Water and Wastewater By-Law Update

City Council Meeting: June 27, 2023

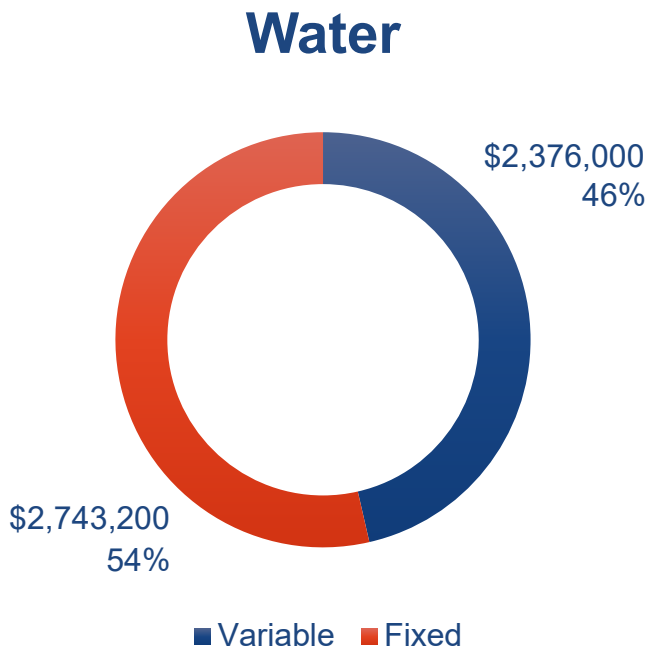
PORT COLBORNE

Topics

- Revenue analytics
- Multi-residential
- Lake/Canal draw
- Developable vacant land

No rate changes to a single-family home are proposed in this report

Rate Revenue Analytics



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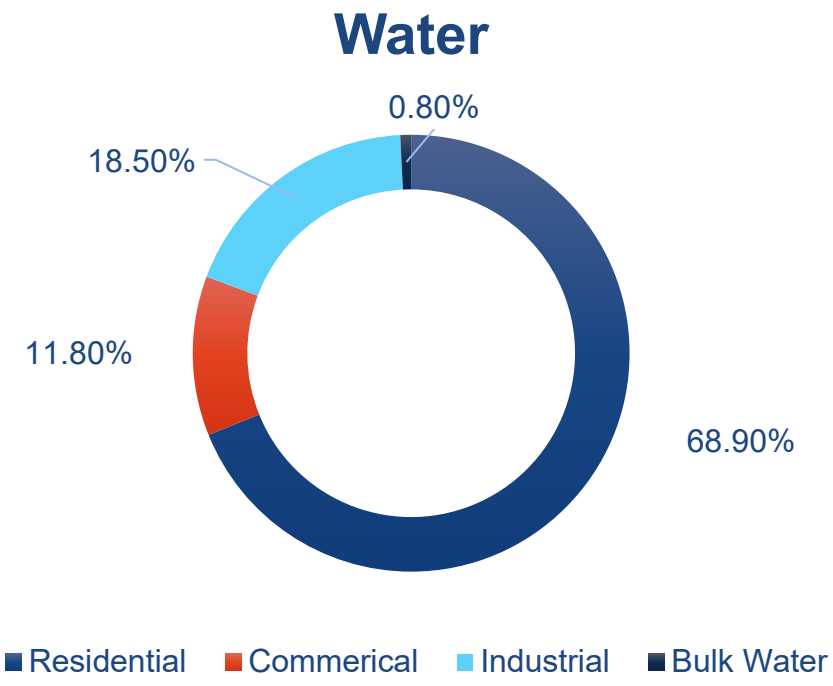
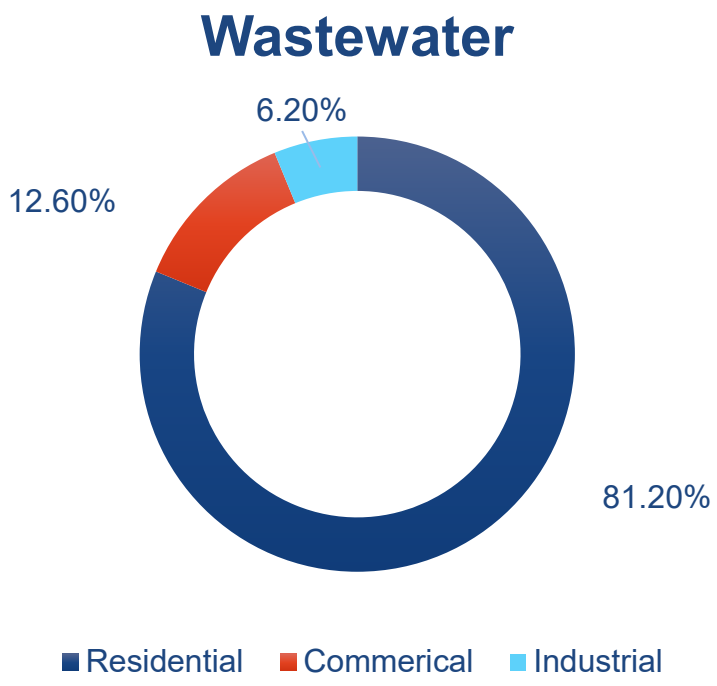
Rate Revenue Analytics





