

**Loyalist Township Staff Report
Water and Sewer Charges and
Rates - Results of Developer and
Public Consultations
Regular Council Meeting**



Report Number: SR- 1171

Meeting:	Regular Council - 15 Oct 2019
Type:	Regular Council
Department:	Business Services Department
Report Date:	October 9, 2019
Author:	Brianne MacNevin
Attachments:	Yes
Number of Attachments:	5

Executive Summary:

Through the Township's procurement process, an agreement was entered with Hemson Consulting Ltd. ("Hemson") to complete a water financial plan in order to meet its drinking water license requirement under Ontario regulation 453/07. Additionally, Hemson will complete a wastewater financial plan and is currently in the process of reviewing connection charges to fund growth capital, and user rates to fund capital replacement and operating activities.

Hemson presented draft findings, connection charges, and user rates to Council at a special meeting held on July 29, 2019. Resolution SP.2019.09 was passed to bring the results of the connection charges to developers, and two out of four scenarios presented for user rates to public for consultation. The purpose of this report is to communicate and document findings from the consultation process to Council.

Recommendation:

That the report from the Senior Financial Analyst, dated October 9, 2019 re: Water and Sewer Charges and Rates - Results of Developer and Public Consultations, be received and the following be adopted:

1. That Council direct staff to bring a draft by-law on November 12, 2019 reflecting the proposed connection charges;
 2. That Council direct staff to bring two draft by-laws on November 12, 2019 for consideration, reflecting the following user rate scenarios brought to public consult:
 - a) Status quo 60:40 fixed/consumption cost recovery with annual increases outlined in the scenario:
 - 6% from 2020 to 2023
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- 4% from 2024 to 2025
 - 3% from 2026 to 2029; **OR**
- b) Status quo 60:40 fixed/consumption cost recovery with annual increases as directed; **AND**
- c) Transitional 40:60 fixed/consumption cost recovery over the planning period with annual combined increases/decreases as outlined in the scenario:
- Decrease in combined water and sewer fixed rate of 30% in 2020 and subsequent increases of 6% in 2021 and 2022, 5% in 2023, 4% in 2024, 3% in 2025, 2% in 2026, and 1% in 2027 to 2029;
 - Increases in combined water and sewer consumption rate of 69% in 2020, 6% from 2021 to 2024, and 4% from 2025 to 2029
3. That Council approve the following changes to the upcoming draft connection charge by-law:
- Exemption for intensification of new housing through a building permit application for the construction of a second residential unit on an existing lot where a principal residential dwelling has already been established; and
 - Exemption for intensification of existing housing through creation of one or two additional residential dwelling units in an existing residential dwelling where the total gross floor area of the additional unit does not exceed the gross floor area of the existing dwelling unit;
4. That Council approve the following changes to the upcoming draft user rate by-law:
- Multi-residential units shall be charged the fixed portion of the rate by the number of equivalent residential units (“ERUs”) to correlate with consumption patterns, rather than number of units.

Background:

As part of the rate study that occurred in 2011, Council directed that each of the water and sewer rates be harmonized across the three communities of Amherstview, Bath, and Odessa as well as the Harewood and Brooklands subdivisions. Both connection charges and user rates are imposed under the *Municipal Act*.

Connection charges:

Connection charges (also referred to as impost charges) are calculated based on past capital growth projects to be recovered, and projects forecasted over the planning period in correlation with the population and growth study. As such, these charges will vary from year to year. This fee is made up of two components: the growth portion and club fee. The growth component is intended to cover all capital costs related to future and past growth in the Township. The club fee is to recuperate past growth costs prior to amalgamation attributable to current capacity used and its existing infrastructure.

User rates:

A water and sewer rate review was conducted in 2008 at which time a 21% rate increase was implemented followed by an approximate 8% increase for each of the following four years.

In addition to harmonized rates as noted above, in 2011 Council authorized an annual increase of rates of 6% for 5 years and a shift from 70:30 to a 60:40 fixed to consumption cost recovery.

A subsequent (and the previous) rate study was completed in 2014 furthering this harmonization which ultimately resulted in fully phased-in harmonized rates by 2015. The findings of this rate study lead Council to implement the following:

As authorized by by-law 2014-091 and subsequent by-laws:

- That connection fee changes proposed by BMA Management Consulting (“BMA”) be approved and implemented as of January 1, 2015

As authorized by by-law 2014-090 and subsequent by-laws

- That water and sewer user rates increase as proposed by BMA, 8% in 2015, 8% in 2016, 8% in 2017 and 8% in 2018; and
- That the proportion of the flat rate versus metered rate remains at a split of 60% fixed and 40% consumption rate for the next four years

Furthermore, as authorized by by-law 2018-116 that user rates were increased by 8% as of January 1, 2019 with the intention that the rate study will be completed in 2019.

A more detailed background and history on connection charges and user rates are outlined in Staff Report-1083.

Status:

On August 26, 2019, a public open house was held where Hemson presented draft connection charges and growth projects to interested developers. Two developers attended this open house. The developers were generally content with the list of growth projects that were included in the development of the charge. There were some questions around water storage and capacity, growth, combining charges into development charge bylaw from an administrative perspective, and grant availability for growth projects.

Other key messages from these developers were as follows:

- Comparison of neighboring municipalities by waiving connection charge for secondary unit on new residential builds;
- Consideration of splitting multi-residential charge based on apartment size (1 versus 2 bedrooms);
- Encouragement of industrial development by exempting industrial connection charge; and

- Consideration of fee deferral to assist landlords with initial costs (i.e. charging fee upon renter occupancy)

Furthermore, there was concerns over high user rates specifically relating to multi-residential units. There was discussion of costs at a high-level, however, it was advised that this would be discussed in more detail at the user rate public consultation meeting.

The presentation, draft rates, and growth project list from Hemson are attached to this report. Many of the above-noted concerns have been captured in Staff Report-1083 with staff responses.

On September 23, 2019, a public open house was held where Hemson presented draft user rates to approximately 30 attendees. At the council meeting held on July 29, Council directed staff to present two of the four draft scenarios to public for consultation. The scenarios are as follows:

1. Retain the same constant rate structure (status quo) at an overall cost recovery ratio of 60% fixed and 40% consumption, with proposed annual increases as follows:
 - 6% from 2020 to 2023
 - 4% from 2024 to 2025
 - 3% from 2026 to 2029
2. Transition to a constant rate structure with an overall cost recovery ratio of 40% fixed and 60% consumption by the end of the planning period. Subsequent annual increases in user bills will vary based on user consumption and is segregated by user groups in the attached presentation.

From the comments and discussion that occurred, it was presumed that most attendees that were present were retirees and low-volume users, however, there was some advocacy for high volume users and larger families as well. As a result, the comments were generally reflected as such. A summary of comments and staff/Hemson responses are included in Appendix A of this report.

The key concerns, perceptions, and questions from residents at this consultation were as follows:

- Rates and annual increases over the last five years are too high;
- Costs to provide water and sewer services are much higher compared to neighboring municipalities;
- Perception that costs are unequal between areas (Odessa, Amherstview, Bath);

- Initial increase on status quo scenario is high at 6% - prefer to see rates averaged such that annual increases are in the 3-4% range;
- Not enough incentives to conserve generally or through renovations/improvements;
- Perception that development should be paying ongoing costs of new services (in addition to initial growth costs);

Analysis:

Connection charges:

Draft combined water and sewer connection charges are proposed to increase by 2% residentially and decrease 9% non-residentially. All charges and comparisons are outlined in the attached consultation presentation. Although the charges are imposed under the *Municipal Act*, the growth portion of the charge mirrors the calculation of a development charge imposed under the *Development Charges Act*. The club fee portion of the charge is anticipated to cease once costs on past growth/existing capacity has been recuperated, nearing the time of new expansions. As a result of the growth and treatment plants' capacity projections, many costs relating to growth will need to be incurred, but are beyond the current benefit period and therefore are not incorporated into the charge in this study.

It is imperative that the connection charges are approved based on the capital projects in the current benefit period in order to correlate with the growth to come and capacity to be used in the Township.

Hemson and staff have analyzed the potential impacts of the following changes to the existing connection charges by-law:

- Credit or exemption to industrial community
As noted, connection charges are imposed under the *Municipal Act* by the Township, however, developers and past Councilors questioned whether industrial exemptions should be available. The *Development Charges Act* only requires that 50% of expansion costs to existing industrial groups are exempt from the charge, and any remaining exemptions would be discretionary to Council. Furthermore, any exemptions would result in a loss of revenue to the Township since it cannot be subsidized from other connection charges. It would be difficult to isolate industrial expansions within growth projections, therefore the potential loss of revenue if this was incorporated into the by-law would be unknown. If Council decided to provide full exemptions to industries, it may result in approximately \$829,000 of revenue lost over 10 years according to the current growth projections.

- Waiving of additional connection charge as a result of secondary unit on new build
Currently, the Township only charges a second impost fee upon new build. Staff are proposing that this secondary fee is waived in order to conform with other municipalities and considering this charge is not currently imposed on an existing build. The overall impact on revenue is minimal as there are very few secondary suites added on new builds. This waiver will only apply to secondary suites in which the existing square footage of the dwelling is not expanded as a result. The new by-law will also be updated to outline definitions as to what constitutes a secondary unit.
- Potential deferrals on impost payments
Developers expressed concern that connection charges payable upon permit issuance creates a burden from a cash-flow perspective, particularly when a unit is not yet occupied. Currently, it is not legislated for municipalities to offer this type of agreement. Further research should be completed prior to implementing any form of deferral provision from a legal and financial perspective, and to ensure alignment with the Township's Official Plan. Introducing a deferral program for charges would deplete cash flows and use additional administrative time due to follow-up and collection, security, and change of ownership.

