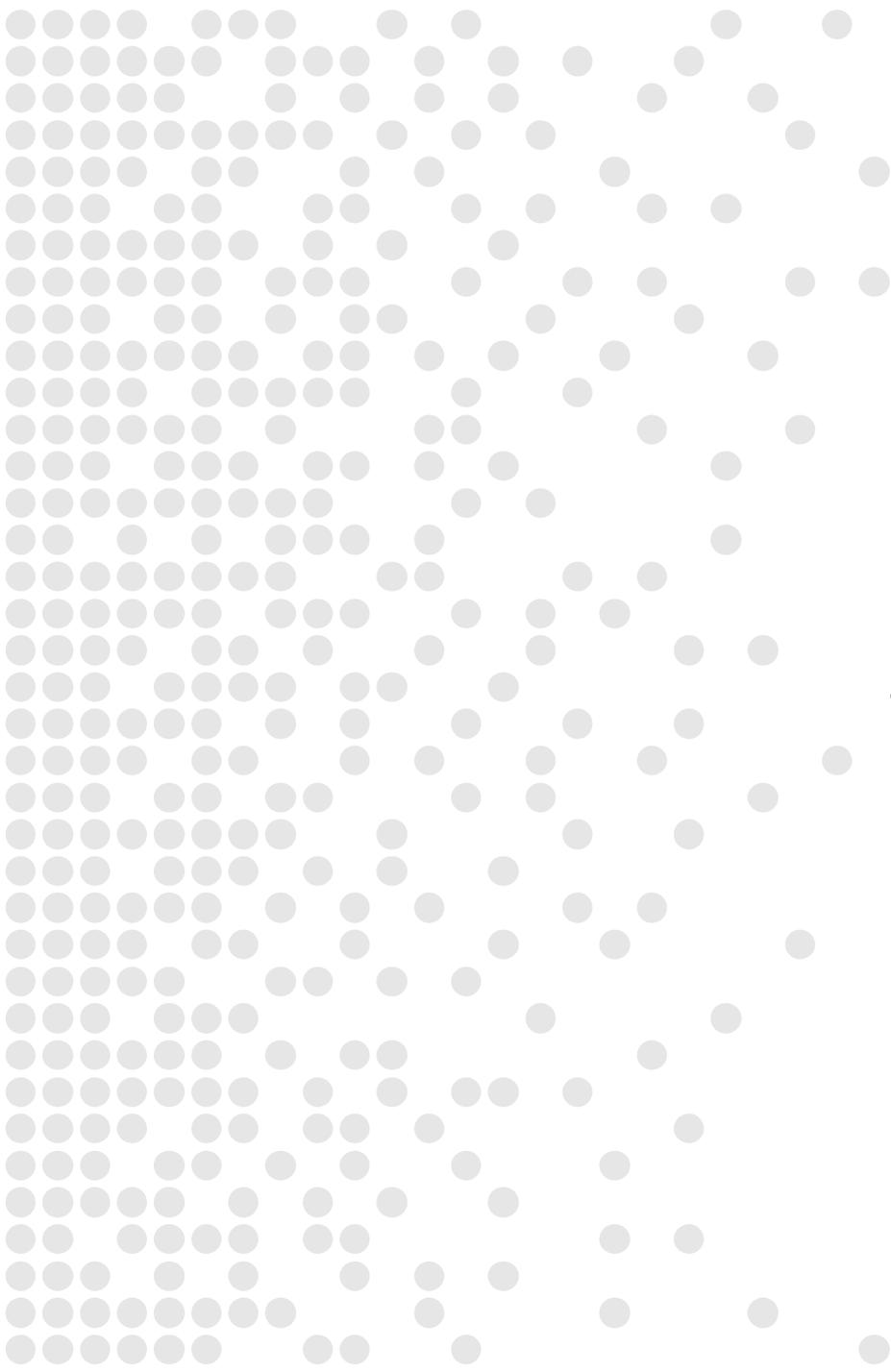


Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Costs	2,291,252	2,422,575	2,527,263	2,642,013	2,768,096	2,903,988	2,996,095	3,097,122	3,208,075	3,328,596	3,459,462
Capital Related	1,359,388	1,440,659	1,675,390	1,845,010	1,987,099	2,087,211	2,194,567	2,267,551	2,242,321	2,256,257	2,304,210
<b>Total</b>	<b>3,650,640</b>	<b>3,863,234</b>	<b>4,202,653</b>	<b>4,487,022</b>	<b>4,755,195</b>	<b>4,991,199</b>	<b>5,190,661</b>	<b>5,364,673</b>	<b>5,450,396</b>	<b>5,584,853</b>	<b>5,763,673</b>

# Wastewater Operating Budget



Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Operating Costs	1,776,244	2,004,516	2,056,108	2,108,746	2,163,035	2,218,781	2,276,293	2,335,176	2,396,337	2,459,184	2,523,823
Capital Related	2,069,616	2,185,862	2,235,681	2,493,214	2,971,847	3,146,360	3,268,949	3,282,794	3,295,374	3,306,809	3,317,488
<b>Total</b>	<b>3,845,860</b>	<b>4,190,378</b>	<b>4,291,789</b>	<b>4,601,959</b>	<b>5,134,882</b>	<b>5,365,142</b>	<b>5,545,242</b>	<b>5,617,970</b>	<b>5,691,711</b>	<b>5,765,993</b>	<b>5,841,311</b>



# Cost of Water and Wastewater Services

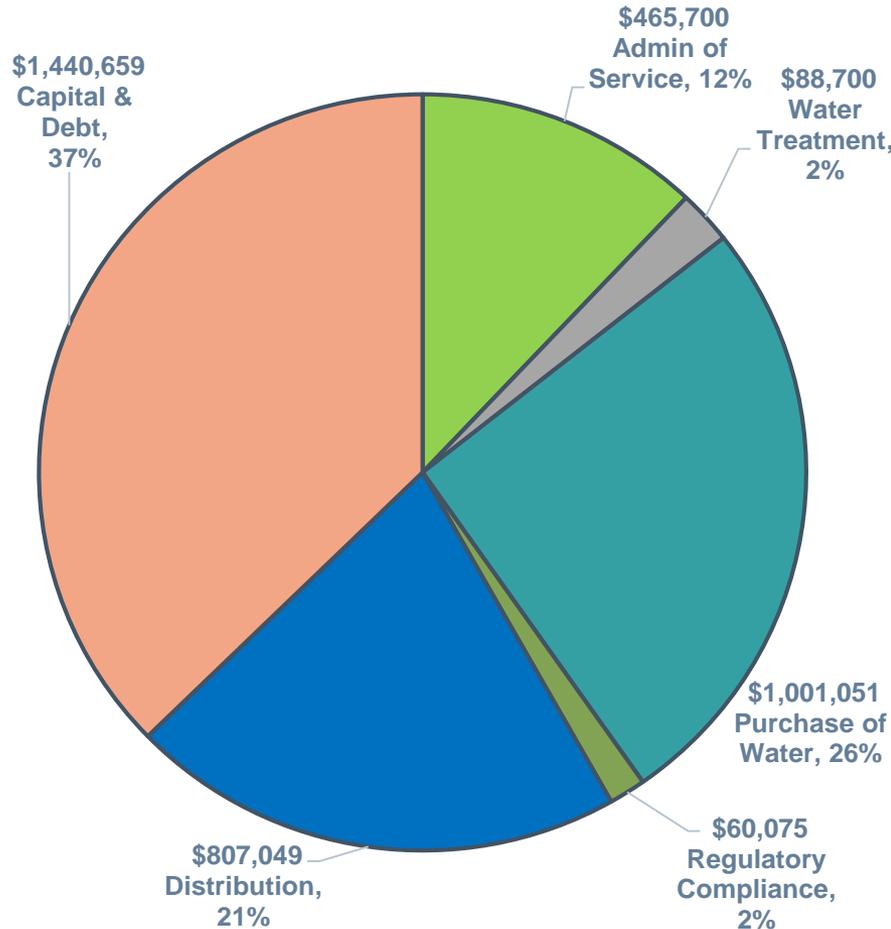
---

Municipality of Central Elgin



# Water Service (2021)

## WHAT DOES IT COST TO RUN OUR WATER SYSTEM EVERY YEAR?



## Service Categories & Information

**Administration of Service** — Managing the Service **12%**  
 Meter Reading, Billing & Customer Service, Contract services, Administrative Oversight