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Rate Revenue Analytics

Municipality	2022 Residential 200 m3, 5/8"	2022 Commercial 10,000 m3, 2"	2022 Industrial 30,000 m3, 3"	2022 Industrial 100,000 m3, 4"	2022 Industrial 500,000 m3, 6"
Port Colborne	$ 1,644	$ 35,942	$ 111,005	$ 338,689	$ 1,625,724
Niagara - BMA Study					
Min	$ 1,026	$ 29,946	$ 85,996	$ 275,742	$ 1,341,567
Max	$ 1,644	$ 48,978	$ 147,919	$ 483,350	$ 2,395,750
Average	$ 1,251	$ 37,548	$ 112,308	$ 362,399	$ 1,783,467
Median	$ 1,220	$ 36,313	$ 110,916	$ 355,252	$ 1,753,645
Port Colborne is …	Above Average	Below Average	Below Average	Below Average	Below Average
Ontario - BMA Study - 132 Municipalities					
Min	$ 625	$ 11,857	$ 27,057	$ 107,204	$ 527,352
Max	$ 2,844	$ 108,936	$ 318,360	$ 1,029,912	$ 5,066,112
Average	$ 1,238	$ 40,907	$ 118,201	$ 384,240	$ 1,898,088
Median	NA	NA	NA	NA	NA
Port Colborne is …	Above Average	Below Average	Below Average	Below Average	Below Average

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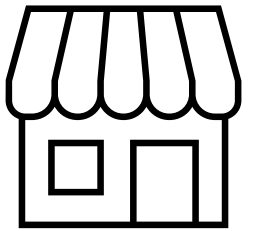
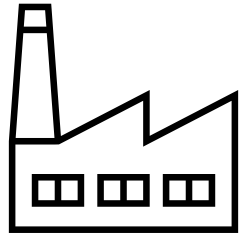
Rate By-law Updates

- Goal is to shrink the residential gap
- Keys to shrinking the gap:
  - Upgrading infrastructure
  - Building storm sewer

- **Billing equity**
  - Water and wastewater by-law

- Three updates to consider





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Update #1 – Multi-residential

Observation

- Infrastructure is important to any residential unit and is a shared cost among all residential units.
- The city's wastewater charge is approximately 80% based on inflow and infiltration, not usage.

Billing Concern

- Water and wastewater fixed charges are based on meter size and not units/number of people served.
- A subdivision with a "meter pit" but multiple residential dwellings under the current bylaw would only pay one fixed meter rate for the "meter pit" and not per dwelling.

Equity

- The billing model, as currently designed, has a disproportionate amount of the water and wastewater charged on a single-family home vs. multi-residential units.