User Rates:

Draft water and sewer rate scenarios are outlined in the attached consultation presentation.

The historical increase in the user rates have been contentious, however, they have allowed the Township to significantly improve its financial position in water and sewer. Over the years, the Township has had to address some critical infrastructure shortfalls in all areas when grants were not available. These projects included decommissioning Odessa water and sewer treatment plants, updating of nearly all pumping stations, and significant upgrades to the Bath sewer treatment plant. As a result, these projects were unfinanced, and as of this year, this unfinanced capital been eliminated/recovered. While both current scenarios require debt financing totaling approximately \$6 million for water, and \$2.8 million for sewer, the level of past and existing user rates have alleviated the need for further debt issuance to cover these past critical infrastructure projects.

Furthermore, user rates have allowed the Township to start building reserve funds for future capital replacement as required by its asset management plan to mitigate risk and consequence of failure of its infrastructure. The proposed models also incorporate reserve fund transfers to be used during years of significant capital replacements. At the end of the immediate five year planning period, it is projected that the Township will have 4% of its replacement cost cumulatively in reserve funds, which is considered common in comparable municipalities. As costs continue to rise with inflation, it is crucial that the Township continues to contribute to its reserve funds to assist in

smoothing rates over time to ensure financial sustainability and retain adequate cash flows.

Noting that a large portion of the revenue requirement is fixed, both user rate scenarios reflect average annual revenue requirements over 10 years of \$5.7 million in water and \$4.8 million in sewer, which is net of debt financing, reserve fund use, and other revenue sources. This revenue requirement does not change regardless of the rate structure chosen. Although the 40:60 fixed/consumption recovery scenario promotes further conservation efforts, the transition places additional inherent risk on the Township to recover revenues and thus is conservative with its consumption projections. Furthermore, the transitional scenario would create a significant increase in billings of large volume and commercial consumers. An overall forecast of operating and capital costs outlined in the models is attached to this report.

Hemson and staff have analyzed the potential impacts of the following change to the existing user rates by-law:

- Changing the basis of fixed rate charge to multi-residential units from number of units to actual ERUs. The overall impact to the Township is minimal, however, this change will positively and negatively affect specific low and high-volume users respectively as it relates directly to consumption. Benchmarking analysis on a sample of accounts is included in the attached presentation. Since the Township has adequate metering on multi-residential properties, it is more accurate to measure the total charge based on consumption rather than a standard meter size equivalent metric. It is evident that one apartment unit consumes just as much, if not more in some cases, as a residential unit. As a result, it is proposed that regardless of the number of units in a multi-residential unit, the number of fixed charges will be a factor of ERUs within that unit as a whole. Since the revenue recovery is based on a fixed/consumption split, it is fair that fixed rates are imposed as such across all consumer groups.

Bulk water rates:

Bulk water rates were adjusted in 2012 to compare with bulk water rates in neighboring municipalities. At this time, a cost analysis concluded that the overall cost to provide this service was higher than the recommended rate by Council. Since this time, bulk water rates have been discounted by approximately 23% compared to the combined harmonized water rate per cubic meter. Council resolved to have bulk rates reviewed again in March 2019 and as recommended in Staff Report-973 and Resolution 2019.7.11, rates remained the same at the existing discounted rate. The approximate gross combined rate per cubic meter is projected in 2020 to be \$4.75. Considering that the existing bulk water consumption is already partly subsidized by other users, it is proposed that rates for bulk water be retained at this discounted rate going forward, with inflationary increases on the same basis as general user rates.

Staff will develop a work plan regarding analysis of potential conservation incentives in comparison to neighboring municipalities at a later date.

Next steps:

October 28 – Further analysis reported back to Council, if requested

November 12 – Final recommendations to Council to receive and accept financial plans and adopt bylaws for new connection charges and user rates

December 1 – Submission by compliance supervisor of application for drinking water license renewal

Financial Considerations:

It is noted that projections outlined in this study are based on several assumptions and thus, actual figures may deviate from these projections over time. Ongoing management of this model and financial plan in correlation with recent asset management planning improvements will be required to ensure long-term sustainability.

New connection charges are anticipated to come into effect January 1, 2020

New user rates are anticipated to come into effect for billing periods ending after December 15, 2019.

Consultation:

The contents of this report in draft have been reviewed with Hemson Consulting Ltd., the Director of Business Services, the Director of Economic Growth & Community Development, the Director of Community & Customer Services (former Utilities Manager), the Utilities Manager, and the Chief Engineer.

The public has been advised on the Township's website to forward any further questions or concerns in relation to this study.

Regulatory/Policy Compliance Implications:

A long-term financial plan is required to be submitted by the Township to meet its drinking water license as per Ontario regulation 453/07.

Link to Strategic Plan:

Address the Township's Municipal Infrastructure Needs, Provide a Well-Managed and Effective Municipal Government, Strengthen the Township's Financial Position

Attachments:

[Hemson developer consultation presentation \(connection charge\) - August 26 2019](#)

[Capital growth projects - developer consultation \(connection charge\) - August 26 2019](#)

[Hemson public consultation presentation \(user rates\) - September 23 2019](#)

[User rates \(non-growth\) historical budget and forecasted costs by area](#)

[Appendix A - public consult \(user rate\) comments](#)

Approved By:

Stephen Dickey, Director of Business
Services/Treasurer
Steven Silver, Chief Administrative Officer

Status:

Approved - 09 Oct 2019
Approved - 09 Oct 2019

Loyalist Township Water & Sewer Rates Study Developer Information Session



Monday, August 26, 2019

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Consulting Ltd.



Study Background

- Township has been fiscally prudent in the management of water and wastewater services
- Assignment is two-fold exercise:
 1. Capital Connection Charges/Impost Fees (levied under the *Municipal Act*)
 2. Water and Wastewater Rate Study and corresponding Financial Plans (O.Reg. 453/07)
- Township-wide development charges are not being reviewed as part of this process
 - DC by-law expires June 28th 2020

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1

Capital Connection Charges

1. Connection Charges to recover the capital costs associated with new development
2. Connection Charges to recover the costs associated with capacity in the existing infrastructure (i.e. club fee)
 - Calculation is based on the historical cost of infrastructure

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2

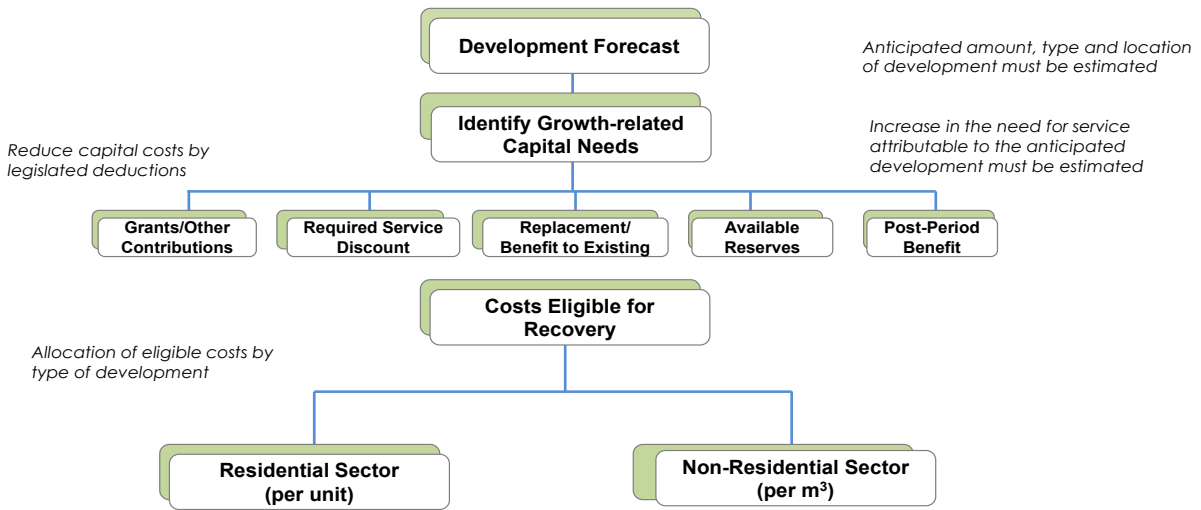
Summary of Existing Capital Connection Charges

Water Services	Single-Detached Semi/Duplex	Multiples	Apartments	Non-Residential (\$/m ³)
Growth Component	\$3,816	\$3,376	\$2,994	\$8,855
Club Fee Component	\$2,879	\$2,547	\$2,259	\$6,880
Total Water Connection Charge	\$6,695	\$5,923	\$5,253	\$15,535
Sewer Services	Single-Detached Semi/Duplex	Multiples	Apartments	Non-Residential (\$/m ³)
Growth Component	\$3,294	\$2,914	\$2,585	\$7,643
Club Fee Component	\$2,921	\$2,584	\$2,292	\$6,778
Total Sewer Connection Charge	\$6,215	\$5,498	\$4,877	\$14,421
Total Connection Charge	\$12,910	\$11,421	\$10,130	\$29,956

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3

Overview of Study Process



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Summary of Development Projections

