

2020

Water & Wastewater Budget

Council Chambers
December 4, 2019

1

Presentation Agenda

- 1) Service Delivery Overview
- 2) Budget: Inputs
- 3) Budget: Rate Setting
- 4) Risks & Opportunities
- 5) Conclusion
- 6) Presentation Questions

1) Service Delivery Overview

- Customers: 13,460 (95% residential + 5% ICI)
- System: 276 km watermains & 196 km sanitary sewers plus various appurtenances such as valves, hydrants, flushing and sampling units and maintenance chambers
- Safe Drinking Water Act
- Legislated Full Cost Recovery
- Reliable System (i.e., availability, flow & pressure)
- Quality of Life
 - Eliminate basement flooding/sewer backups
 - Protection of natural environment
 - Cost control



1) Service Delivery Overview

Council Responsibilities

Municipal Officials legislative responsibilities:

- “Taking Care of Your Drinking Water – A Guide For Members Of Municipal Councils”



- “Standard of Care” presentation for all municipal Councils was coordinated by the Region in early 2019

1) Service Delivery Overview

Departmental Responsibilities

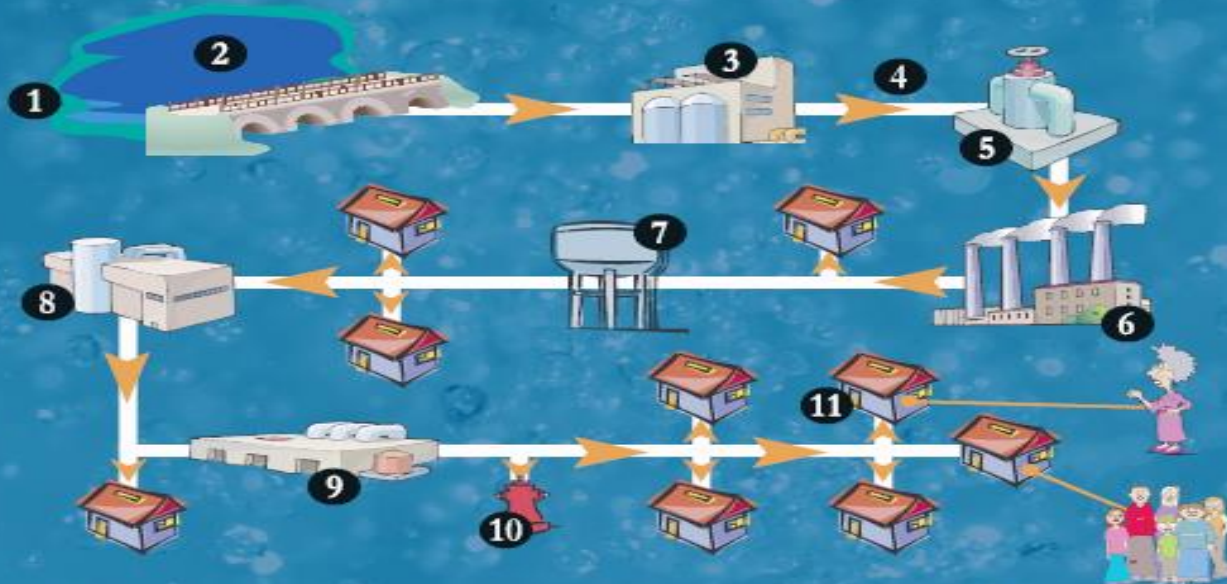
Corporate & Community Services

Billing & Collections, Customer Service, Digital Services

Infrastructure Services

Engineering, Capital, Operations & Maintenance,
Compliance, Customer Service

TOWN OF FORT ERIE Cost to Deliver



- | | | |
|--------------------------------------|-----------------------------|----------------------------|
| 1. Watershed Management | 5. Pressure Reducing Valves | 9. Re-Chlorination Station |
| 2. Raw Water Quality Monitoring | 6. Industrial Park | 10. Fire Hydrants |
| 3. Rosehill Water Treatment Facility | 7. Reservoirs | 11. Your Home |
| 4. Treated Water Quality Monitoring | 8. Pump Stations | |

The costs to deliver water and sewers services and maintain the piping networks to both Grandma and the Smith family of six are equal. Fixed cost recovery is spread equally among all customers.