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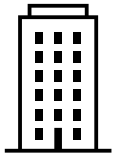
Update #1 – Multi-residential

	Annualized Water Current	Wastewater Current
	$410 (FC) + 193 m3 * 1.412 (V) = $682	$1,002 (FC) = $1,002
	($410 (FC) + $607 (V)) / 5 units = $203	($738 (FC) + 811 (V)) / 5 units = $310

FC = Fixed Charge
V = Variable Charge
V (Water) = 86 m3 * 5 units * 1.412 = $607
V (Wastewater) = 86 m3 * 5 units * 1.886 = $811

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Update #1 – Multi-residential

Considerations and Requirements

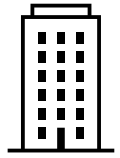
- Equity is important
- Multi-residential should receive some benefit for intensification leading to less infrastructure requirements

Update #1 – Multi-residential

Proposal

- Modelled from the City of Welland
- Multi-residential properties would pay 50% of the fixed charge of a single-family property if they have => 3 units (Welland charges at 70% to 86%)
  - In 2022 a multi-residential unit is estimated to use approximately 45% (on average) or 70% (of the median) of the water of a single-family home in the city.
  - A 50% minimum floor is recommended:
    - Providing a +/- for fluctuations in water usage.
    - Ensures a duplex property is charged no less than a single-family property
- Duplex properties were not included in the multi-residential proposal to provide simplicity to the billing process given their charge is the same as a single-family with the 50% minimum floor.
- Working from the average (50% minimum floor) vs. median provides continued incentive for intensification developments within the City.

Update #1 – Multi-residential

	Water Proposed	Wastewater Proposed
	$410 (FC) + 272 (V) = $682	$1,002 (FC) = $1,002
	($1,025 (FC) + 607 (V)) / 5 units = $326	$2,255 (FC) / 5 units = $501

FC = Fixed Charge
V = Variable Charge
V (Water) = 86 m3 * 5 units * 1.412 = $607
V (Wastewater) = 86 m3 * 5 units * 1.886 = $811

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Update #1 – Multi-residential

Impact

- 1,133 units classified as multi-residential with >= 3 units
- Estimated impact is
  - Water $119,600
  - Wastewater $362,900
- It is recommended this change becomes effective January 1, 2024.
- Where a tenant relationship exists, legislation around rent increases exist.

Update #2 – Lake/Canal Draw

Observation

- The City has legacy agreements and/or practices with two companies (potential for more) that have the ability to draw water from the lake/canal.

Billing Concern

- A company with the ability to draw water could pull significant water from the lake/canal and push that through the wastewater system.
- Since the City bills wastewater on water usage, there is a disconnect in the billing driver.

Update #2 – Lake/Canal Draw

Agreements and/or Practice

- Companies have been billed based on wastewater usage either through actual metering or modelling pump activity.

Equity

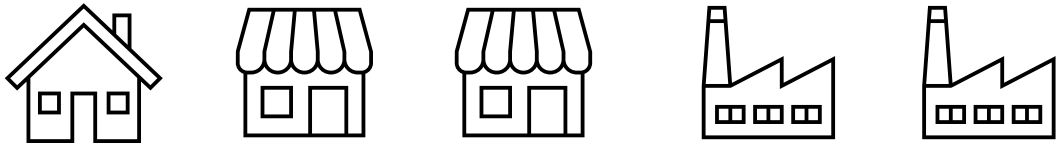
When wastewater usage falls below a company's water usage.

The equity issue occurs because:

- Everyone else is billed on water usage
- Most companies would have wastewater usage below water usage so all other companies would want the same treatment.

Wastewater Billing Scenario– By-law

Wastewater is billed based on water usage, unless they are in a fixed group … residential <= 19 mm (3/4”)



Usage X Rate

	Residential	Commercial 1	Commercial 2	Industrial 1	Industrial 2	Total
Water Usage (m3) (note: 1 m3 = 1,000 litres)		200	400	400	600	1600
Water Meter Size	19 mm (3/4")	19 mm (3/4")	25 mm (1")	50 mm (2")	75 mm (3")	
Water Meter Factor (universal calculation that recognizes volume and pressure)	NA	1	1.4	2.9	11	
Fixed	$ 1,002	$ 738	$ 1,033	$ 2,140	$ 8,118	$ 13,032
Variable (1.886 per m3)		$ 377	$ 754	$ 754	$ 1,132	$ 3,018
Total	$ 1,002	$ 1,115	$ 1,788	$ 2,895	$ 9,250	$ 16,050

Fixed cost growth recognizes the cost of building, maintaining and replacing the larger infrastructure to accommodate the larger volume and pressure.