- Forecast based on *Population, Housing and Employment Projections to 2046 Report (July 2019)*
- 2019 – 2028 10-year Growth Summary:
 - *Census Population of approx. 2,000 people*
 - *About 1,180 new households*
 - *Approximately 550 employees (excl. work at home)*

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5

Summary of Key Capital Projects Included for Recovery

- **Water*:**

- Watermain oversizing (or upsizing) and other linear works
- Additional Fleet and office storage design/construction
- Outstanding Debt (principal and interest)
- Plant expansion construction (Bath)

- **Sewer*:**

- Plant expansion design and EA
- Additional Fleet and office storage/design
- Outstanding Debt (principal and interest)
- Oversizing works
- Dewatering equipment

*Detailed capital project listing attached separately

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6

Summary of Water Development Related Expenditures	
Total Gross Cost (\$millions)	\$ 17.30
<i>Less: Grants & Subsidies</i>	\$ 0.00
<i>Less: Benefit to Existing Share</i>	\$ 4.02
<i>Less: Available Reserves</i>	\$ 0.54
<i>Less: Post-Period Benefit Share</i>	\$ 7.37
Growth Eligible Share (In-Period)	\$ 5.37

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7

Summary of Sewer Development Related Expenditures	
Total Gross Cost (\$millions)	\$ 18.28
<i>Less: Grants & Subsidies</i>	\$ 0.00
<i>Less: Benefit to Existing Share</i>	\$ 1.50
<i>Less: Available Reserves</i>	\$ 0.79
<i>Less: Post-Period Benefit Share</i>	\$ 13.50
Growth Eligible Share (In-Period)	\$ 2.49

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Draft Calculated Impost Fees: Growth Component

Service	Residential Unit Type			Non- Residential (\$/m3/day)
	Single / Semi-Detached / Duplex	Other Multiples	Apartments	
Water	\$ 4,655	\$ 3,613	\$ 2,823	\$ 9,312
Sewer	\$ 2,032	\$ 1,577	\$ 1,232	\$ 4,067
TOTAL Charge	\$ 6,687	\$ 5,190	\$ 4,055	\$ 13,379

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Draft Calculated Impost Fees: Club Fee Component

Service	Residential Unit Type			Non-Residential (\$/m3/day)
	Single / Semi-Detached / Duplex	Other Multiples	Apartments	
Water	\$ 2,890	\$ 2,243	\$ 1,753	\$ 6,248
Sewer	\$ 3,548	\$ 2,754	\$ 2,152	\$ 7,670
TOTAL Charge	\$ 6,438	\$ 4,997	\$ 3,905	\$ 13,918

- Calculation based on the historical cost of Infrastructure (net of developer and CSC contributions)
- Net recoverable from club fee: **\$14.8 Million**
 - Water - \$6.7 Million
 - Sewer - \$8.2 Million

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Draft Calculated Impost Fees: Combined Rates

Service	Residential Unit Type			Non-Residential (\$/m3/day)
	Single / Semi-Detached / Duplex	Other Multiples	Apartments	
Water	\$ 7,545	\$ 5,856	\$ 4,576	\$ 15,560
Sewer	\$ 5,580	\$ 4,331	\$ 3,384	\$ 11,737
TOTAL Charge	\$ 13,125	\$ 10,187	\$ 7,960	\$ 27,297

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11

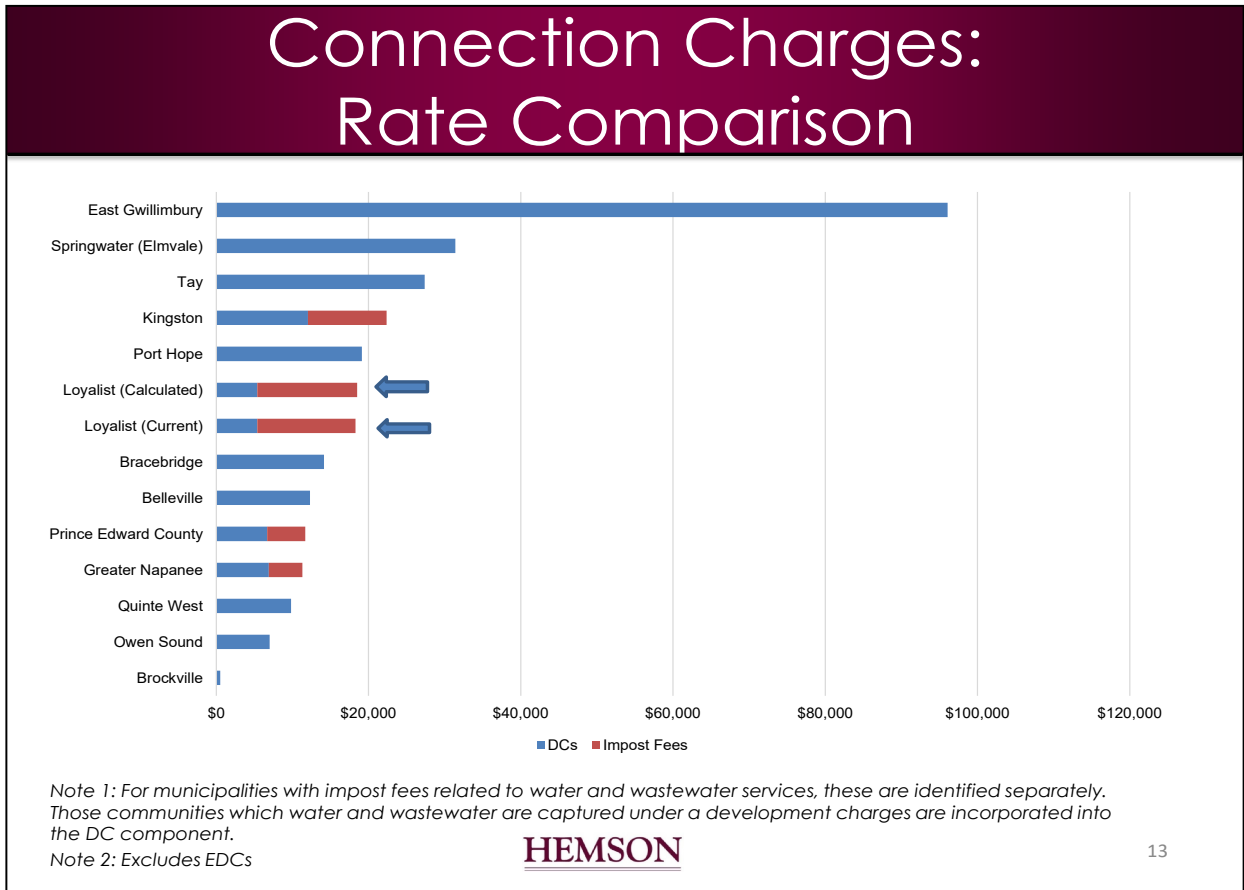
Comparison of Current vs. Calculated (Combined)

Service	Current SFD	Calculated	Difference	
		SFD	\$	%
Water	\$ 6,695	\$ 7,545	\$ 850	13%
Sewer	\$ 6,215	\$ 5,580	\$ -635	-10%
Total	\$ 12,910	\$ 13,125	\$ 215	2%

Service	Current Non-Residential (\$/m3/day)	Calculated Non-Residential (\$/m3/day)	Difference	
			\$	%
Water	\$ 15,535	\$ 15,560	\$ 25	0%
Sewer	\$ 14,421	\$ 11,737	\$ (2,684)	-19%
Total	\$ 29,956	\$ 27,297	\$ (2,659)	-9%

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12



By-law Considerations

- Secondary units to be exempt from the payment of Impost Fees at the time of permit
- Deferral agreements
- Other factors to consider?

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14

Next Steps

- Hemson to receive comments and feedback
- Refine analysis
- Further Council consultation
- Adoption of updated rates