1) Service Delivery Overview

Operational Commitments

- ✓ **Legislative Compliance**
 - Conformance and Maintenance of Accreditation
- ✓ **Reduce Infiltration to Sanitary Sewer System (\$4M problem)**
 - Capital investment - Investigation, repair, replacement, monitoring
 - Programs: Annual Target of Exflow Areas (e.g., Lateral replacement, disconnections)
 - Capture new development issues before they start

1) Service Delivery Overview

Operational Commitments

- ✓ **Leverage Funding Opportunities**
 - Pursue operating (e.g., CSO) & capital (e.g., OCIF) programs
 - Grants Oversight Team
- ✓ **Reduce 'Non-Revenue' Water Volumes (\$1M problem)**
 - Capital Investment - Watermain Replacement.
 - Completion of Water Meter Exchange program.
 - Ongoing focus on Leak detection, tracking and operation & maintenance programs.

1) Service Delivery Overview

Operational Challenges

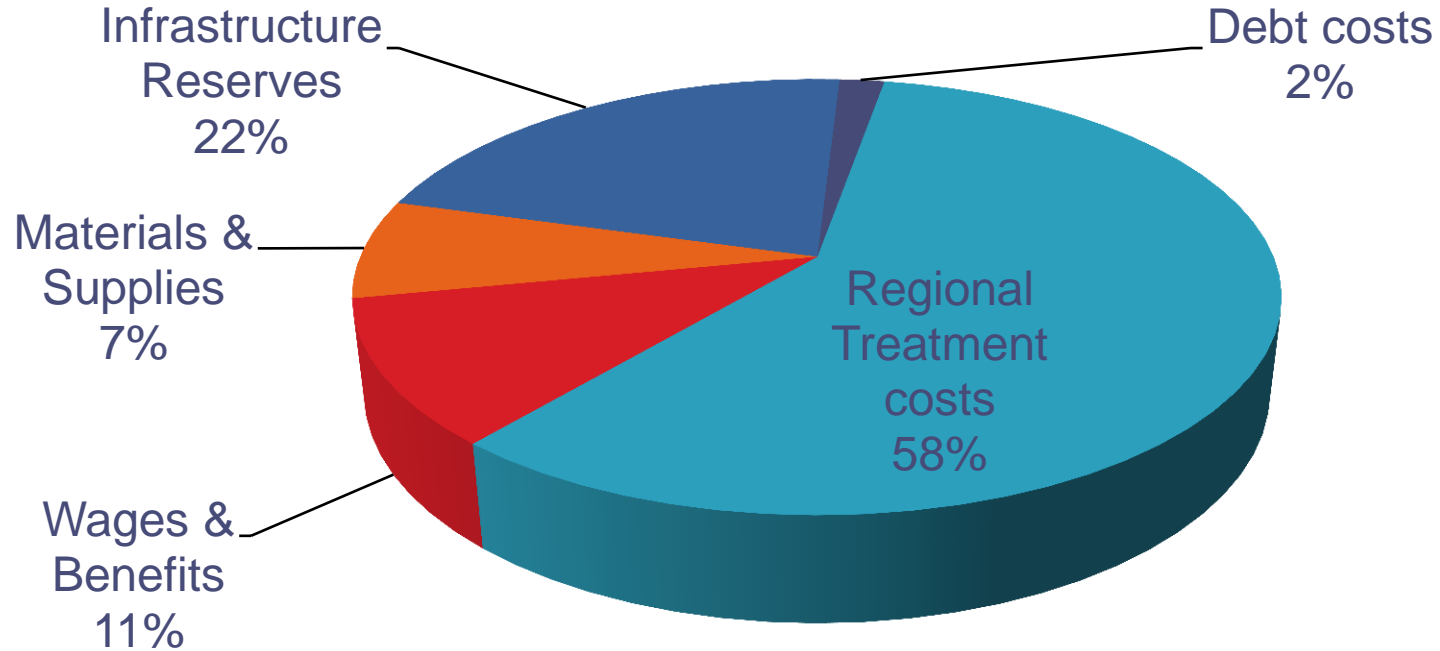
- Recruitments & aging workforce (expected retirements)
- 40 Watermain breaks in 2018: down compared to historical average of 50; tracking well in 2019 to be below average
- Legislative requirements for new water projects
- Commercial and industrial meter replacement program; remaining residential meters
- Outstanding work orders re: meter & billing issues

2) Budget: Inputs Overview

Customer Rates are a function of:

1. Expenses & Other Revenues
 - a) Regional treatment costs and volume estimates
 - b) Town expenses (i.e., operations, billing) and other revenues
 - c) Financing & Transfers
2. Rate Setting
 - a) Customer volumes
 - b) Town's billing methodology

2) Budget: Inputs Total Expenses



Total: \$19,607,470

2) Budget: Inputs

Regional Treatment Costs

Increase in budget of \$440,071 or 2.33%

58% of Town's budget:

- Status of Region rates: Budget Review Committee Nov 28/19 and Council By-law Dec/19.
 - Proposed net budget increase of **5.15%** (Water budget increase of **3.8%** and Wastewater increase of **6.0%**).
- FE water volume share: down **2.8%**.
- FE wastewater volume share: down **0.1%**.
- 2021 to 2025 forecasts include **5.15%** increase annually.

2) Budget: Inputs

Regional Treatment Costs

No change in Regional billing formulas:

- **Water** charge
 - 75% variable & 25% fixed
- **Wastewater** charge
 - 100% fixed apportioned on prior 3 year average volumes.
 - 2020 reconciliation adjustment for 2018 actual flows is a credit of **\$189,542** as volumes were lower than estimated.
 - 2021 estimate is small credit based on 2019 YTD actual flows.

2) Budget: Inputs Expenses & Other Revenue

Increase in budget of \$15,499 or 0.07%

- Increased other revenue (e.g., grants, fees).
- Increased wages & benefits.
- Increased overhead costs (e.g., fleet, legal, customer service).
- Reduction in debt charges (no matured debt available to be repurposed as capital contributions).
- Increased materials & services, including a focus on reducing non-revenue water and extraneous wastewater flows.

2) Budget: Inputs

Program Expenses

- Water Emergency Relief Fund (WERF): Maintain at **\$15,000** for low income families.
- Seniors Utility Relief Fund (SURF): Maintain at **\$21,000** for low income seniors.
- Other programs noted in the Operations section such as the Extraneous Flow lateral replacement program.

2) Budget: Inputs

Financing & Transfers: Reserves

- Rate Stabilization Reserves are key to mitigating annual increases due to:
 - Unknown Regional budget increases.
 - Unknown proportionate share changes.
 - Unknown future treated volumes (e.g., 2021 adjustment expected to maintain a small credit).

2) Budget: Inputs Financing & Transfers

Increase in budget of \$464,343 or 2.45%

- 2020 contribution from Water & Sewer Rate Stabilization Reserves of **\$225,000** to use available balances & realize projected 2019 surplus.
- Increased costs to transfer reconciliation credit of **\$189,542** to Sewer Rate Stabilization Reserve; Overall charge decrease from 2019 of **\$517,243**.
- Increase in capital contributions of **\$50,000** from 2017 Water Master Plan recommendations and **\$100,000** from 2019 Wastewater Master Plan recommendations.

2) Budget: Inputs

Capital

- Capital Budget presented to Council November 6, 2019.
- New 2020 Water & Wastewater capital assets include operating costs of **\$6,307**.
- Master Servicing Plans identify priority replacement
 - Water Master Plan: Completed June/17 [IS-17-2017].
 - Wastewater Master Plan: Completed May/19 [IS-15-2019].
 - Asset Management Plan: Completed July/19 [IS-21-2019] and proposed funding strategies based on annual Life Cycle Costs.
 - Development Charges: Funding for capital projects. Alternatively, reduced DCs place considerable pressure on utility rates.

2) Budget: Inputs

Capital Reserve Funding

Infrastructure Reserve Funding: proposed 2020 changes

- Water: \$50K strategic + \$100K from Water Meter funding. \$2,307 for new amortization.
- Wastewater: \$100K strategic. \$4,000 for new asset amortization.
- Inflationary: \$77,100 represents 2.1% CPI increase over 2019 base contribution.
- No repurposed debt [2018: \$328,157]

Reserve	2019 Actual	2020 Strat + new Amort	2020 Inflation	2020 Proposed	2020 Target contribution
Water Capital	\$2,043,642	\$152,307	\$42,920	\$2,238,869	\$2,258,869
Wastewater Capital*	1,627,500	104,000	34,180	1,765,680	1,935,680
TOTAL	\$3,671,142	\$256,307	\$77,100	\$4,004,549	\$4,193,961
% of Target	88%			95%	100%