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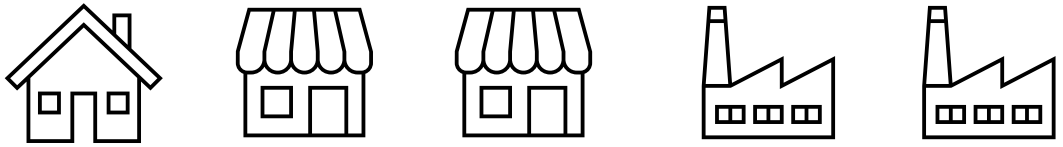
Wastewater Billing Scenarios – Exception

Wastewater billing same as “By-law” scenario, except 1 industrial property billed on wastewater vs. water



A 50% reduction

Impact is the variable rate changes to 3.772 vs. 1.886 to achieve the same budget as system costs haven’t changed. Assumes for illustrative purposes every property wastewater was ½ of water usage

	Residential	Commercial 1	Commercial 2	Industrial 1	Industrial 2	Total
Water Usage (m3)					0	0
Wastewater Usage (m3)		100	200	200	300	800
(note: 1 m3 = 1,000 litres)						
Water Meter Size	19 mm (3/4")	19 mm (3/4")	25 mm (1")	50 mm (2")	75 mm (3")	
Water Meter Factor	NA	1	1.4	2.9	11	
(universal calculation that recognizes volume and pressure)						
Fixed	$ 1,002	$ 738	$ 1,033	$ 2,140	$ 8,118	$ 13,032
Variable (3.772 per m3)		$ 377	$ 754	$ 754	$ 1,132	$ 3,018
Total	$ 1,002	$ 1,115	$ 1,788	$ 2,895	$ 9,250	$ 16,050
Fixed cost growth recognizes the cost of building, maintaining and replacing the larger infrastructure to accommodate the larger volume and pressure.						

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No change in total figures from original By-law, given assumption stated on wastewater usage. Problem is we would need to build infrastructure to monitor everyone's wastewater (that cost is not factored above)

Wastewater Billing Scenarios – Exception

In Summary

- If all companies pay for wastewater based on water usage, all companies pay equitably
- If select companies pay based on wastewater usage and it is less than water usage, the select companies pay proportionally less than all other companies
- If all companies pay for wastewater based on wastewater usage, all companies pay equitably

Costly as it would require additional meters at each property to essentially get to the same result as billing on water that is done at other municipalities.

Update #2 – Lake/Canal Draw

Considerations and Requirements

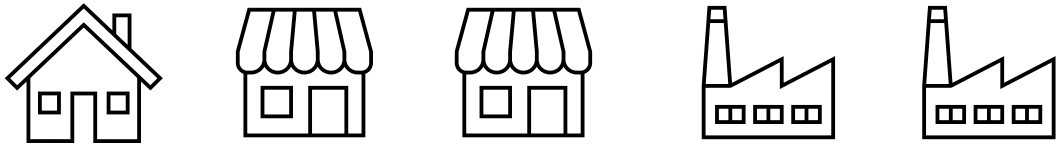
- Billing companies on the same method is necessary
- Addressing potential anomalies is equally important
  - Wastewater billing models in the municipal environment is predicated on wastewater usage being less than water usage due to consumption
  - Companies that can pull water from the Lake/Canal could have more wastewater usage than water usage

Proposal

- Companies that can or have had the ability to pull water from the Lake/Canal to be billed based on water usage through normal billing practices with the following caveats:
  - Wastewater activity to be monitored
  - Water usage vs. wastewater usage to be reconciled annually on the December billing
  - If wastewater usage is higher than water usage the volume difference will be billed on the December bill at the prevailing wastewater rate
  - If water usage is higher than wastewater no volume differential change on the December bill will occur as none will be necessary