**Capital/Debt** — Paying for the Pipes **37%**  
 Current Costs for replacing aging or failed Assets, Debt Payments for recently replaced failed Assets

**Distribution** — Getting the Water to your taps & Fire Protection **21%**  
 Operating & Maintaining Water Towers, Booster Stations, water Chambers, Water Mains, Fire Hydrant, Property Services and Metering

**Water Treatment** — Ensuring your Water is Safe **2%**  
 Treatment Facilities & Processes, Treatment Chemicals, Quality monitoring, utility costs

**Regulatory Compliance** — Ensuring legal compliance **2%**  
 Best Practices, Water Sampling, Facility and Site Checks, Laboratory costs, Government Reporting, DWQMS, Training

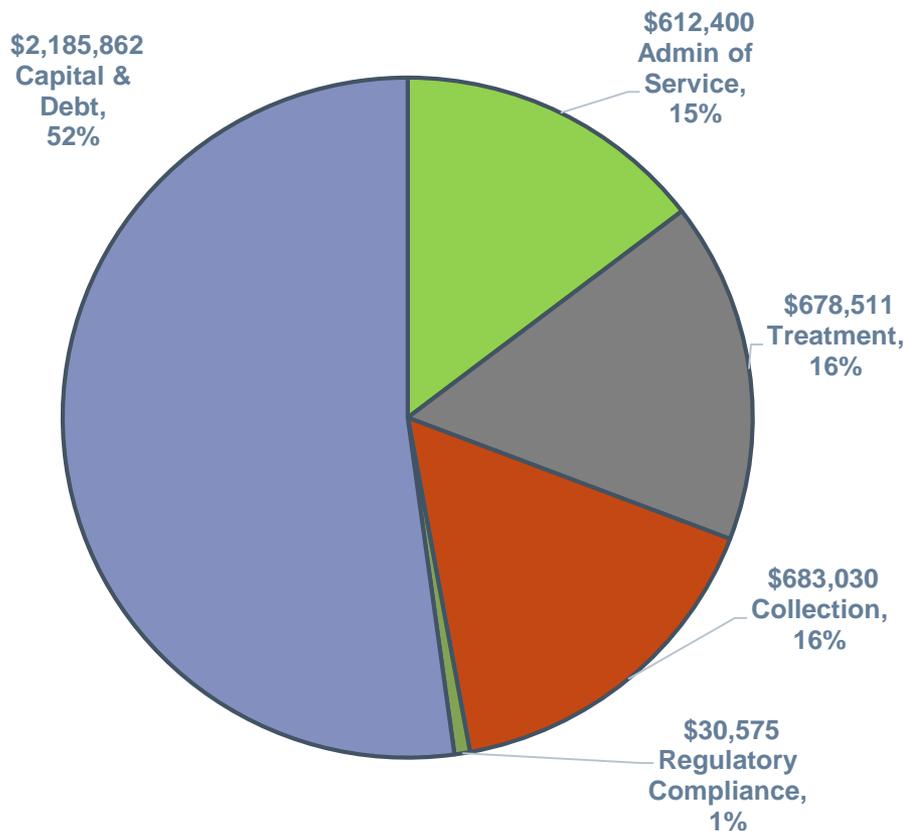
**Purchase of Water** — Treated Water Purchase **26%**  
 Costs of purchasing water (5 Services)

**Water System Annually \$3,863,234**

# Wastewater Service (2021)



## WHAT DOES IT COST TO RUN OUR WASTE WATER SYSTEM EVERY YEAR?



## Service Categories & Information

**Administration of Service** — Managing the Service **15%**  
Meter Reading, Billing & Customer Service, Contract services, Administrative Oversight, Insurance, Lease

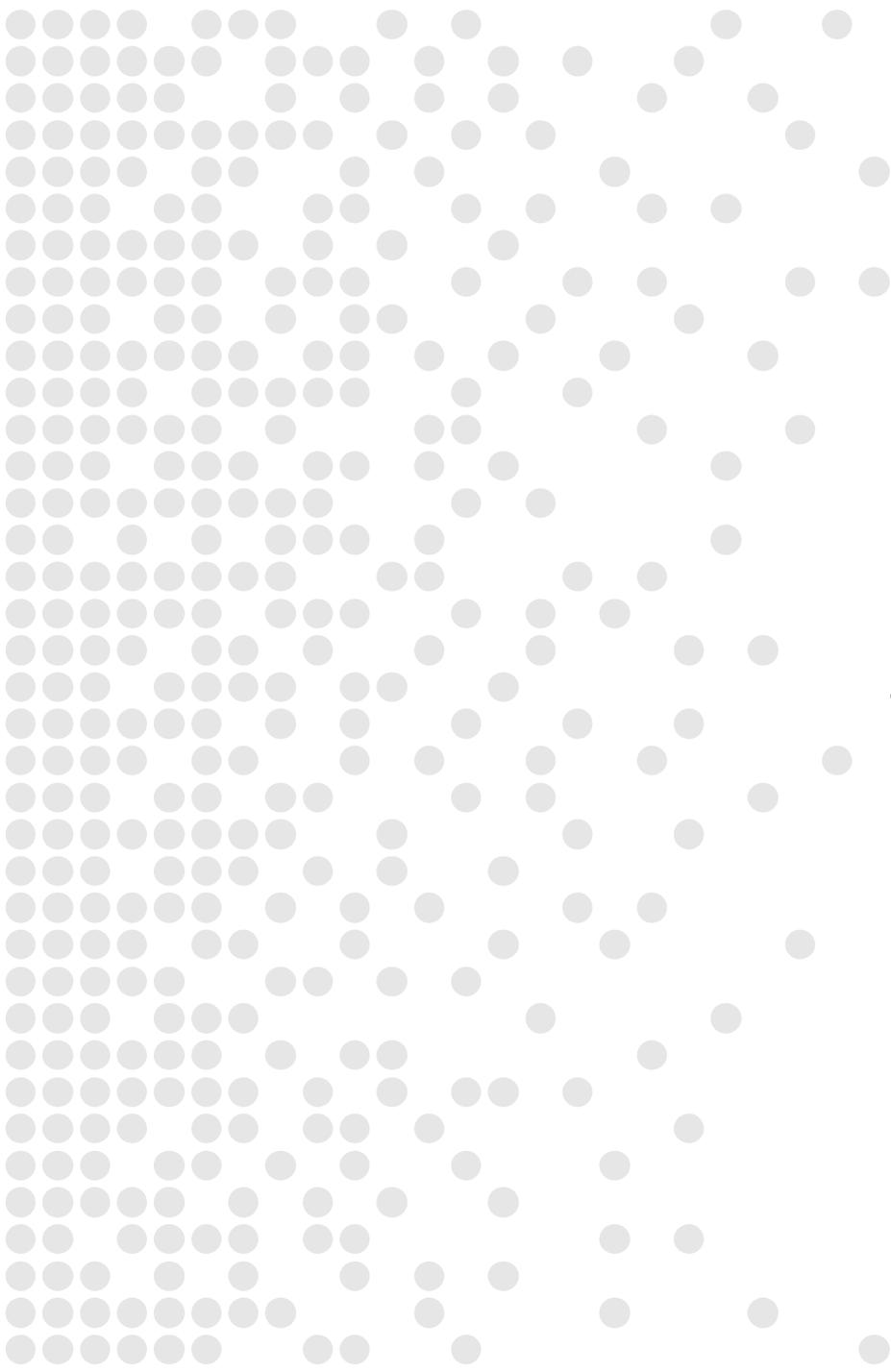
**Capital/Debt** — Paying for the Pipes **52%**  
Current Costs for replacing aging or failed Assets, Debt Payments for recently replaced failed Assets

**Collection** — Moving Waste Away from Connection **16%**  
Operating & Maintaining Collection Systems, Property Service Connections, Pump Station, Forcemains

**Treatment** — Ensuring Safe Disposal of Waste **16%**  
Treatment Facilities & Processes, Treatment Chemicals, Quality monitoring, utility costs

**Regulatory Compliance** — Ensuring legal compliance **1%**  
Best Practices, Treatment Sampling, Facility and Site Checks, Laboratory costs, Government Reporting, Provincial Training