* Based on condition assessment gap identified in AMP

2) Budget: Inputs

Revenue & Expense Summary

Proposed 2020 Changes by Revenue & Expense Type	\$ Increase/ (Decrease)	% Increase/ (Decrease)
2019 Rate Revenue	\$18,931,399	
Net Revenue	(49,500)	(0.27%)
Net Expense	64,999	0.34%
Regional Treatment Costs	(77,172)	(0.40%)
Financing & Transfers (net of funded reconciliations)	464,343	2.45%
2020 Budget change	\$402,670	2.13%
2020 Rate Revenue	\$19,334,069	

2) Budget: Inputs

Revenue & Expense Comparison

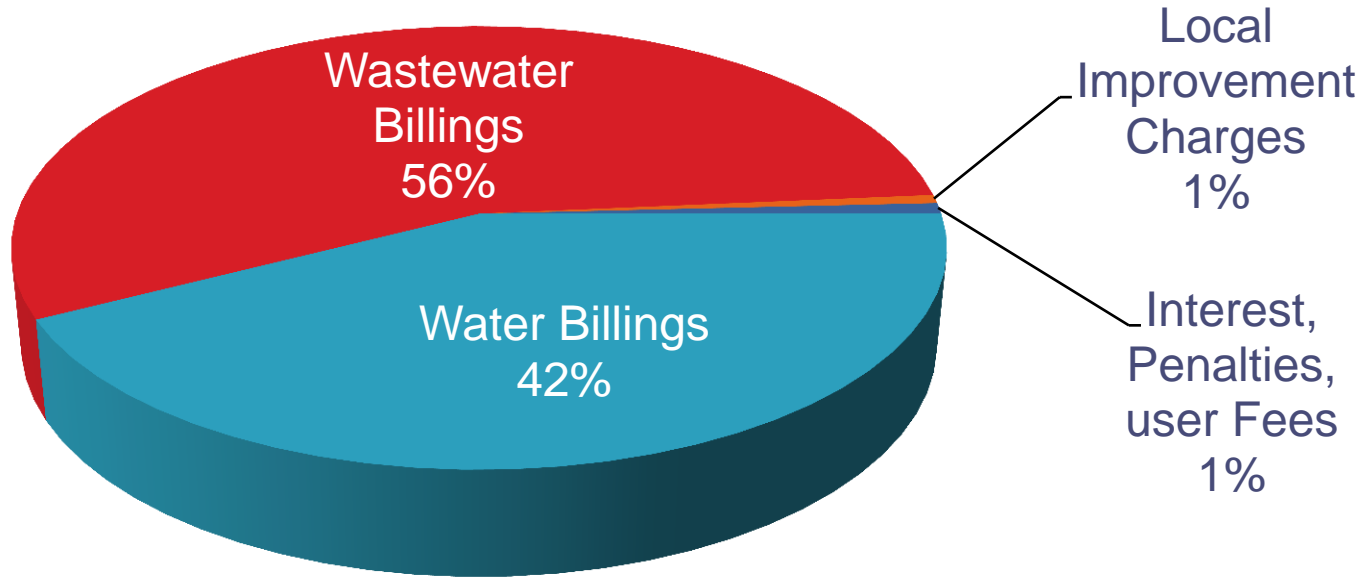
	\$ 2019 Budget	\$ 2020 Budget	\$ Increase/ (decrease)	% Increase/ (decrease) of Total	% Increase/ (decrease) over Prior
Prior Rate Revenue			\$18,931,399		
Town net cost	7,718,714	7,691,313	(27,401)	(0.14%)	(0.35%)
Region net cost (excl. reconciliation)	11,212,685	11,642,756	430,071	2.27%	3.84%
Budget increase			\$402,670	2.13%	
Final Rate Revenue	\$18,931,399	\$19,334,069	\$19,334,069		

3) Budget: Rate Setting

1. Customer Consumption volumes
 - Billed water volumes are expected to increase due to more accurate metering and reduced unauthorized losses.
 - Adjustments to water & wastewater volumes based on 2019 budget & projections.
2. Town's billing methodology
 - Base charge vs. volumetric charge.
 - Municipal trends.