Wastewater Billing Scenarios – Exception

Wastewater billing same as “By-law” scenario, except 1 industrial property billed on wastewater vs. water



Wastewater usage is 300 m3 vs. water usage of 600 m3. A 50% reduction

Impact is the variable rate changes to 2.3215 vs. 1.886 to achieve the same budget as system costs haven’t changed. Given the small scenario sample this change is only to illustrate the variable rate would go up as costs would be pushed to other properties

	Residential	Commercial 1	Commercial 2	Industrial 1	Industrial 2	Total
Water Usage (m3)		200	400	400	0	1000
Wastewater Usage (m3)					300	300
(note: 1 m3 = 1,000 litres)						
Water Meter Size	19 mm (3/4")	19 mm (3/4")	25 mm (1")	50 mm (2")	75 mm (3")	
Water Meter Factor	NA	1	1.4	2.9	11	
(universal calculation that recognizes volume and pressure)						
Fixed	$ 1,002	$ 738	$ 1,033	$ 2,140	$ 8,118	$ 13,032
Variable (2.3215 per m3)		$ 464	$ 929	$ 929	$ 696	$ 3,018
Total	$ 1,002	$ 1,202	$ 1,962	$ 3,069	$ 8,815	$ 16,050
Fixed cost growth recognizes the cost of building, maintaining and replacing the larger infrastructure to accommodate the larger volume and pressure.						

Paying more

Paying less

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Update #2 – Lake/Canal Draw

Impact

- Maintains equity while protecting the wastewater system from excessive use
- Both companies have historically paid close to what they would pay if billed by water usage although they have been billed by wastewater usage
- Recent figures at one company identify wastewater usage is now trending lower than water usage. This will result in a refund.
- This clarification in billing will ensure companies are treated the same with a safeguard for excessive usage of the wastewater system

Update #3 – Vacant Land Fixed Charges

Observation

- Vacant land fixed charges for developable land abutting water and wastewater systems exist for the following reasons:
  - Land value is enhanced
  - Assets in the ground begin depreciating once built
  - Community desire for the land to be developed

Billing Concern

- Councillors have identified they thought both water and wastewater fixed charges are charged. Historically only wastewater has been charged.
- The wastewater fixed charge is the residential rate which does not vary dependent on property classification (residential, commercial, industrial).
- The current bylaw provides no mechanism to prorate the vacant land fixed charges.

Equity

- Lack of variability in vacant land fixed charges by property type.
- Potential for a double charge once a property moves from undeveloped to developed.
- Undevelopable property is technically subject to the current vacant land fixed charges.

Update #3 – Vacant Land Fixed Charges

Considerations and Requirements

- Equity is important
- Water and wastewater systems should be treated the same
- If a property goes from undeveloped to developed within a year a property owner should not be billed for the vacant land fixed charged and regular water and wastewater fixed charges.

Proposal

- Effective immediately, all developable vacant land directly abutting the water distribution and/or wastewater collection system to be charged the fixed service charge for water and wastewater through the property tax billing system unless the property is assessed undevelopable by the City's Planning department. (unless otherwise stated – water not to be charged until 2024)
- Effective January 1, 2024, the fixed service charge applied to developable vacant land to be charged based on property classification (next slide)
- Effective immediately, for any period of duplicate payment, which may occur due to timing of billings as a property moves from undeveloped to developed, the City will refund the developable vacant land fixed service charge.

Update #3 – Vacant Land Fixed Charges

Proposal

Property Type	Water	Wastewater
Residential	$410.10	$1,002.38
Commercial/Institutional	$1,189.27	$2,140.28
Industrial	$4,511.03	$8,118.29

Impact

- 187 properties (167 residential, 8 commercial/institutional, 12 industrial)
- Estimated impact is
  - Water $114,100
  - Wastewater $57,000
- To support the transition, it is recommended this change becomes effective January 1, 2024.

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Recommendation

- Multi-residential
- Lake/Canal Draw
- Developable Vacant Land

No rate changes to a single-family home are proposed in this report

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