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15

TABLE 1
 LOYALIST TOWNSHIP
 DEVELOPMENT-RELATED CAPITAL PROGRAM
 BATH WATER SERVICE AREA

BATH WATER SERVICE AREA	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	Impost Fee Eligible Costs			
					Replacement & BTE Shares	0% Reduction		Available Reserves	2019-2023	Post 2023	
1.0 New Water Projects - Linear and Plant Infrastructure											
1.0.1	Upsizing Main Street Bath from Mott to Heritage - Design	2019	\$ 32,194	\$ -	\$ 32,194	\$ -	\$ -	\$ 32,194	\$ 32,194	\$ -	\$ -
1.0.2	Upgrade Purdy PRV	2020	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -
1.0.3	Upsizing Main Street Bath from Mott to Heritage - Construction	2020	\$ 485,250	\$ -	\$ 485,250	\$ -	\$ -	\$ 485,250	\$ 253,711	\$ -	\$ 231,539
1.0.4	Extension of Academy	2020	\$ 128,000	\$ -	\$ 128,000	\$ -	\$ -	\$ 128,000	\$ 128,000	\$ -	\$ -
1.0.5	Plant Expansion Construction	2020	\$ 5,000,000	\$ -	\$ 5,000,000	\$ 4,015,862	\$ -	\$ 984,138	\$ -	\$ 150,000	\$ 834,138
1.0.6	Fire Station Road	2025	\$ 260,000	\$ -	\$ 260,000	\$ -	\$ -	\$ 260,000	\$ -	\$ 260,000	\$ -
1.0.7	Additional Capacity	2025	\$ 1,000,000	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ 1,000,000
1.0.8	Storage Increase EA	2030	\$ 40,000	\$ -	\$ 40,000	\$ -	\$ -	\$ 40,000	\$ -	\$ -	\$ 40,000
1.0.9	Storage Increase	2032	\$ 2,500,000	\$ -	\$ 2,500,000	\$ -	\$ -	\$ 2,500,000	\$ -	\$ -	\$ 2,500,000
Subtotal New Water Projects - Linear and Plant Infrastructure			\$ 9,695,444	\$ -	\$ 9,695,444	\$ 4,015,862	\$ -	\$ 5,679,582	\$ 413,905	\$ 891,539	\$ 4,374,138
1.1 Additional Fleet and Space (Bath Water Share)											
1.1.1	Additional Fleet	2020	\$ 7,200	\$ -	\$ 7,200	\$ -	\$ -	\$ 7,200	\$ 7,200	\$ -	\$ -
1.1.2	Utilities Offices & Storage Design	2020	\$ 27,000	\$ -	\$ 27,000	\$ -	\$ -	\$ 27,000	\$ 27,000	\$ -	\$ -
1.1.3	Additional Fleet	2021	\$ 14,400	\$ -	\$ 14,400	\$ -	\$ -	\$ 14,400	\$ -	\$ 14,400	\$ -
1.1.4	Utilities Offices & Storage Construction	2021	\$ 243,000	\$ -	\$ 243,000	\$ -	\$ -	\$ 243,000	\$ -	\$ 243,000	\$ -
Subtotal Additional Fleet and Space (Bath Water Share)			\$ 291,600	\$ -	\$ 291,600	\$ -	\$ -	\$ 291,600	\$ 34,200	\$ 257,400	\$ -
1.2 Recovery of Completed Projects											
1.2.1	Outstanding Debt - Principal	2019	\$ 9,847	\$ -	\$ 9,847	\$ -	\$ -	\$ 9,847	\$ 9,847	\$ -	\$ -
1.2.2	Outstanding Debt - Interest	2019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal Recovery of Completed Projects			\$ 9,847	\$ -	\$ 9,847	\$ -	\$ -	\$ 9,847	\$ 9,847	\$ -	\$ -
TOTAL BATH WATER SERVICE AREA			\$ 9,996,891	\$ -	\$ 9,996,891	\$ 4,015,862	\$ -	\$ 5,981,029	\$ 457,952	\$ 1,148,939	\$ 4,374,138

TABLE 2
 LOYALIST TOWNSHIP
 DEVELOPMENT-RELATED CAPITAL PROGRAM
 BATH SANITARY SEWER SERVICE AREA

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	Impost Fee Eligible Costs		
					Replacement & BTE Shares	0% Reduction		Available Reserves	2019-2028	Post 2028
2.0 New Sanitary Projects - Linear and Plant Infrastructure										
2.0.1 Bath Plant Expansion EA	2024	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -
2.0.2 Bath Plant Design	2026	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -
2.0.3 Bath Plant Expansion Construction	2028	\$ 5,000,000	\$ -	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000
Subtotal New Sanitary Projects - Linear and Plant Infrastructure		\$ 5,400,000	\$ -	\$ 5,400,000	\$ -	\$ -	\$ 5,400,000	\$ -	\$ 400,000	\$ 5,000,000
2.1 Additional Fleet and Space (Bath Sanitary Sewer Share)										
2.1.1 Additional Fleet	2020	\$ 6,000	\$ -	\$ 6,000	\$ -	\$ -	\$ 6,000	\$ -	\$ 6,000	\$ -
2.1.2 Utilities Offices & Storage Design	2020	\$ 22,500	\$ -	\$ 22,500	\$ -	\$ -	\$ 22,500	\$ -	\$ 22,500	\$ -
2.1.3 Additional Fleet	2021	\$ 12,000	\$ -	\$ 12,000	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000	\$ -
2.1.4 Utilities Offices & Storage Construction	2021	\$ 202,500	\$ -	\$ 202,500	\$ -	\$ -	\$ 202,500	\$ -	\$ 202,500	\$ -
Subtotal Additional Fleet and Space (Bath Sanitary Sewer Share)		\$ 243,000	\$ -	\$ 243,000	\$ -	\$ -	\$ 243,000	\$ -	\$ 243,000	\$ -
2.2 Recovery of Completed Projects										
2.2.1 Outstanding Debt - Principal	2019	\$ 197,956	\$ -	\$ 197,956	\$ -	\$ -	\$ 197,956	\$ 99,247	\$ 98,708	\$ -
2.2.2 Outstanding Debt - Interest (2014-2018)	2019	\$ 9,982	\$ -	\$ 9,982	\$ -	\$ -	\$ 9,982	\$ -	\$ 9,982	\$ -
2.2.3 Outstanding Debt - Interest	2019	\$ 13,589	\$ -	\$ 13,589	\$ -	\$ -	\$ 13,589	\$ -	\$ 13,589	\$ -
Subtotal Recovery of Completed Projects		\$ 221,527	\$ -	\$ 221,527	\$ -	\$ -	\$ 221,527	\$ 99,247	\$ 122,279	\$ -
TOTAL BATH SANITARY SEWER SERVICE AREA		\$ 5,864,527	\$ -	\$ 5,864,527	\$ -	\$ -	\$ 5,864,527	\$ 99,247	\$ 765,279	\$ 5,000,000

TABLE 3
LOYALIST TOWNSHIP
DEVELOPMENT-RELATED CAPITAL PROGRAM
LOYALIST EAST / FAIRFIELD WATER SERVICE AREA

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	Impost Fee Eligible Costs			
					Replacement & BTE Shares	0% Reduction		Available Reserves	2019-2028	Post 2028	
3.0 New Water Projects - Linear and Plant Infrastructure											
3.0.1 Miscellaneous Trunk Growth Connections	Various	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -
3.0.2 Watermain oversizing	2019	\$ 1,120,800	\$ -	\$ 1,120,800	\$ -	\$ -	\$ 1,120,800	\$ -	\$ 1,120,800	\$ -	\$ -
3.0.3 Fairfield Plant Expansion EA	2022	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -
3.0.4 Lakeside Ponds Oversized Watermain (Tip Portion Only)	2022	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ -
3.0.5 Fairfield Plant Expansion Design	2024	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -
3.0.6 Fairfield Plant Expansion Construction	2026	\$ 3,000,000	\$ -	\$ 3,000,000	\$ -	\$ -	\$ 3,000,000	\$ -	\$ -	\$ -	\$ 3,000,000
Subtotal		\$ 4,970,800	\$ -	\$ 4,970,800	\$ -	\$ -	\$ 4,970,800	\$ -	\$ 1,970,800	\$ -	\$ 3,000,000
3.1 Additional Fleet and Space (Loyalist East/Fairfield Share)											
3.1.1 Additional Fleet	2020	\$ 15,200	\$ -	\$ 15,200	\$ -	\$ -	\$ 15,200	\$ -	\$ 15,200	\$ -	\$ -
3.1.2 Additional Fleet	2021	\$ 30,400	\$ -	\$ 30,400	\$ -	\$ -	\$ 30,400	\$ -	\$ 30,400	\$ -	\$ -
3.1.3 Utilities Offices & Storage Design	2020	\$ 57,000	\$ -	\$ 57,000	\$ -	\$ -	\$ 57,000	\$ -	\$ 57,000	\$ -	\$ -
3.1.4 Utilities Offices & Storage Construction	2021	\$ 513,000	\$ -	\$ 513,000	\$ -	\$ -	\$ 513,000	\$ -	\$ 513,000	\$ -	\$ -
Subtotal Additional Fleet and Space (Loyalist East/Fairfield Share)		\$ 615,600	\$ -	\$ 615,600	\$ -	\$ -	\$ 615,600	\$ -	\$ 615,600	\$ -	\$ -
3.2 Recovery of Completed Projects											
3.2.1 Outstanding Debt - Principal	2019	\$ 1,355,038	\$ -	\$ 1,355,038	\$ -	\$ -	\$ 1,355,038	\$ 83,281	\$ 1,271,756	\$ -	\$ -
3.2.2 Outstanding Debt - Interest (2014-2018)	2019	\$ 206,332	\$ -	\$ 206,332	\$ -	\$ -	\$ 206,332	\$ -	\$ 206,332	\$ -	\$ -
3.2.2 Outstanding Debt - Interest	Various	\$ 153,195	\$ -	\$ 153,195	\$ -	\$ -	\$ 153,195	\$ -	\$ 153,195	\$ -	\$ -
Subtotal Recovery of Completed Projects		\$ 1,714,564	\$ -	\$ 1,714,564	\$ -	\$ -	\$ 1,714,564	\$ 83,281	\$ 1,631,283	\$ -	\$ -
TOTAL New Water Projects - Linear and Plant Infrastructure		\$ 7,300,964	\$ -	\$ 7,300,964	\$ -	\$ -	\$ 7,300,964	\$ 83,281	\$ 4,217,683	\$ -	\$ 3,000,000