**Wastewater System Annually \$4,190,378**



# Rate Structures

---

Municipality of Central Elgin

# Rate Structures and Billing Cycles



## Rate Structures:

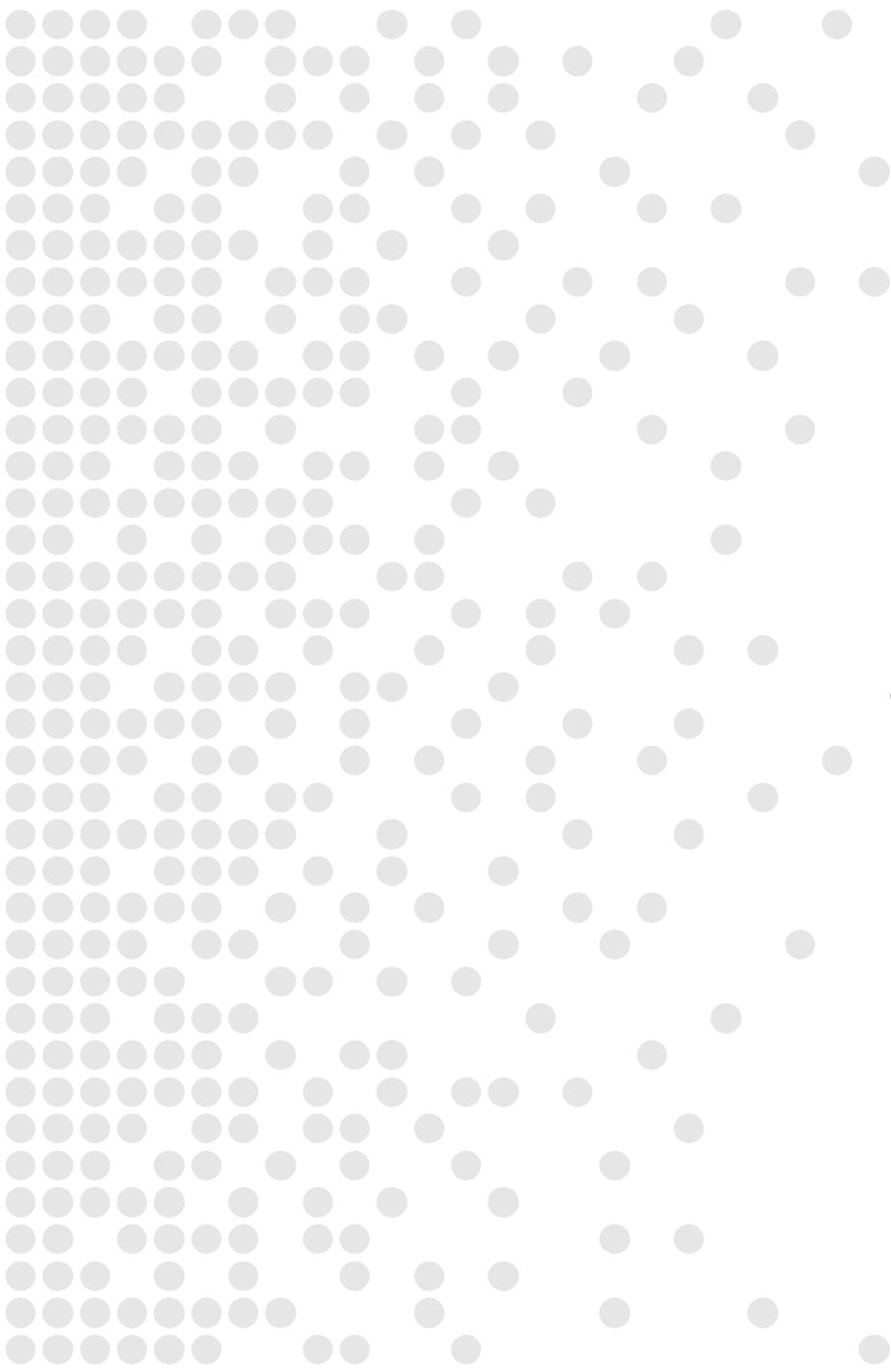
- Currently both the water and wastewater rate structures are based on:
  - Volume rates that are imposed on volume consumed; and
  - A base charge that is equal for all customers.
- A few water rate structures that were explored including:
  - Continuing with the current rate structure;
  - Rate structures which vary the base charge by meter size; and
  - Rate structures that place different emphasis on either the base charges or volume rates.
- Rate structure options were not explored for the wastewater system.

# Rate Structures and Billing Cycles



## Billing Cycles:

- Currently water and wastewater customers are billed every other month.
- The update analysis include moving to a monthly billing cycle.
  - Operating budget forecasts has been adjusted to reflect the additional costs associated with a monthly billing and collection cycle beginning in 2021.



## Water Rates based on the Rate Structures Explored

---

Municipality of Central Elgin

# Water Rate Structure Scenarios and Current Wastewater Rate Structure



- Based on discussions with the Steering Committee and Central Elgin Staff, three rate structure scenarios have been undertaken for **Water**:
  - Base Scenario:
    - Volume rates are held constant at current 2020 rate
    - Base charge is increased to fund the total net expenditures.
  - Scenario 1:
    - Impose a minimum bill with 7m<sup>3</sup> per month included with no volume charge
    - Volume charges are reduced over the forecast period to target the St. Thomas volume rate forecast by 2030.
    - The base charge/minimum bill is increased to fund the total net expenditures
  - Scenario 2:
    - Volume charges are held constant at current 2020 rate
    - Base charges vary by meter size similar to St. Thomas base charges.
    - The base charge is increased to fund the total net expenditures.
  - Scenario 3 (Preferred):
    - Volume charges are reduced over the forecast period to target the St. Thomas volume rate forecast by 2030.
    - Base charges vary by meter size similar to St. Thomas base charges.
    - The base charge is increased to fund the total net expenditures.
- **Wastewater** rate structure will continue with current structure
  - Based Charge – constant rate for all customers
  - Volume Charge – constant rate for all volume

# Impacts on Average Residential and Average Non-Residential Water and Wastewater Bills by Water Scenario



**Annual Residential Customer Water and Wastewater Bill - Based on 5/8" Meter and 147 m<sup>3</sup> of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Base Scenario (status quo structure)	\$1,405.47	\$1,606.83	\$1,725.87	\$1,866.03	\$1,927.11	\$1,952.19	\$1,967.67	\$1,983.27	\$1,999.23	\$2,010.03	\$2,020.95
% Increase - Total Annual Bill		14%	7%	8%	3%	1%	1%	1%	1%	1%	1%
Scenario 1 - Minimum Bill	\$1,405.47	\$1,607.58	\$1,719.57	\$1,846.08	\$1,925.70	\$1,964.04	\$1,978.41	\$1,994.76	\$1,998.15	\$2,004.42	\$2,013.06
% Increase - Total Annual Bill		14%	7%	7%	4%	2%	1%	1%	0%	0%	0%
Scenario 2 - Varied Base Charge*	\$1,405.47	\$1,600.11	\$1,717.83	\$1,837.71	\$1,896.51	\$1,920.75	\$1,935.63	\$1,950.63	\$1,965.99	\$1,976.43	\$1,987.11
% Increase - Total Annual Bill		14%	7%	7%	3%	1%	1%	1%	1%	1%	1%
Scenario 3 - Varied Base Charge and reduced Volume Charge*	\$1,405.47	\$1,607.58	\$1,712.01	\$1,812.24	\$1,871.34	\$1,920.60	\$1,941.69	\$1,971.00	\$1,981.71	\$2,002.38	\$2,031.90
% Increase - Total Annual Bill		14%	6%	6%	3%	3%	1%	2%	1%	1%	1%

\*Base Monthly Charge varies for users with Large Meters

**Annual Non-Residential Customer Water and Wastewater Bill - Based on 3" Meter and 500 m<sup>3</sup> of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Base Scenario (status quo structure)	\$3,611.72	\$3,813.08	\$3,932.12	\$4,072.28	\$4,133.36	\$4,158.44	\$4,173.92	\$4,189.52	\$4,205.48	\$4,216.28	\$4,227.20
% Increase - Total Annual Bill		6%	3%	4%	1%	1%	0%	0%	0%	0%	0%
Scenario 1 - Minimum Bill	\$3,611.72	\$3,789.12	\$3,876.40	\$3,978.20	\$4,036.64	\$4,053.80	\$3,979.92	\$3,915.08	\$3,809.04	\$3,720.00	\$3,643.92
% Increase - Total Annual Bill		5%	2%	3%	1%	0%	-2%	-2%	-3%	-2%	-2%
Scenario 2 - Varied Base Charge*	\$3,611.72	\$6,098.40	\$6,674.53	\$7,206.80	\$7,518.70	\$7,645.59	\$7,731.27	\$7,817.95	\$7,906.76	\$7,954.37	\$8,003.10
% Increase - Total Annual Bill		69%	9%	8%	4%	2%	1%	1%	1%	1%	1%
Scenario 3 - Varied Base Charge and reduced Volume Charge*	\$3,611.72	\$5,244.36	\$5,586.04	\$5,867.60	\$6,097.88	\$6,337.52	\$6,503.04	\$6,707.12	\$6,833.64	\$7,002.24	\$7,209.84
% Increase - Total Annual Bill		45%	7%	5%	4%	4%	3%	3%	2%	2%	3%