3) Budget: Rate Setting

Total Revenue



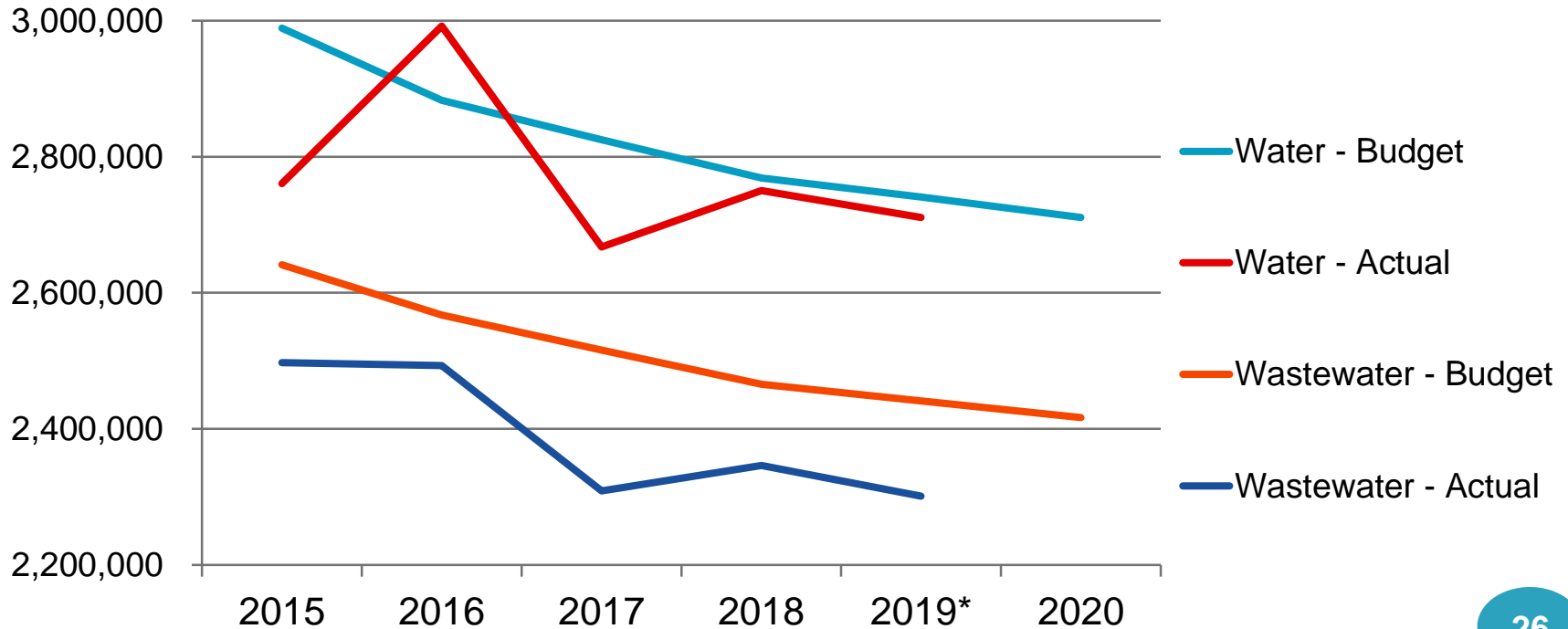
Total: \$19,607,470

3) Budget: Rate Setting Volume Assumptions

- Water Consumption: Volume of 2.71M m³ in rate calc
 - Decreased 30,150 m³ or 1.1% over 2019 volumes.
 - Narrow gap with additional 2020 volume reduction.
 - At 3-yr average. Below 5-yr average by 2.4%.
- Wastewater Treatment: Volume of 2.42M m³ in rate calc
 - Decrease 24,410 m³ or 1.0% over 2019 volumes.
 - Narrow gap with additional 2020 volume reduction.
 - Over 5-yr average by 1.1%.

3) Budget: Rate Setting

Volume Budget vs. Actual (m3)



3) Budget: Rate Setting Billing Methodology

- Balancing act between base & volumetric
- Priority to mitigate revenue shortfalls due to decline in volumes
- Making progress toward objective of:
 - Charging proportionately less to base. Volumetric weighting gives homeowner more control over cost.
 - Decreasing risk of revenue shortfalls through better consumption estimates.

3) Budget: Rate Setting

Base charge

Base charge for stability and sufficiency:

- 2020 combined monthly base of **\$66.74**.
- Increase of 1.0% over 2019 \$66.33.