TABLE 4
LOYALIST TOWNSHIP
DEVELOPMENT-RELATED CAPITAL PROGRAM
LOYALIST EAST / FAIRFIELD SANITARY SEWER SERVICE AREA

Project Description	Timing	Gross Project Cost	Grants/ Subsidies/Other Recoveries	Net Municipal Cost	Ineligible Costs		Total DC Eligible Costs	Impost Fee Eligible Costs		
					Replacement & BTE Shares	0% Reduction		Available Reserves	2019-2028	Post 2028
4.0 New Sanitary Sewer Projects - Linear and Plant Infrastructure										
4.0.1 Trunk Oversizing Across Taylor Kidd	2019	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000	\$ 23,104	\$ 1,896	\$ -
4.0.2 Odessa West Trunk Oversizing	2019	\$ 120,000	\$ -	\$ 120,000	\$ -	\$ -	\$ 120,000	\$ -	\$ 120,000	\$ -
4.0.3 Dewatering Equipment @ AWPCP	2022	\$ 2,000,000	\$ -	\$ 2,000,000	\$ 1,500,000	\$ -	\$ 500,000	\$ -	\$ 500,000	\$ -
4.0.4 AWPCP Plant Expansion EA	2022	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -
4.0.5 Odessa West Trunk Oversizing	2023	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -
4.0.6 AWPCP Plant Expansion Design	2024	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -
4.0.7 Emma Street Servicing Allowance	2024	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4.0.8 AWPCP Plant Expansion Construction	2026	\$ 5,000,000	\$ -	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000
4.0.9 New Pumping Station & Forcemain (2kn) to Taylor Kidd PS	2030	\$ 3,500,000	\$ -	\$ 3,500,000	\$ -	\$ -	\$ 3,500,000	\$ -	\$ -	\$ 3,500,000
4.0.10 Miscellaneous Trunk Growth Connections	Various	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -
Subtotal New Sanitary Sewer Projects - Linear and Plant Infrastructure		\$ 11,275,000	\$ -	\$ 11,275,000	\$ 1,500,000	\$ -	\$ 9,775,000	\$ 23,104	\$ 1,281,896	\$ 8,500,000
4.1 Additional Fleet and Space (Loyalist East/Fairfield Share)										
4.1.1 Additional Fleet	2020	\$ 11,600	\$ -	\$ 11,600	\$ -	\$ -	\$ 11,600	\$ -	\$ 11,600	\$ -
4.1.2 Utilities Offices & Storage Design	2020	\$ 43,500	\$ -	\$ 43,500	\$ -	\$ -	\$ 43,500	\$ -	\$ 43,500	\$ -
4.1.3 Additional Fleet	2021	\$ 23,200	\$ -	\$ 23,200	\$ -	\$ -	\$ 23,200	\$ -	\$ 23,200	\$ -
4.1.4 Utilities Offices & Storage Construction	2021	\$ 391,500	\$ -	\$ 391,500	\$ -	\$ -	\$ 391,500	\$ -	\$ 391,500	\$ -
Subtotal Additional Fleet and Space (Loyalist East/Fairfield Share)		\$ 469,800	\$ -	\$ 469,800	\$ -	\$ -	\$ 469,800	\$ -	\$ 469,800	\$ -
4.2 Recovery of Completed Projects										
4.2.1 Outstanding Debt - Principal	2019	\$ 597,557	\$ -	\$ 597,557	\$ -	\$ -	\$ 597,557	\$ 597,557	\$ -	\$ -
4.2.2 Outstanding Debt - Interest (2014-2018)	2019	\$ 28,215	\$ -	\$ 28,215	\$ -	\$ -	\$ 28,215	\$ 28,215	\$ -	\$ -
4.2.3 Outstanding Debt - Interest	Various	\$ 42,931	\$ -	\$ 42,931	\$ -	\$ -	\$ 42,931	\$ 42,931	\$ -	\$ -
Subtotal Recovery of Completed Projects		\$ 668,704	\$ -	\$ 668,704	\$ -	\$ -	\$ 668,704	\$ 668,704	\$ -	\$ -
TOTAL New Sanitary Sewer Projects - Linear and Plant Infrastructure		\$ 12,413,504	\$ -	\$ 12,413,504	\$ 1,500,000	\$ -	\$ 10,913,504	\$ 691,807	\$ 1,721,696	\$ 8,500,000

**Loyalist Township
Water & Sewer Rates Study
Public Information Session**



Monday, September 23, 2019



Study Objectives

1. Rate Structure Review
2. Rate Setting and Financial Analysis
3. Rate Results and Impact Per User – Status Quo Rate Structure
4. Rate Results and Impact Per User – 40:60 Rate Structure (transition)





BACKGROUND INFORMATION

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2



Background Information

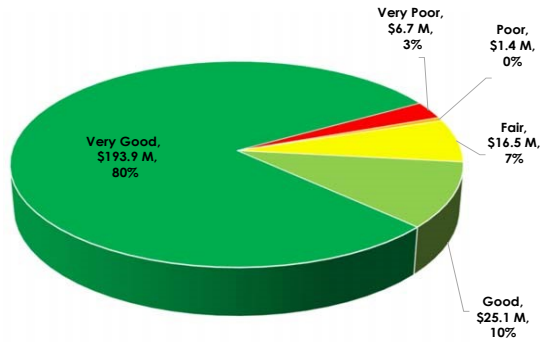
- Since 2014, Township has increased water and sewer rates generally in accordance with the rates outlined in the 2014 Rate Study
- Rates were calculated to ensure the Township generates sufficient revenues to fund costs
- The 2014 Study calculated water and sewer rates for a 10-year period (to 2024) with a view to update the study in 3 to 5 years.
 - Given the 5-year timeframe is near complete, the Township initiated this update rate study

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3

Summary of Water and Sewer Infrastructure

Water and Sewer Infrastructure
Total = \$243.6 Million



- Financial statements indicate historical value of assets to be about \$71.3 million
- Actual replacement value estimated over \$243 million
 - Water: \$144.4 million
 - Sewer: \$99.2 million
- Township has done a good job of maintaining assets in state of good repair and saving for future replacement

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2019 Bimonthly Water and Sewer Rates:

1. Water Fixed Charge	
Description	Rate (bimonthly)
Flat charge per ERU	\$68.08

1. Sewer Fixed Charge	
Description	Rate (bimonthly)
Flat charge per ERU	\$60.44

2. Water Consumption Charge	
Description	Rate (per m ³)
All consumption – constant rate	\$1.71

2. Sewer Consumption Charge	
Description	Rate (per m ³)
All consumption – constant rate	\$1.51

*Fixed Cost Recovery: 60%
Variable Cost Recovery: 40%

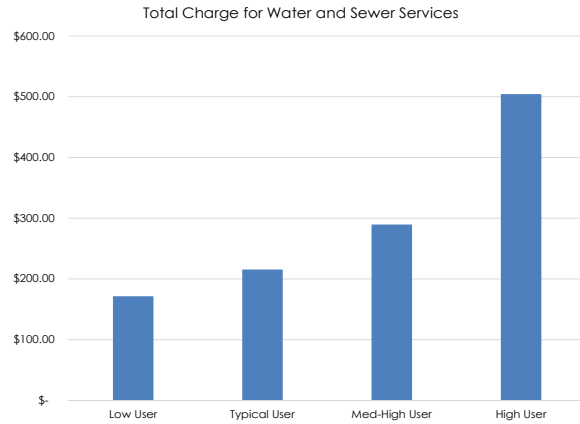
*Fixed Cost Recovery: 60%
Variable Cost Recovery: 40%

**Identified cost recovery target*

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5

Total Bimonthly Charge for a Range of Household Users (in 2019):



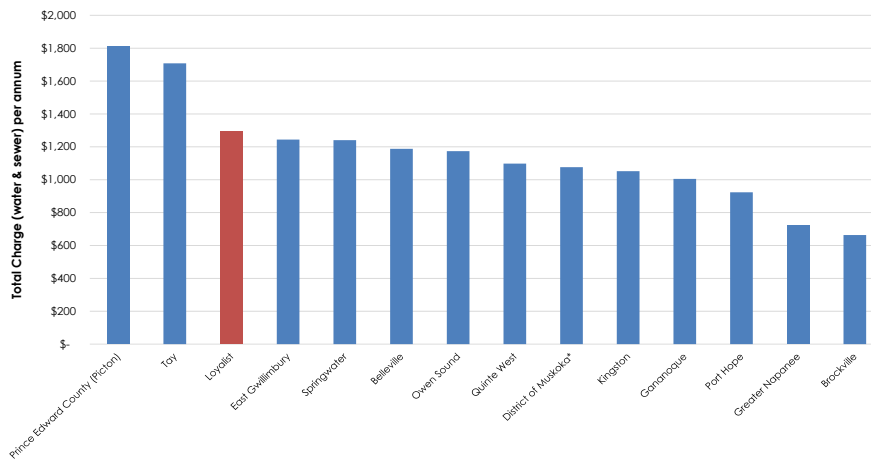
- Total charge dependent on the amount of water consumed
- Residents have control over their total bill
- Existing structure encourages conservation

High User: 117m³ per 2 months
 Med-High User: 50m³ per 2 months
 Typical User: 27m³ per 2 months
 Low User: 13m³ per 2 months

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6

Benchmarking Analysis: Cost per Typical Household (162 m³)



Note*: Rate applies to all communities in the District of Muskoka
 All rates illustrated include both water and sewer services