\*Base Monthly Charge varies for users with Large Meters

# Impacts on Sample Non-Residential Water and Wastewater Bills by Water Scenario



**Average Annual Elgin County Facility Water and Wastewater Bill - Based on 2" Meter and 2500 m<sup>3</sup> of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Base Scenario (status quo structure)</b>	<b>\$16,111.72</b>	<b>\$16,313.08</b>	<b>\$16,432.12</b>	<b>\$16,572.28</b>	<b>\$16,633.36</b>	<b>\$16,658.44</b>	<b>\$16,673.92</b>	<b>\$16,689.52</b>	<b>\$16,705.48</b>	<b>\$16,716.28</b>	<b>\$16,727.20</b>
<b>% Increase - Total Annual Bill</b>		1%	1%	1%	0%	0%	0%	0%	0%	0%	0%
<b>Scenario 1 - Minimum Bill</b>	<b>\$16,111.72</b>	<b>\$16,149.12</b>	<b>\$16,096.40</b>	<b>\$16,058.20</b>	<b>\$15,996.64</b>	<b>\$15,893.80</b>	<b>\$15,319.92</b>	<b>\$14,795.08</b>	<b>\$14,069.04</b>	<b>\$13,440.00</b>	<b>\$12,883.92</b>
<b>% Increase - Total Annual Bill</b>		0%	0%	0%	0%	-1%	-4%	-3%	-5%	-4%	-4%
<b>Scenario 2 - Varied Base Charge*</b>	<b>\$16,111.72</b>	<b>\$17,604.02</b>	<b>\$17,981.27</b>	<b>\$18,334.62</b>	<b>\$18,536.72</b>	<b>\$18,619.08</b>	<b>\$18,674.04</b>	<b>\$18,729.62</b>	<b>\$18,786.57</b>	<b>\$18,818.05</b>	<b>\$18,850.27</b>
<b>% Increase - Total Annual Bill</b>		9%	2%	2%	1%	0%	0%	0%	0%	0%	0%
<b>Scenario 3 - Varied Base Charge and reduced Volume Charge*</b>	<b>\$16,111.72</b>	<b>\$16,922.88</b>	<b>\$17,001.80</b>	<b>\$17,046.88</b>	<b>\$17,067.04</b>	<b>\$17,087.56</b>	<b>\$16,644.12</b>	<b>\$16,268.32</b>	<b>\$15,669.36</b>	<b>\$15,184.08</b>	<b>\$14,788.68</b>
<b>% Increase - Total Annual Bill</b>		5%	0%	0%	0%	0%	-3%	-2%	-4%	-3%	-3%

\*Base Monthly Charge varies for users with Large Meters

**Average Annual OPP Station Water and Wastewater Bill - Based on 2" Meter and 2200 m<sup>3</sup> of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Base Scenario (status quo structure)</b>	<b>\$14,236.72</b>	<b>\$14,438.08</b>	<b>\$14,557.12</b>	<b>\$14,697.28</b>	<b>\$14,758.36</b>	<b>\$14,783.44</b>	<b>\$14,798.92</b>	<b>\$14,814.52</b>	<b>\$14,830.48</b>	<b>\$14,841.28</b>	<b>\$14,852.20</b>
<b>% Increase - Total Annual Bill</b>		1%	1%	1%	0%	0%	0%	0%	0%	0%	0%
<b>Scenario 1 - Minimum Bill</b>	<b>\$14,236.72</b>	<b>\$14,295.12</b>	<b>\$14,263.40</b>	<b>\$14,246.20</b>	<b>\$14,202.64</b>	<b>\$14,117.80</b>	<b>\$13,618.92</b>	<b>\$13,163.08</b>	<b>\$12,530.04</b>	<b>\$11,982.00</b>	<b>\$11,497.92</b>
<b>% Increase - Total Annual Bill</b>		0%	0%	0%	0%	-1%	-4%	-3%	-5%	-4%	-4%
<b>Scenario 2 - Varied Base Charge*</b>	<b>\$14,236.72</b>	<b>\$15,729.02</b>	<b>\$16,106.27</b>	<b>\$16,459.62</b>	<b>\$16,661.72</b>	<b>\$16,744.08</b>	<b>\$16,799.04</b>	<b>\$16,854.62</b>	<b>\$16,911.57</b>	<b>\$16,943.05</b>	<b>\$16,975.27</b>
<b>% Increase - Total Annual Bill</b>		10%	2%	2%	1%	0%	0%	0%	0%	0%	0%
<b>Scenario 3 - Varied Base Charge and reduced Volume Charge*</b>	<b>\$14,236.72</b>	<b>\$15,068.88</b>	<b>\$15,168.80</b>	<b>\$15,234.88</b>	<b>\$15,273.04</b>	<b>\$15,311.56</b>	<b>\$14,943.12</b>	<b>\$14,636.32</b>	<b>\$14,130.36</b>	<b>\$13,726.08</b>	<b>\$13,402.68</b>
<b>% Increase - Total Annual Bill</b>		6%	1%	0%	0%	0%	-2%	-2%	-3%	-3%	-2%

\*Base Monthly Charge varies for users with Large Meters

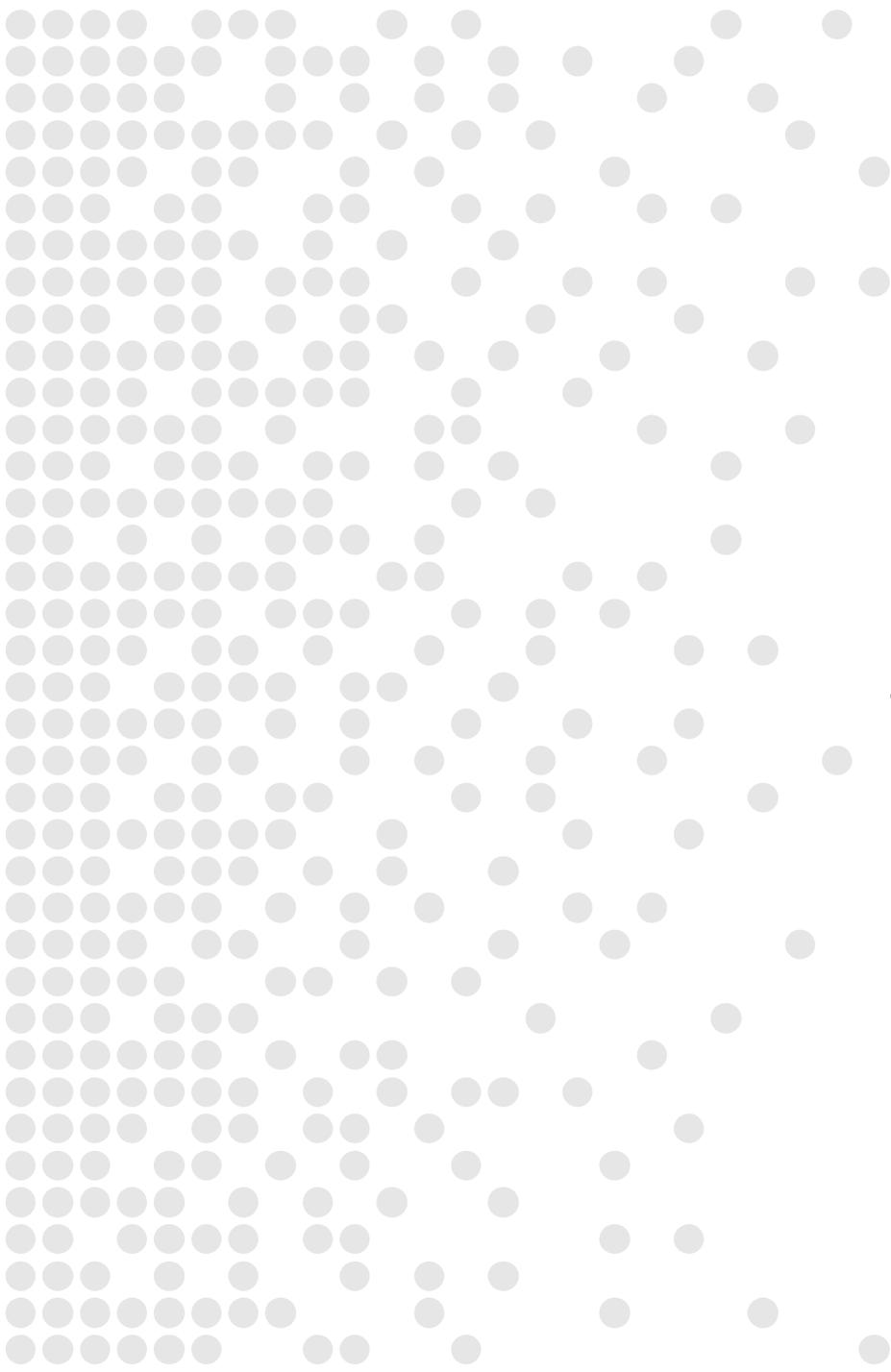
# Impacts on Sample Non-Residential Water and Wastewater Bills by Water Scenario