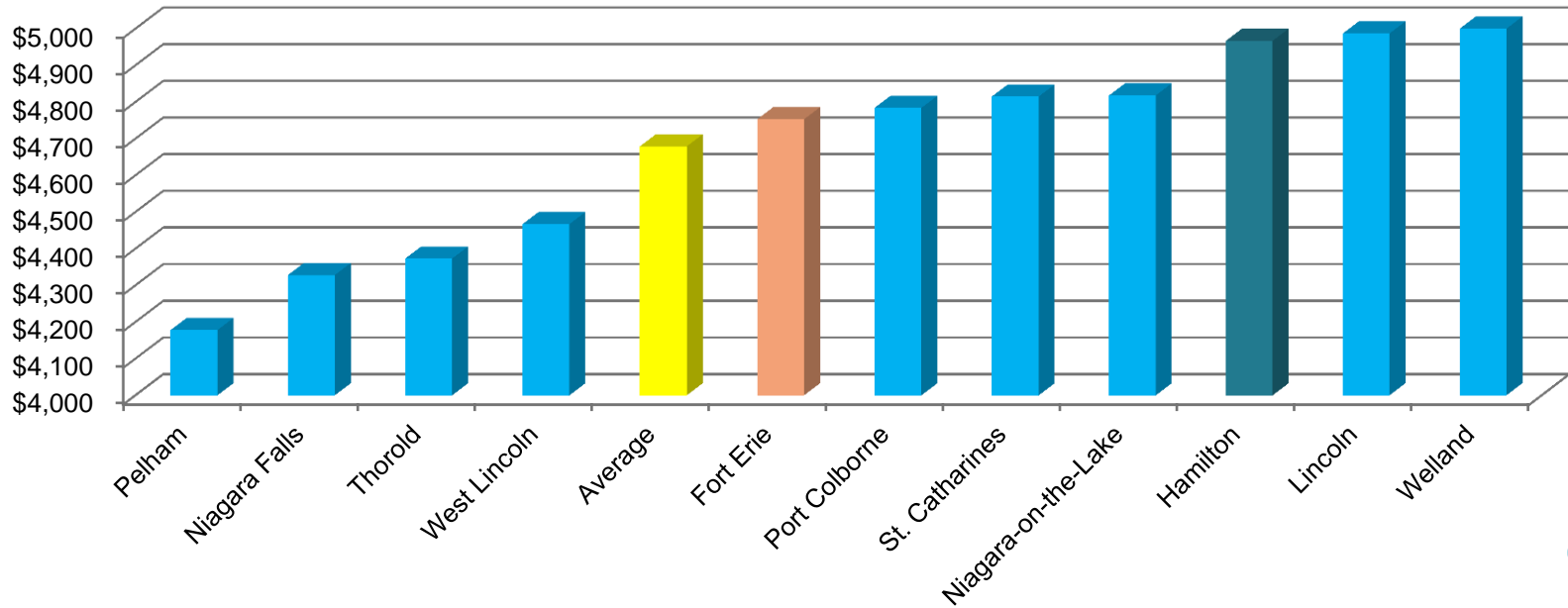
Niagara base average is 42% of monthly bill

- 2019 was 55%; 2020 is 54%.
- Fort Erie is 2nd highest in Niagara. Challenged due to one of lowest customers per km of infrastructure.
- 5-yr forecasted decrease to 50%.

3) Budget: Rate Setting

Municipal Burden Comparison

2018 FIR



3) Budget: Rate Setting

Volumetric rate

Volumetric Rates for **control & conservation**:

- **\$3.347/m³** 2019 current combined rate
- **\$3.475/m³** 2020 proposed combined rate

Niagara combined volumetric rate for 2019:

- Average 2019 of **\$3.206/m³**, min of **\$2.318/m³**, max of **\$4.789/m³**.
- TOFE 2020 of **\$3.475/m³** above 2019 avg.

3) Budget: Rate Setting

Water (residential 3/4" meter)

- Water Base Charge

- = ((Region costs + net Town costs) x 51%) / #accts / 12 months
- = ((\$3,668,845 + \$4,660,267) x 51%) / 14k / 12
- = \$25.27/mos

- Water Unit Charge:

- = (Total costs - Base charge revenue) / volume
- = (\$8,329,112 - \$4,263,008) / 2.71M m³
- = \$1.500/m³

3) Budget: Rate Setting

Wastewater

- Wastewater Base Charge

- = ((Region costs + net Town costs) x 57%) / #accts / 12 months
- = (($\$7,784,369 + \$3,220,588$) x 57%) / 12k / 12
- = $\$41.47/\text{mos}$