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RATE STRUCTURE REVIEW

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8



Rate Structure Review

- Hemson and Township staff have examined a variety of rate structures

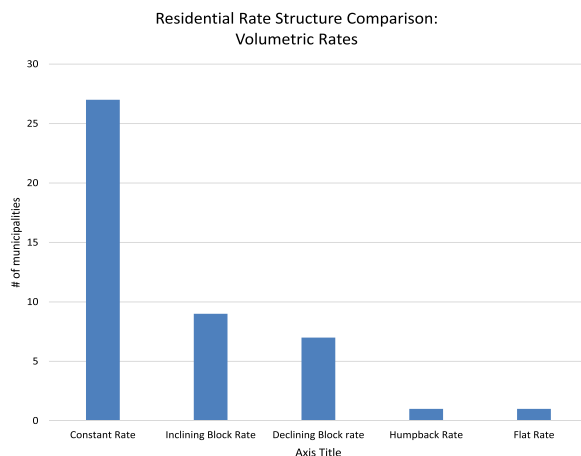
- Intention is to examine the current rate structure and provide options that reflect changing consumption patterns and demographic trends

- Ensure fiscal stability and sustainability from a service delivery standpoint

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Benchmarking Analysis: Rate Structure Review



- Survey of 45 municipalities in Ontario that range in population from 15,000 to 25,000 people were considered (plus direct neighbours)
- About 60% of communities (including Loyalist) employ a constant rate structure for consumption based component
- Inclining and declining block structures are also common

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Rate Structure Review: Key Township Objectives

- The rate structure should consider the following factors:
 - Cost recovery;
 - Equity;
 - Conservation;
 - Administration;
 - Transparency and efficiency; and
 - Economic Development

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Rate Structures Considered Under This Study

Rate Structure Alternatives	General Impact and assessment
Scenario 1. Adjust the Fixed vs. Variable Rate Cost Recovery to 40:60 in 2020	Bill would be reduced for low volume water users. Typical households would pay marginally more relative to status quo scenario (60:40 Structure) The burden would largely be shifted to water users above the typical household. Non-residential users would also see higher rate increases.
Scenario 2. Adjust the Fixed vs. Variable Rate Cost Recovery to 40:60 over the planning period	Bill would be reduced for low volume water users but the impact would be captured over a longer horizon relative to scenario 1 (40:60 Structure). Impact on a typical household would be moderated in early years relative to Scenario 1 (40:60 Structure) The burden would largely be shifted to water users above the typical household. Non-residential users would also see higher rate increases.
Scenario 3. Minimum Bill (includes 20m³ every 2 months) Each cubic meter charged above the minimum would be equal to the minimum bill \$/m ³	Bill would be reduced for low and typical volume water users relative to status quo (60:40 Structure) The burden would be shifted to water users above the typical household. High volume non-residential users would see higher rate increases.



RATE SETTING AND FINANCIAL ANALYSIS

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13

Rate Setting Approach

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14

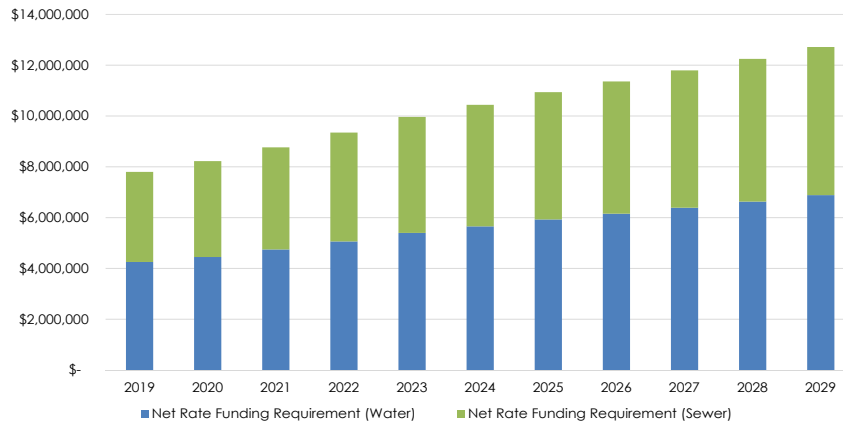
Rate Setting Approach

- Rates calculated based on the following:
 1. Full recovery of operating costs
 - Based on the Township's 2019 budget
 - Costs have been adjusted to account for inflation
 2. Full recovery of annual capital needs
 - In-year capital requirements identified by the 10-year capital plan and discussions with staff
 - Financing costs required to carry out the capital plan have been included (where applicable)
 - Only non-growth related costs have been included
 3. Provision for future asset replacement

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15

How much Revenue Needs to be Collected from Water & Sewer Rates?

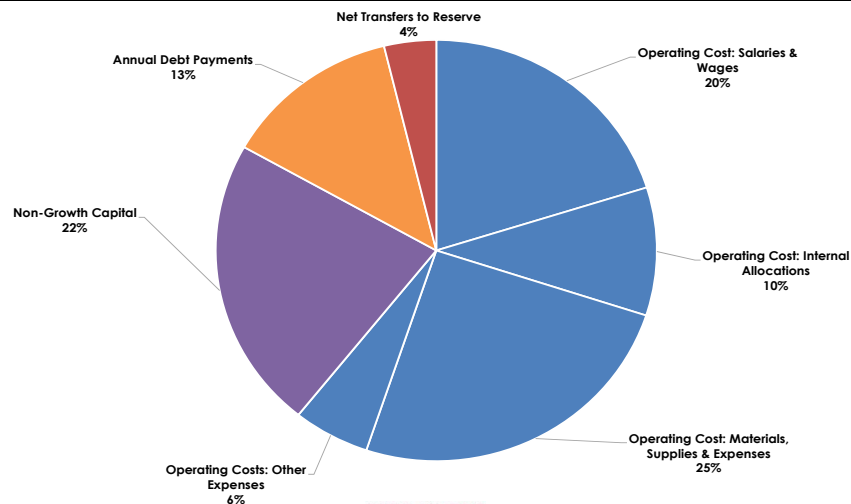


Note: The net rate funding requirement represents the amount of funds that must be funded through the water & sewer rates

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16

Allocation of Water and Sewer Expenditures – 2019 Budget

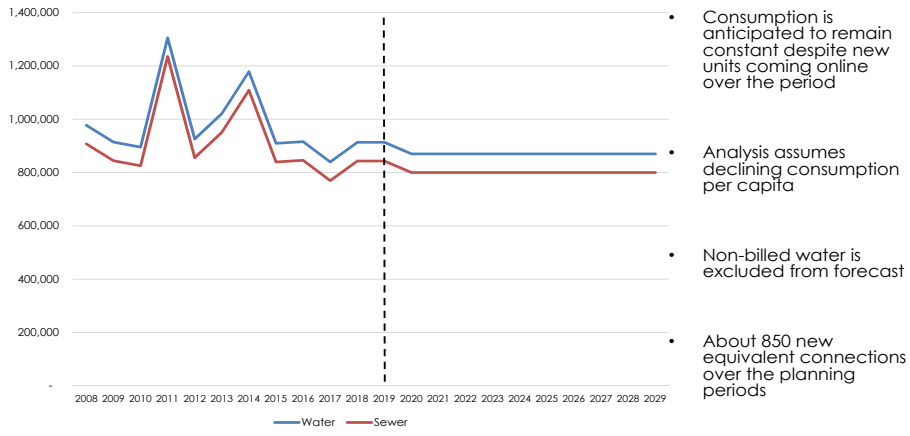


Note: Other expenses include: contracted services, insurance and utility costs

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17

Projected Consumption



- Consumption is anticipated to remain constant despite new units coming online over the period
- Analysis assumes declining consumption per capita
- Non-billed water is excluded from forecast
- About 850 new equivalent connections over the planning periods

Note 1: For the purposes of setting a utility rate, only the water that is distributed to the end-user is used to determine the rate. This is referred to as "billable" water.
 Note 2: Sewer generation is based on water consumption billed by sewer users connected to the water system.

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RATE RESULTS AND IMPACT PER USER – STATUS QUO RATE STRUCTURE (60:40)

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19

Rates Required to fund the 10-year Program (Status Quo)

Water & Sewer:

- Fixed & Variable Rates:
 - 6% annual increase from 2020 to 2023
 - 4% annual increase from 2024 to 2025
 - 3% annual increase from 2026 to 2029

- An adjustment to the way the Township bills multi-unit customers is assumed for 2020.
 - Transition to "Actual ERUs"

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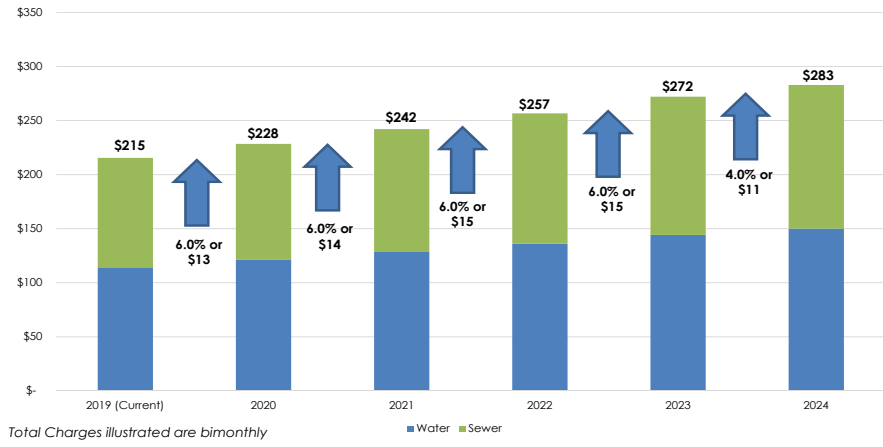
20