**Average Annual SJHC - North Water and Wastewater Bill - Based on 6" Meter and 2300 m<sup>3</sup> of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Base Scenario (status quo structure)</b>	<b>\$14,861.72</b>	<b>\$15,063.08</b>	<b>\$15,182.12</b>	<b>\$15,322.28</b>	<b>\$15,383.36</b>	<b>\$15,408.44</b>	<b>\$15,423.92</b>	<b>\$15,439.52</b>	<b>\$15,455.48</b>	<b>\$15,466.28</b>	<b>\$15,477.20</b>
<b>% Increase - Total Annual Bill</b>		1%	1%	1%	0%	0%	0%	0%	0%	0%	0%
<b>Scenario 1 - Minimum Bill</b>	<b>\$14,861.72</b>	<b>\$14,913.12</b>	<b>\$14,874.40</b>	<b>\$14,850.20</b>	<b>\$14,800.64</b>	<b>\$14,709.80</b>	<b>\$14,185.92</b>	<b>\$13,707.08</b>	<b>\$13,043.04</b>	<b>\$12,468.00</b>	<b>\$11,959.92</b>
<b>% Increase - Total Annual Bill</b>		0%	0%	0%	0%	-1%	-4%	-3%	-5%	-4%	-4%
<b>Scenario 2 - Varied Base Charge*</b>	<b>\$14,861.72</b>	<b>\$23,636.19</b>	<b>\$25,469.88</b>	<b>\$27,133.46</b>	<b>\$28,139.69</b>	<b>\$28,548.20</b>	<b>\$28,828.09</b>	<b>\$29,111.42</b>	<b>\$29,401.73</b>	<b>\$29,551.31</b>	<b>\$29,704.43</b>
<b>% Increase - Total Annual Bill</b>		59%	8%	7%	4%	1%	1%	1%	1%	1%	1%
<b>Scenario 3 - Varied Base Charge and reduced Volume Charge*</b>	<b>\$14,861.72</b>	<b>\$20,677.56</b>	<b>\$21,668.92</b>	<b>\$22,434.68</b>	<b>\$23,126.48</b>	<b>\$23,884.64</b>	<b>\$24,289.32</b>	<b>\$24,837.44</b>	<b>\$25,073.04</b>	<b>\$25,476.12</b>	<b>\$26,029.80</b>
<b>% Increase - Total Annual Bill</b>		39%	5%	4%	3%	3%	2%	2%	1%	2%	2%

\*Base Monthly Charge varies for users with Large Meters



## Draft Rates Based on the Preferred Rate Structure

---

Municipality of Central Elgin



# Impacts of Preferred Rate Structure on Residential and Non-Residential Water Bills

- The following provides the water bill based on the preferred rate structure and calculated rates (Scenario 3)

**Average Annual Residential Customer Water Bill - Based on 5/8" Meter and 147 m<sup>3</sup> of usage  
Preferred Rate Structure - Varied Base Charge by Meter Size and Reduction in Volume Charge**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Minimum Monthly Base Rate (incl. 7m <sup>3</sup> )	\$18.50	\$27.38	\$32.31	\$36.19	\$39.81	\$43.79	\$48.17	\$52.99	\$57.23	\$61.81	\$66.75
Constant Rate	\$3.40	\$3.33	\$3.26	\$3.19	\$3.13	\$3.07	\$2.82	\$2.59	\$2.28	\$2.01	\$1.77
<b>Annual Base Rate Bill</b>	<b>\$222.00</b>	<b>\$328.56</b>	<b>\$387.72</b>	<b>\$434.28</b>	<b>\$477.72</b>	<b>\$525.48</b>	<b>\$578.04</b>	<b>\$635.88</b>	<b>\$686.76</b>	<b>\$741.72</b>	<b>\$801.00</b>
Volume	147	147	147	147	147	147	147	147	147	147	147
<b>Annual Volume Bill</b>	<b>\$499.80</b>	<b>\$489.51</b>	<b>\$479.22</b>	<b>\$468.93</b>	<b>\$460.11</b>	<b>\$451.29</b>	<b>\$414.54</b>	<b>\$380.73</b>	<b>\$335.16</b>	<b>\$295.47</b>	<b>\$260.19</b>
<b>Total Annual Bill</b>	<b>\$721.80</b>	<b>\$818.07</b>	<b>\$866.94</b>	<b>\$903.21</b>	<b>\$937.83</b>	<b>\$976.77</b>	<b>\$992.58</b>	<b>\$1,016.61</b>	<b>\$1,021.92</b>	<b>\$1,037.19</b>	<b>\$1,061.19</b>
<b>% Increase - Total Annual Bill</b>		13%	6%	4%	4%	4%	2%	2%	1%	1%	2%

**Average Annual Non-Residential Customer Water Bill - Based on 3" Meter and 500 m<sup>3</sup> of usage  
Preferred Rate Structure - Varied Base Charge by Meter Size and Reduction in Volume Charge**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Minimum Monthly Base Rate (incl. 7m <sup>3</sup> )	\$18.50	\$148.65	\$175.41	\$196.46	\$216.11	\$237.72	\$261.49	\$287.64	\$310.65	\$335.50	\$362.34
Constant Rate	\$3.40	\$3.33	\$3.26	\$3.19	\$3.13	\$3.07	\$2.82	\$2.59	\$2.28	\$2.01	\$1.77
<b>Annual Base Rate Bill</b>	<b>\$222.00</b>	<b>\$1,783.80</b>	<b>\$2,104.92</b>	<b>\$2,357.52</b>	<b>\$2,593.32</b>	<b>\$2,852.64</b>	<b>\$3,137.88</b>	<b>\$3,451.68</b>	<b>\$3,727.80</b>	<b>\$4,026.00</b>	<b>\$4,348.08</b>
Volume	500	500	500	500	500	500	500	500	500	500	500
<b>Annual Volume Bill</b>	<b>\$1,700.00</b>	<b>\$1,665.00</b>	<b>\$1,630.00</b>	<b>\$1,595.00</b>	<b>\$1,565.00</b>	<b>\$1,535.00</b>	<b>\$1,410.00</b>	<b>\$1,295.00</b>	<b>\$1,140.00</b>	<b>\$1,005.00</b>	<b>\$885.00</b>
<b>Total Annual Bill</b>	<b>\$1,922.00</b>	<b>\$3,448.80</b>	<b>\$3,734.92</b>	<b>\$3,952.52</b>	<b>\$4,158.32</b>	<b>\$4,387.64</b>	<b>\$4,547.88</b>	<b>\$4,746.68</b>	<b>\$4,867.80</b>	<b>\$5,031.00</b>	<b>\$5,233.08</b>
<b>% Increase - Total Annual Bill</b>		79%	8%	6%	5%	6%	4%	4%	3%	3%	4%

# Wastewater Recap – Impacts on Residential and Non-Residential Wastewater Bills



- Wastewater rate scenarios have not been undertaken
- Hold the current 2020 volume rate constant
- Base charge to fund all net expenditures