- Wastewater Unit Charge:

- = (Total costs - Base charge revenue) / volume
- = ($\$11,004,957 - \$6,232,223$) / 2.42M m³
- = $\$1.975/\text{m}^3$

3) Budget: Rate Setting

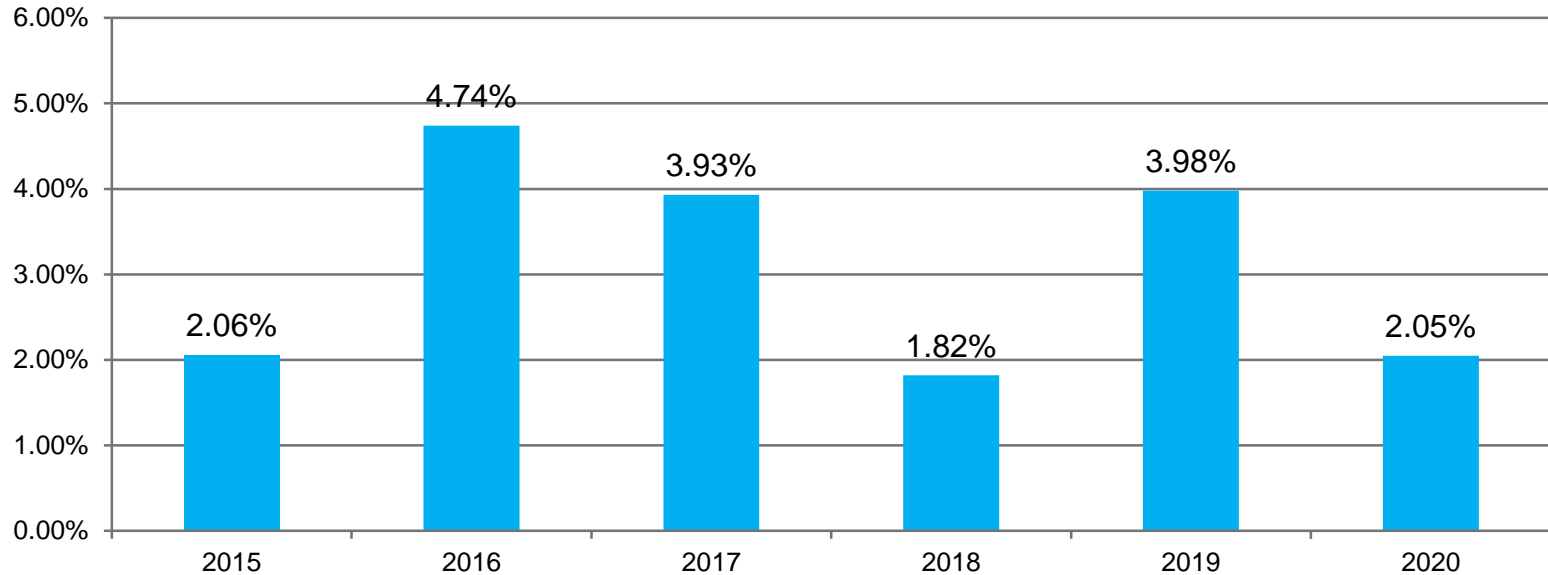
	2019	2020	% increase/ (decrease)	\$ increase/ (decrease)
Water/month	\$49.32	\$49.27	(0.10%)	(\$0.05)
Wastewater/month	\$70.56	\$73.07	3.56%	\$2.51
Monthly total	\$119.88	\$122.34	2.05%	\$2.46
Annual total	\$1,438	\$1,468	2.05%	\$30

Household cost of \$4.02 per day
Based on average consumption of 16m³/month

3) Budget: Rate Setting

Rate History & Forecast

Water & Wastewater bill increase by year



Forecast for 2021-2025 is approx. **4.05%** per year and includes Region increase of **5.15%** per year

4) Risks & Opportunities

Risks

- **Weather:** impacts consumption trends & maintenance costs.
- **Volumetric vs. base rate:** revenue risk from volume variances.
- **Wastewater treatment adjustment:** impact on rate reserve.
- **Consumer shifts:** impacts from changes to large consumers.
- **Billing frequency:** monthly based on AWWA best practice & assists with leak detection & customer cash flow.
- **Legislative compliance:** DWQMS extended to wastewater.
- **Reserves:** < provincial average. Targeting improvements.
- **Comparisons:** relatively high Residential & low Non-Res rates.