Status Quo: 60:40 Structure

	2019	2020	2021	2022	2023	2024
Fixed Charge Bimonthly – Water	\$68.08	\$72.16	\$76.48	\$81.06	\$85.92	\$89.36
% Change		6.0%	6.0%	6.0%	6.0%	4.0%
Fixed Charge Bimonthly– Sewer	\$60.44	\$64.06	\$67.90	\$71.98	\$76.30	\$79.36
% Change		6.0%	6.0%	6.0%	6.0%	4.0%
Charge per Cubic Meter – Water	\$1.710	\$1.813	\$1.922	\$2.037	\$2.159	\$2.245
% Change		6.0%	6.0%	6.0%	6.0%	4.0%
Charge per Cubic Meter – Sewer	\$1.510	\$1.601	\$1.697	\$1.799	\$1.907	\$1.983
% Change		6.0%	6.0%	6.0%	6.0%	4.0%

Bimonthly Charge per Typical User (27m ³)	2019	2020	2021	2022	2023	2024
Bimonthly Charge – Water	\$114	\$121	\$128	\$136	\$144	\$150
Bimonthly Charge – Sewer	\$101	\$107	\$114	\$121	\$128	\$133
Total Bimonthly Charge	\$215	\$228	\$242	\$257	\$272	\$283
\$ Change		\$13	\$14	\$15	\$15	\$11
% Change		6.0%	6.0%	6.0%	6.0%	4.0%

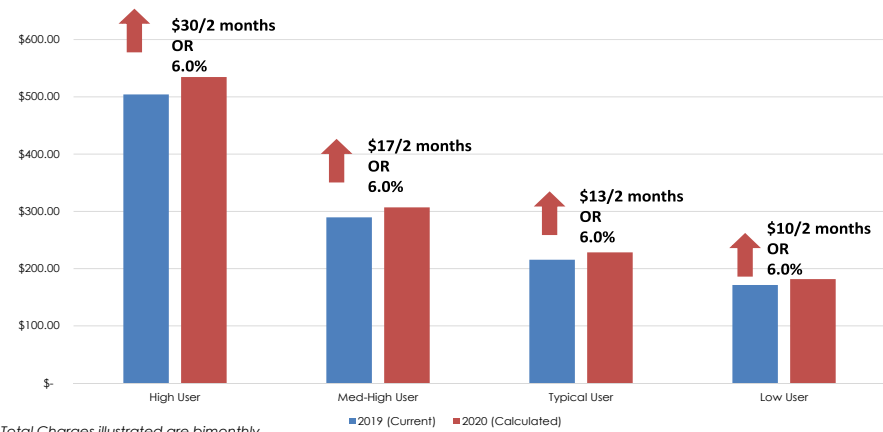
Status Quo: Typical Household Charge (1)



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22

Calculated Utility Rates (Water & Sewer) Range of Residential Users (Status Quo)

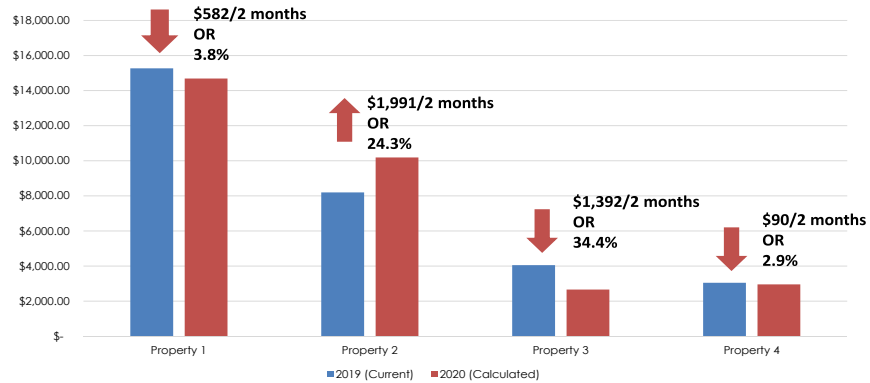


High User: 117m³ per 2 months
 Med-High User: 50m³ per 2 months
 Typical User: 27m³ per 2 months
 Low User: 13m³ per 2 months

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23

Calculated Utility Rates (Water & Sewer) Range of Apartment Users (Status Quo)



Total Charges illustrated are bimonthly

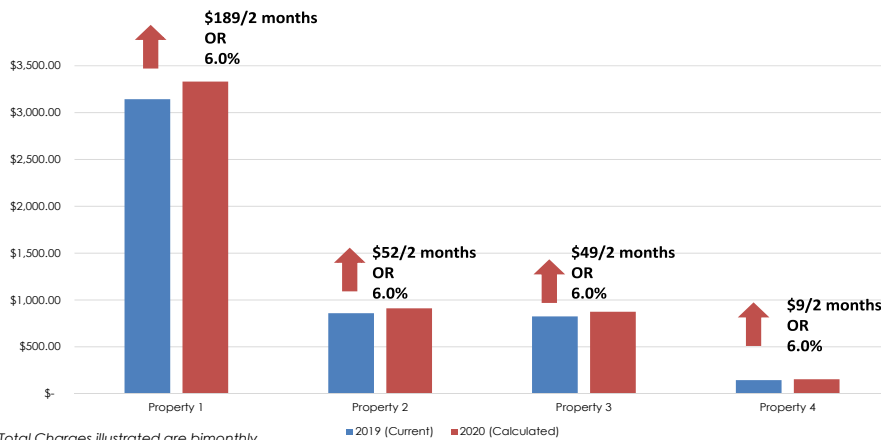
Property 1: 1,908m³ per 2 months – 71 ERUs (2019) – 60 ERUs (2020)
 Property 2: 1,148m³ per 2 months – 35 ERUs (2019) – 46 ERUs (2020)
 Property 3: 300m³ per 2 months – 24 ERUs (2019) – 12 ERUs (2020)
 Property 4: 347m³ per 2 months – 15 ERUs (2019) – 13 ERUs (2020)

NOTE:
 2019 ERUs are units billed
 2020 ERUs represent actual ERUs based on an average



24

Calculated Utility Rates (Water & Sewer) Range of Commercial Users (Status Quo)



Total Charges illustrated are bimonthly

Property 1: 377m³ per 2 months – 15 ERUs
 Property 2: 107m³ per 2 months – 4 ERUs
 Property 3: 96m³ per 2 months – 4 ERUs
 Property 4: 5m³ per 2 months – 1 ERU



25



PREFERRED SCENARIO TO 40:60 GRADUALLY

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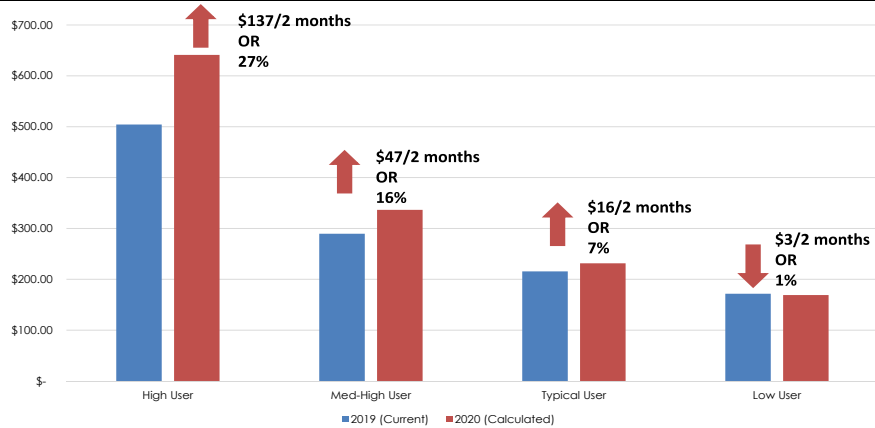
26

Preferred Scenario: 60:40 to 40:60 (Gradual)

	2019	2020	2021	2022	2023	2024
Fixed Charge Bimonthly – Water	\$68.08	\$57.00	\$57.00	\$57.00	\$57.00	\$58.71
% Change		-16.3%	0.0%	0.0%	0.0%	3.0%
Fixed Charge Bimonthly– Sewer	\$60.44	\$51.00	\$51.00	\$51.00	\$51.00	\$52.54
% Change		-15.6%	0.0%	0.0%	0.0%	3.0%
Charge per Cubic Meter – Water	\$1.710	\$2.520	\$2.772	\$3.049	\$3.354	\$3.622
% Change		47.4%	10.0%	10.0%	10.0%	8.0%
Charge per Cubic Meter – Sewer	\$1.510	\$2.050	\$2.337	\$2.617	\$2.853	\$3.081
% Change		35.8%	14.0%	12.0%	9.0%	8.0%

Bimonthly Charge per Typical User (27m ³)	2019	2020	2021	2022	2023	2024
Bimonthly Charge – Water	\$114	\$125	\$132	\$139	\$148	\$157
Bimonthly Charge – Sewer	\$101	\$106	\$114	\$122	\$128	\$136
Total Bimonthly Charge	\$215	\$231	\$246	\$261	\$276	\$292
\$ Change		\$16	\$15	\$15	\$15	\$17
% Change		7.4%	6.3%	6.1%	5.6%	6.0%

Calculated Utility Rates (Water & Sewer) Range of Residential Users (Preferred)