**Annual Customer Wastewater Bill - Based on 147 m³ of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$22.06	\$30.88	\$35.51	\$40.84	\$42.88	\$43.74	\$44.18	\$44.62	\$45.07	\$45.52	\$45.98
Constant Rate	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85
<b>Annual Base Rate Bill</b>	<b>\$264.72</b>	<b>\$370.56</b>	<b>\$426.12</b>	<b>\$490.08</b>	<b>\$514.56</b>	<b>\$524.88</b>	<b>\$530.16</b>	<b>\$535.44</b>	<b>\$540.84</b>	<b>\$546.24</b>	<b>\$551.76</b>
Volume	147	147	147	147	147	147	147	147	147	147	147
<b>Annual Volume Bill</b>	<b>\$418.95</b>										
<b>Total Annual Bill</b>	<b>\$683.67</b>	<b>\$789.51</b>	<b>\$845.07</b>	<b>\$909.03</b>	<b>\$933.51</b>	<b>\$943.83</b>	<b>\$949.11</b>	<b>\$954.39</b>	<b>\$959.79</b>	<b>\$965.19</b>	<b>\$970.71</b>
<b>%Increase - Total Annual Bill</b>		15%	7%	8%	3%	1%	1%	1%	1%	1%	1%

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Monthly Base Rate	\$22.06	\$30.88	\$35.51	\$40.84	\$42.88	\$43.74	\$44.18	\$44.62	\$45.07	\$45.52	\$45.98
Constant Rate	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85	\$2.85
<b>Annual Base Rate Bill</b>	<b>\$264.72</b>	<b>\$370.56</b>	<b>\$426.12</b>	<b>\$490.08</b>	<b>\$514.56</b>	<b>\$524.88</b>	<b>\$530.16</b>	<b>\$535.44</b>	<b>\$540.84</b>	<b>\$546.24</b>	<b>\$551.76</b>
Volume	500	500	500	500	500	500	500	500	500	500	500
<b>Annual Volume Bill</b>	<b>\$1,425.00</b>										
<b>Total Annual Bill</b>	<b>\$1,689.72</b>	<b>\$1,795.56</b>	<b>\$1,851.12</b>	<b>\$1,915.08</b>	<b>\$1,939.56</b>	<b>\$1,949.88</b>	<b>\$1,955.16</b>	<b>\$1,960.44</b>	<b>\$1,965.84</b>	<b>\$1,971.24</b>	<b>\$1,976.76</b>
<b>%Increase - Total Annual Bill</b>		6%	3%	3%	1%	1%	0.3%	0.3%	0.3%	0.3%	0.3%

# Summary of Combined Water and Wastewater Bills



## Annual Residential Customer Water and Wastewater Bill - Based on 5/8" Meter and 147 m<sup>3</sup> of usage

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water and Wastewater Annual Bill	\$1,405.47	\$1,607.58	\$1,712.01	\$1,812.24	\$1,871.34	\$1,920.60	\$1,941.69	\$1,971.00	\$1,981.71	\$2,002.38	\$2,031.90
% Increase - Total Annual Bill		14%	6%	6%	3%	3%	1%	2%	1%	1%	1%

\*Base Monthly Charge varies for users with Large Meters

## Annual Non-Residential Customer Water and Wastewater Bill - Based on 3" Meter and 500 m<sup>3</sup> of usage

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Water and Wastewater Annual Bill	\$3,611.72	\$5,244.36	\$5,586.04	\$5,867.60	\$6,097.88	\$6,337.52	\$6,503.04	\$6,707.12	\$6,833.64	\$7,002.24	\$7,209.84
% Increase - Total Annual Bill		45%	7%	5%	4%	4%	3%	3%	2%	2%	3%

\*Base Monthly Charge varies for users with Large Meters

# Example Central Elgin Non-Residential Customers Annual Bill



- The following provides the combined water and wastewater bill for a few of Central Elgin's non-res customers based on the preferred rate structure and calculated rates

**Average Annual OPP Station Water and Wastewater Bill - Based on 2" Meter and 2200 m<sup>3</sup> of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Water and Wastewater Annual Bill</b>	<b>\$14,236.72</b>	<b>\$15,068.88</b>	<b>\$15,168.80</b>	<b>\$15,234.88</b>	<b>\$15,273.04</b>	<b>\$15,311.56</b>	<b>\$14,943.12</b>	<b>\$14,636.32</b>	<b>\$14,130.36</b>	<b>\$13,726.08</b>	<b>\$13,402.68</b>
<b>% Increase - Total Annual Bill</b>		6%	1%	0%	0%	0%	-2%	-2%	-3%	-3%	-2%

\*Base Monthly Charge varies for users with Large Meters

**Average Annual Elgin County Facility Water and Wastewater Bill - Based on 2" Meter and 2500 m<sup>3</sup> of usage**

Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Water and Wastewater Annual Bill</b>	<b>\$16,111.72</b>	<b>\$16,922.88</b>	<b>\$17,001.80</b>	<b>\$17,046.88</b>	<b>\$17,067.04</b>	<b>\$17,087.56</b>	<b>\$16,644.12</b>	<b>\$16,268.32</b>	<b>\$15,669.36</b>	<b>\$15,184.08</b>	<b>\$14,788.68</b>
<b>% Increase - Total Annual Bill</b>		5%	0%	0%	0%	0%	-3%	-2%	-4%	-3%	-3%

\*Base Monthly Charge varies for users with Large Meters

**Average Annual SJHC - North Water and Wastewater Bill - Based on 6" Meter and 2300 m<sup>3</sup> of usage**

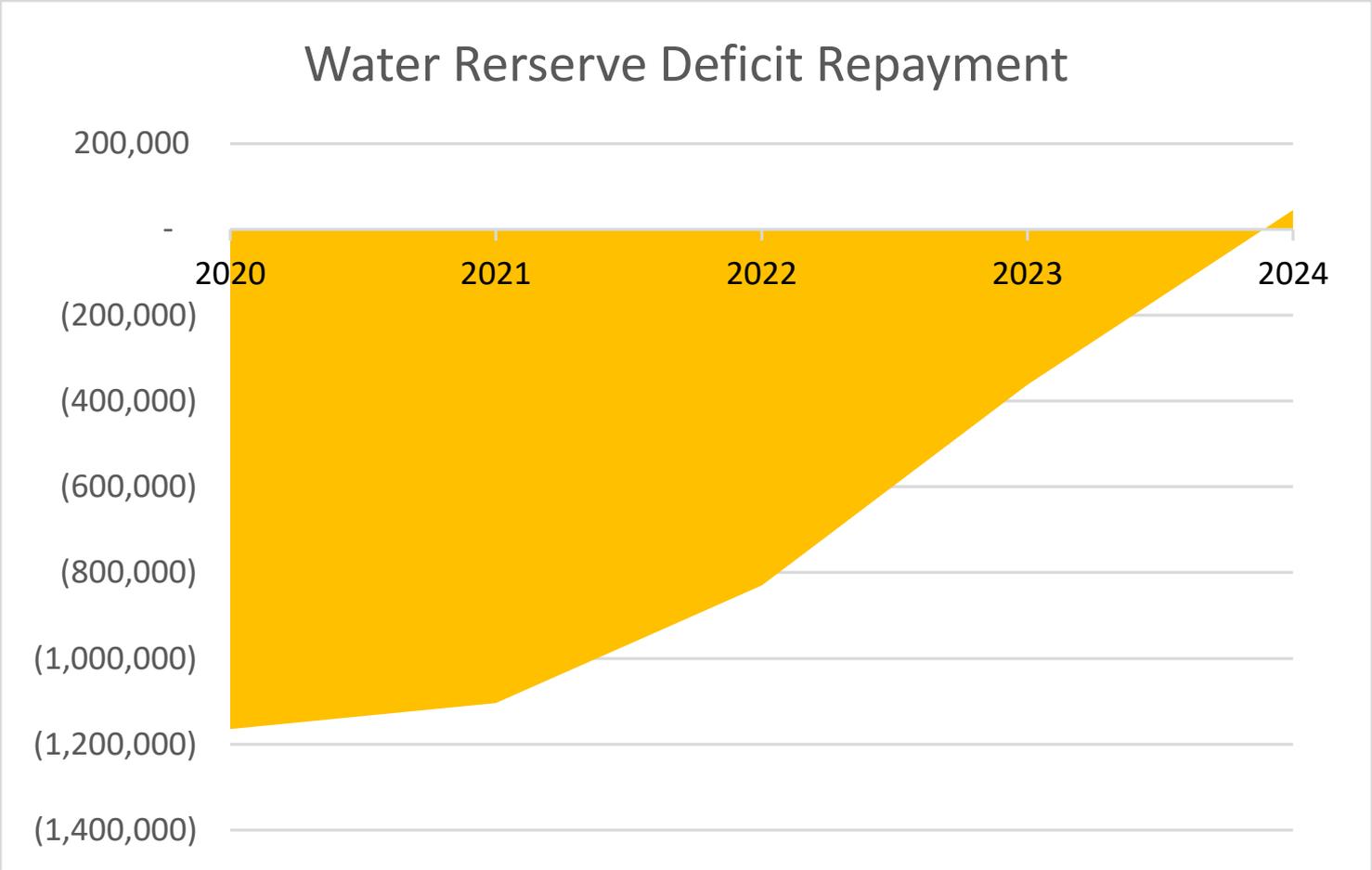
Description	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Water and Wastewater Annual Bill</b>	<b>\$14,861.72</b>	<b>\$20,677.56</b>	<b>\$21,668.92</b>	<b>\$22,434.68</b>	<b>\$23,126.48</b>	<b>\$23,884.64</b>	<b>\$24,289.32</b>	<b>\$24,837.44</b>	<b>\$25,073.04</b>	<b>\$25,476.12</b>	<b>\$26,029.80</b>
<b>% Increase - Total Annual Bill</b>		39%	5%	4%	3%	3%	2%	2%	1%	2%	2%