4) Risks & Opportunities

Opportunities

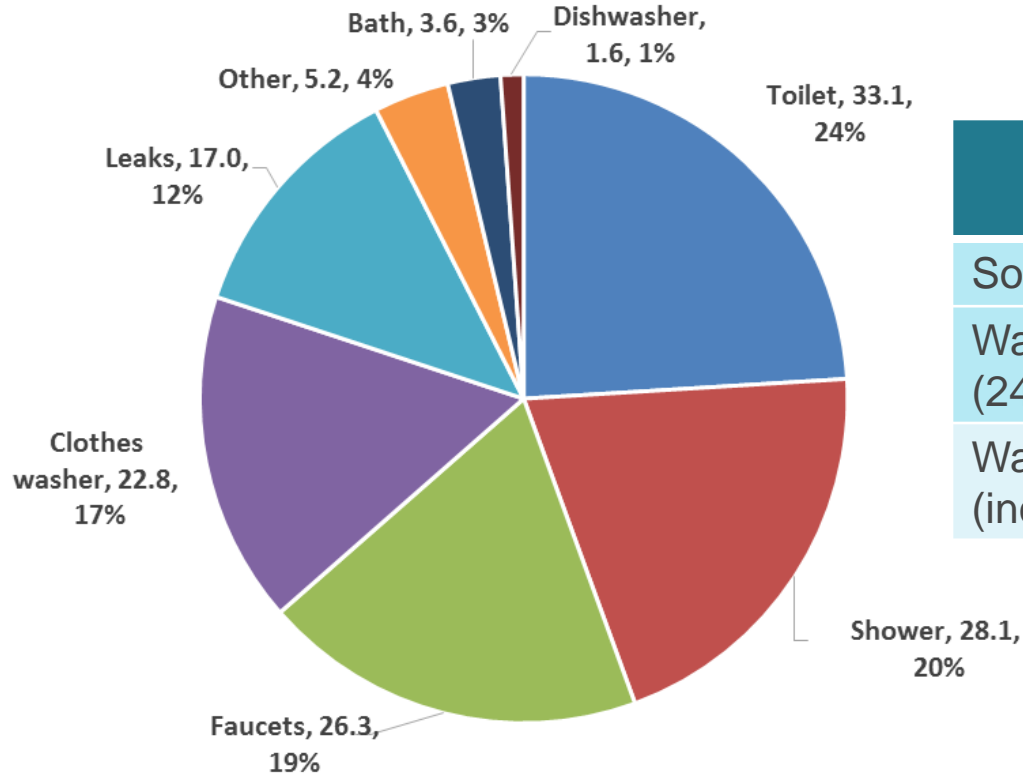
- **Rate adjustments:** \$203,000 budget change = 1% rate change.
- **Grant funding:** applying for available programs (CSO, OCIF).
- **Meter change out program:** reduced meter reading costs, improved customer service & accuracy.
- **Extraneous flows:** continued reduction of extraneous flows

Example photo: sump pump connection to sewer lateral →



4) Risks & Opportunities

Typical Use & Comparisons



	\$ per litre	Cost multiplier
Soda	\$0.9800	280x
Water - bottled (24x500ml case)	\$0.2500	70x
Water - Town (incl wastewater)	\$0.0035	N/a

5) Conclusion

Summary

- **Costs:** Town decrease of 0.14% + Region increase of 2.27% for a combined budget increase of 2.13%.
- **Rates:** When distributed over estimated volumes for 2020, the net increase for a household with 16m³/month is **2.05%**.
- **Alternatives:** Approval of final rate structure by upcoming Regional Council will determine impact and any opportunities.
- **Resources:** Extensive information, including 19 “Frequently Asked Questions”, available on Town website.
- **Recommendation:** as noted in CBC-02-2020.

5) Conclusion

Next Steps

Water & Wastewater Budget & User Fees:

- Jan 20 By-laws: W&WW and Fees

General Levy Budget:

- Jan 22 Budget-in-Committee: Town Levy #1 with Library reports & presentation
- Jan 29 Budget-in-Committee: Town Levy #2 (if necessary)
- Feb 10 By-laws: Levy & General Capital (timing depends on above)

6) Presentation Questions



Please refer to Council Report No. CBC-02-2020 for further information