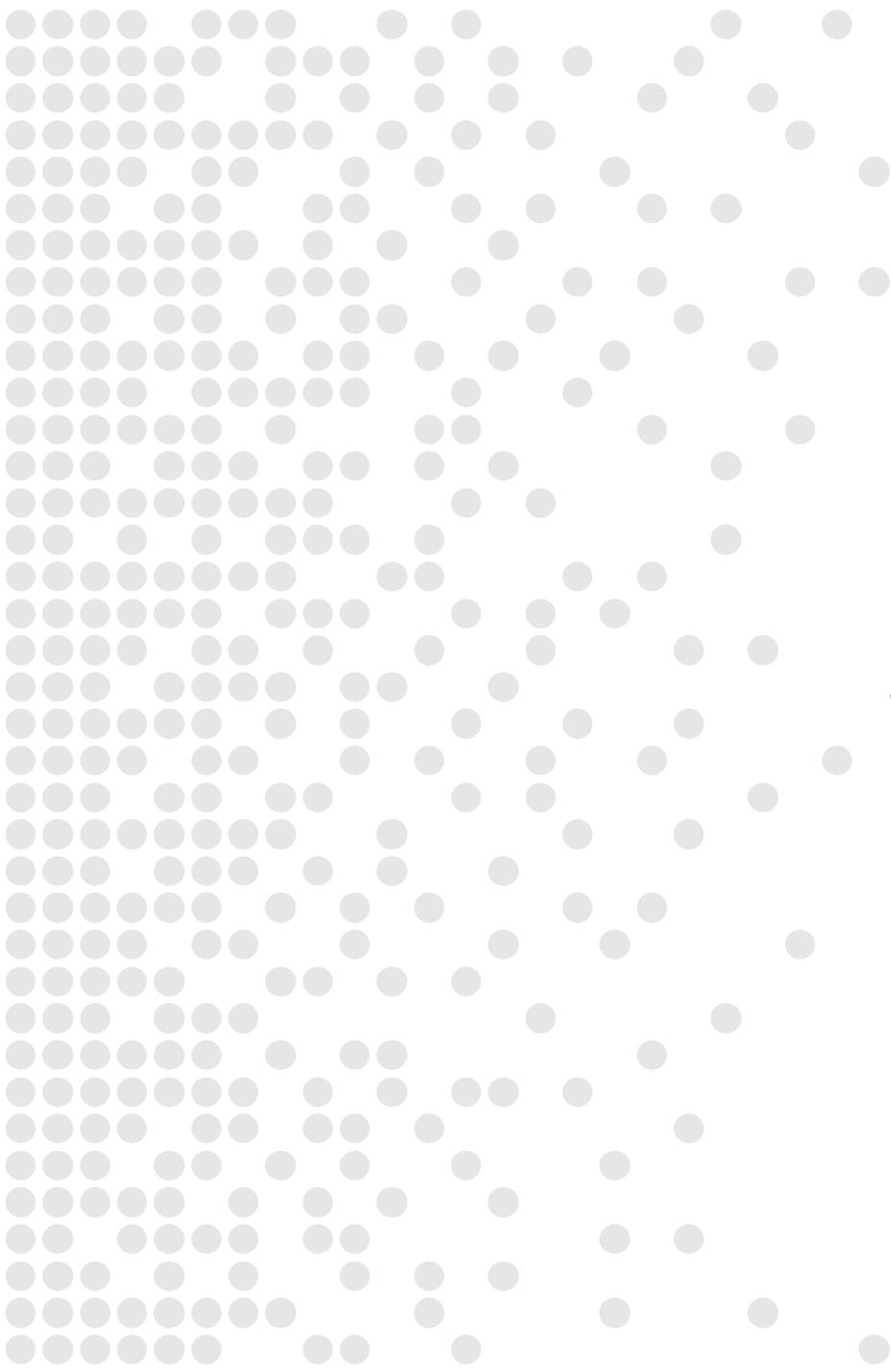
\*Base Monthly Charge varies for users with Large Meters

# Impact on Water Deficit Repayment



- The anticipated increases to the Water Bill will allow for a repayment of the Water Deficit in **2024**.





# Factors Resulting in Calculated Rates and Observations

---

Municipality of Central Elgin



## Factors Resulting in Calculated Rates

- Deficit in the water reserve of \$1.2 million by end of 2020 (to be paid off by 2024)
- Payment to St. Thomas for Central Elgin water customers:
  - For 2020 repaying last few years outstanding amounts owing
  - For 2021 expense is estimated at \$386,700 – for future years, amounts will be indexed and are increased to reflect growth in customers.
- Payment to St. Thomas for Central Elgin wastewater customers:
  - Repaying last few years outstanding amounts owing
  - For 2021 expense is estimated at \$266,000 – for future years, amounts will be indexed and are increased to reflect growth in customers.
- For both water and wastewater, the capital program is requiring additional reserve transfers and debt funding.
- Above inflation increases to primary and secondary water systems.

# Observations

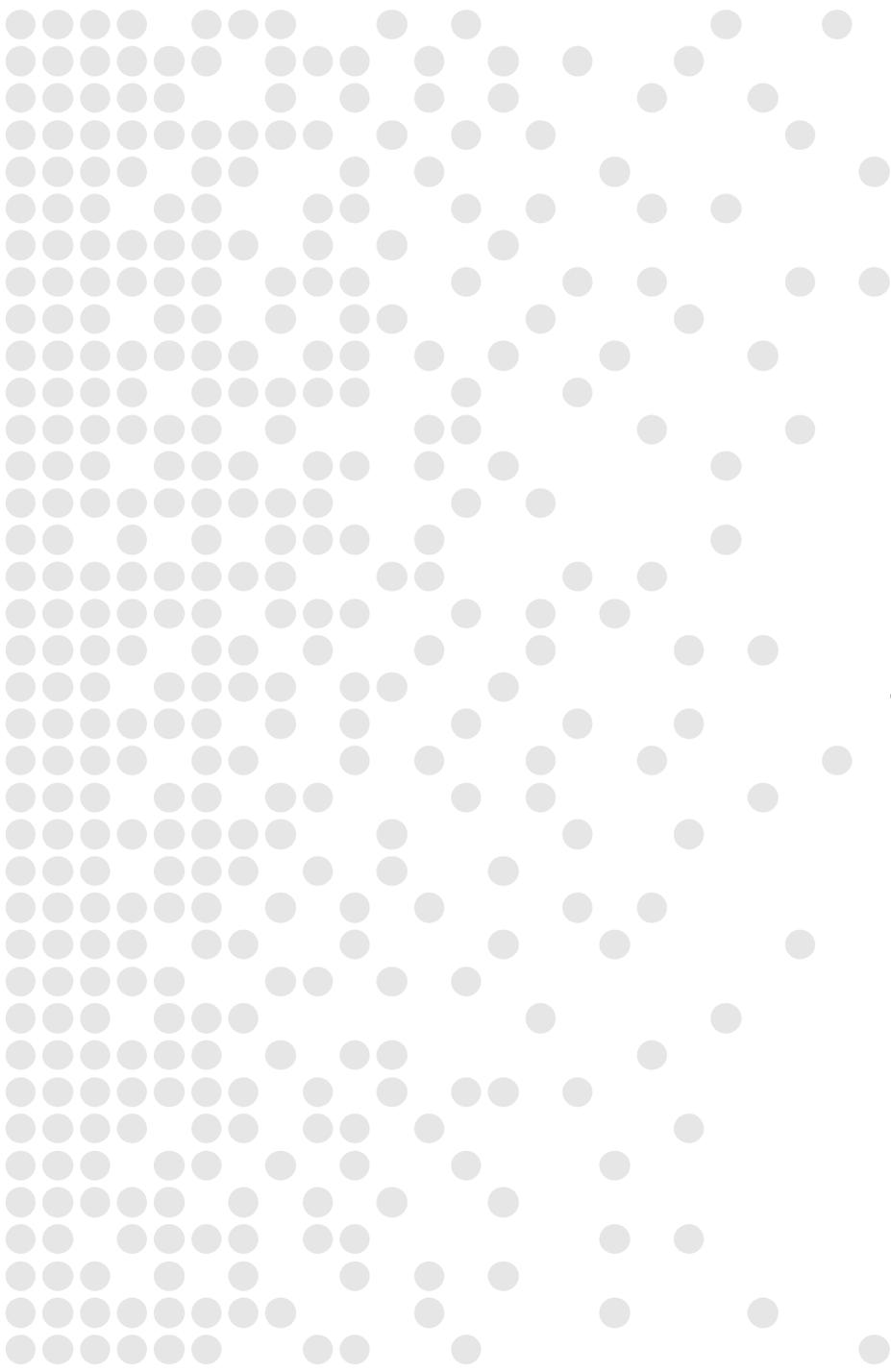


- Significant debt required for water and wastewater growth related projects of \$11.3 million - could be minimized by:
  - Negotiating with developers to prepay their D.C. or have them construct the capital works with a future recovery
  - Update the D.C. Study to reflect the revised growth-related capital costs
  - Delaying Projects
- Non-Growth-Related water and wastewater Debentures of \$3.77 million - could be minimized by:
  - Increasing the Reserve Transfers (i.e. further rate increases)
  - Delaying Projects



# Observations – On Preferred Water Rate Structure

- Rate structures that rely more heavily on base monthly charge revenue vs. volume rate revenue shift more cost recovery from non-residential to residential users.
- Rate structures that rely more on volume rate revenue shift more cost recovery to non-residential users.
- Base charges that vary by meter size provides additional revenue from non-residential and multi-residential users.
- Higher base charges, provide for greater guaranteed revenue as less reliance volumes which may be subject to seasonal variation.



# Comparison of Rates

---

Municipality of Central Elgin

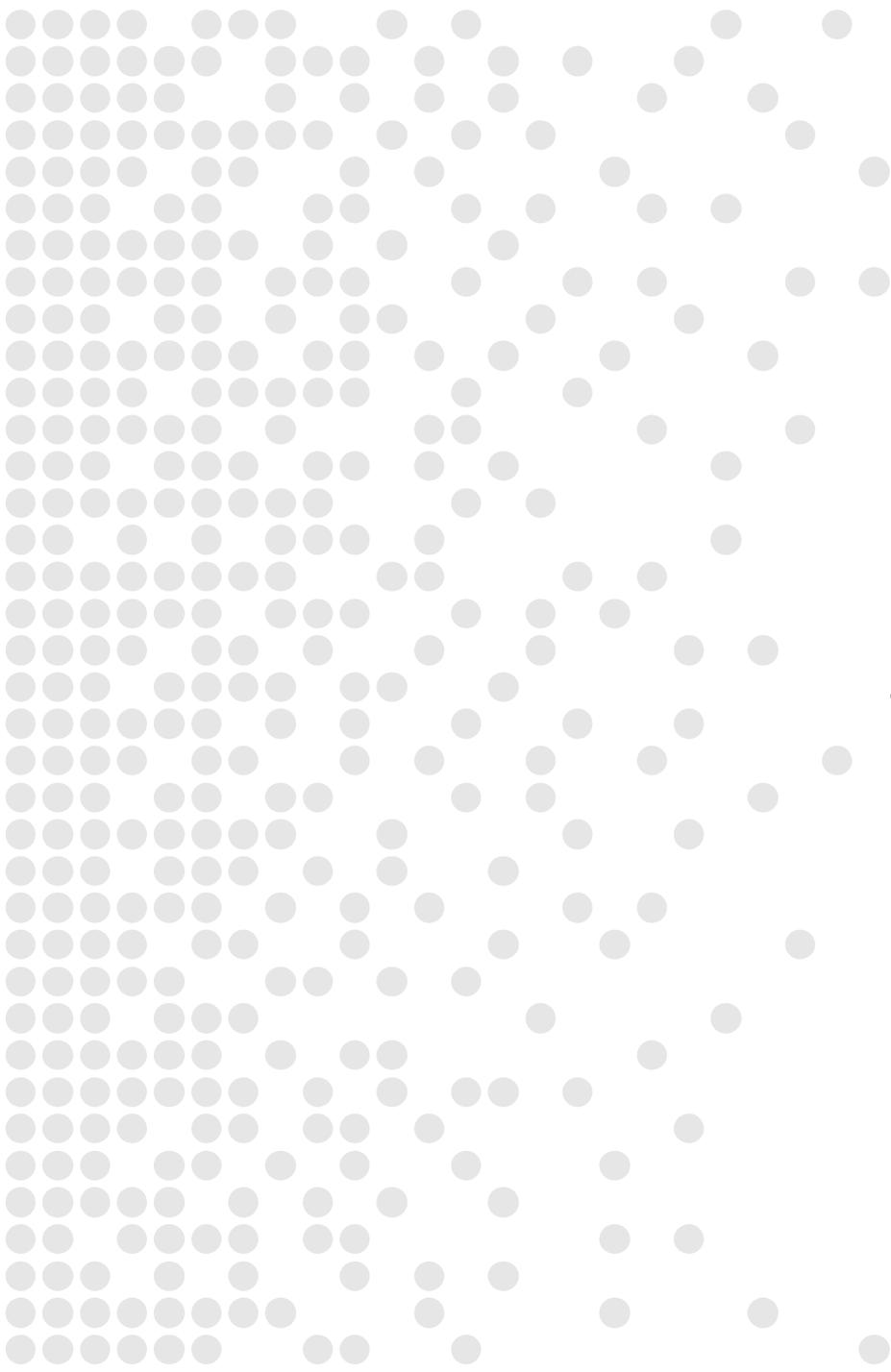
# Comparison of Residential Annual Water and Wastewater Bill (based on 147 m<sup>3</sup>)



As of January 4, 2021

Municipality	Water	Wastewater	Total	Rank
Malahide	\$ 940	\$ 1,081	\$ 2,020	1
Bayham - Richmond	\$ 1,216	\$ 686	\$ 1,903	2
Central Elgin (Calculated 2021)	\$ 818	\$ 790	\$ 1,608	3
Thames Centre	\$ 698	\$ 848	\$ 1,546	4
Bayham - Port Burwell - Vienna	\$ 740	\$ 686	\$ 1,427	5
Central Elgin (Current)	\$ 722	\$ 684	\$ 1,405	6
Middlesex Centre	\$ 657	\$ 746	\$ 1,403	7
Lambton Shores*	\$ 603	\$ 651	\$ 1,253	8
Southwold	\$ 556	\$ 535	\$ 1,091	9
Southwest Middlesex*	\$ 617	\$ 357	\$ 974	10
Dutton Dunwich	\$ 538	\$ 404	\$ 942	11
St. Thomas	\$ 506	\$ 344	\$ 850	12
Aylmer*	\$ 430	\$ 253	\$ 683	13
London	\$ 372	\$ 301	\$ 673	14

\* denotes 2020 rates



## Next Steps and Discussion

---

Municipality of Central Elgin



## Next Steps

1. Council to approve moving to a monthly billing cycle for water and wastewater
2. Council to approve moving to a new water rate structure
3. Council to approve the water and wastewater 2021 Rates and Rate Forecast



# Public Comment