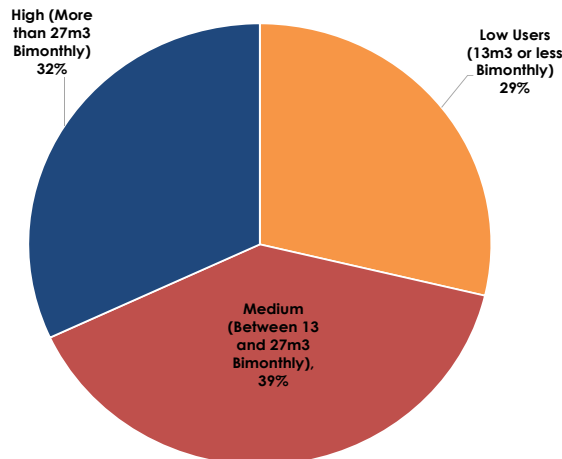


Total Charges illustrated are bimonthly
 High User: 117m³ per 2 months
 Med-High User: 50m³ per 2 months
 Typical User: 27m³ per 2 months
 Low User: 13m³ per 2 months

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28

Customer Profiles: Quantifying the # of accounts in each category



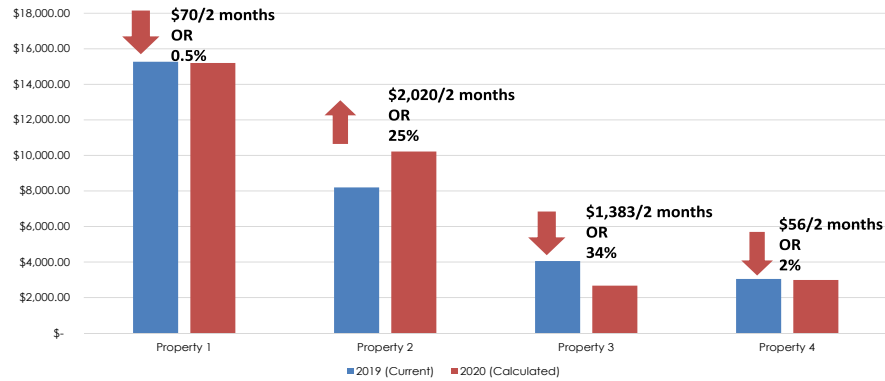
- About 70% of accounts consume 162m³ per year or less

- About 30% of customers will see a decrease in their total bill (from 2019)

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29

Calculated Utility Rates (Water & Sewer) Range of Apartment Users (Preferred)



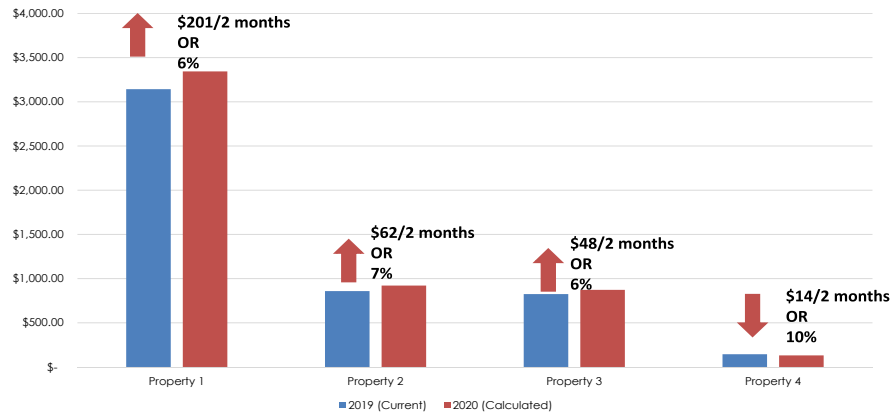
Total Charges illustrated are bimonthly

Property 1: 1,908m³ per 2 months – 71 ERUs (2019) – 60 ERUs (2020)
 Property 2: 1,148m³ per 2 months – 35 ERUs (2019) – 46 ERUs (2020)
 Property 3: 300m³ per 2 months – 24 ERUs (2019) – 12 ERUs (2020)
 Property 4: 347m³ per 2 months – 15 ERUs (2019) – 13 ERUs (2020)

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30

Calculated Utility Rates (Water & Sewer) Range of Commercial Users (Preferred)



Total Charges illustrated are bimonthly

Property 1: 377m³ per 2 months – 15 ERUs
 Property 2: 107m³ per 2 months – 4 ERUs
 Property 3: 96m³ per 2 months – 4 ERUs
 Property 4: 5m³ per 2 months – 1 ERUs

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31

Summary of Key Outcomes and Concluding Comments

- Any rate structure adjustment will lead to changes in customers total bills – the total revenue requirement remains **constant** in all scenarios
- Calculated rates continue to provide Township with sufficient revenue to fund costs
- This study should be reviewed every 3-5 years (or earlier depending on the rate of growth, significant cost adjustments or changes to the pattern of consumption)

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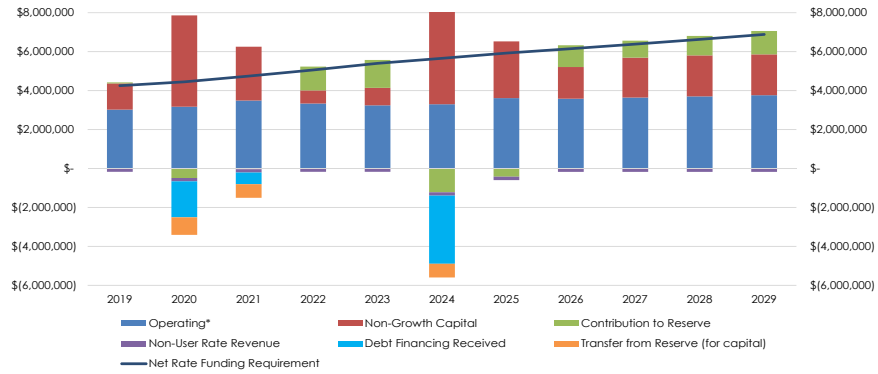
32

SUPPLEMENTARY SLIDES

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33

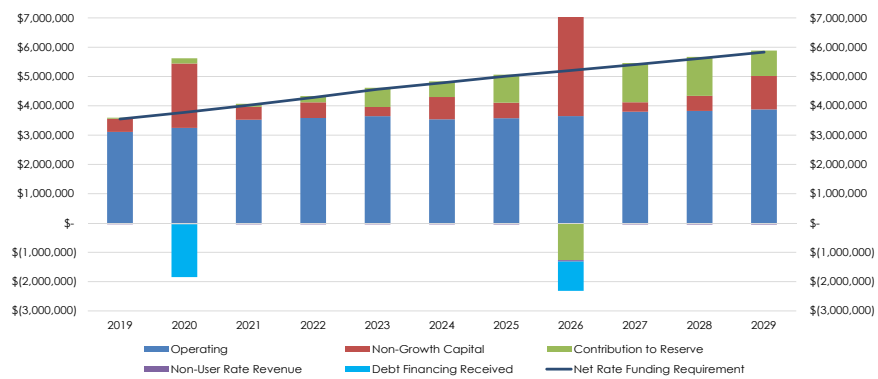
How much Revenue Needs to be Collected from Water Rates?



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34

How much Revenue Needs to be Collected from Sewer Rates?



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35

Status of Reserve Funds: Short-term Snapshot

Service	2018 Year-End Balance	2024 Year-End Projected Balance	Relationship to Replacement Value*
Water	\$2.30 M	\$3.18 M	1.9% (of \$168.1 M)
Sewer	\$3.21 M	\$6.97 M	6.3% (of \$109.7 M)
Total Combined	\$5.51 M	\$10.15 M	3.7% (of \$277.8 M)

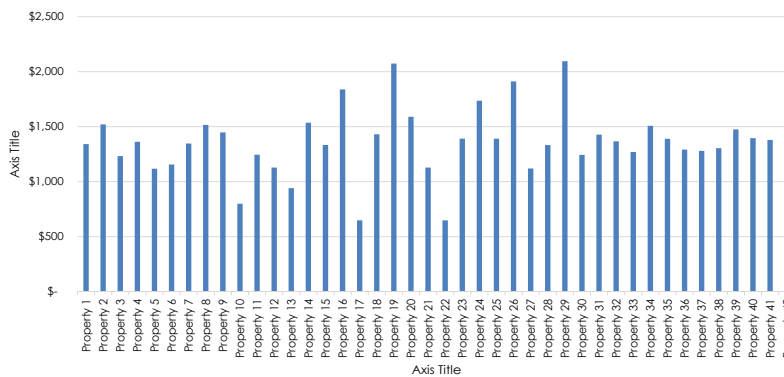
*The current replacement value of water and sewer infrastructure has been provided by the Township of Loyalist and inflated to 2024\$ for comparison purposes.

- Summary of reserve funds in the short-term:
 - **Water:** reserves are projected to increase, although, the projected balance is less than 2% of the total water system replacement value in 5-years.
 - **Sewer:** reserves are projected to increase and the projected balance is about 6% of the total sewer system replacement value in 5-years.

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36

Average Cost per Actual ERU by Multi-Unit Property



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37

Water Harmonized including utilities general allocation

	2016 revised budget	2017 revised budget	2018 revised budget	2019 revised budget	2020 forecasted	2021 forecasted	2022 forecasted	2023 forecasted	2024 forecasted
Harmonized revenue (user rate and other)	(3,210,400)	(3,678,800)	(3,877,900)	(4,425,100)					
salaries and wages	2%	773,100	826,700	819,800	870,100	887,500	905,300	923,400	941,900
internal allocations	2%	459,500	489,000	442,500	444,600	453,500	462,600	471,900	481,300
debt principal & interest		600,200	520,700	504,100	503,100	500,000	455,300	394,400	247,500
contracted services	2%	25,200	27,500	41,500	41,900	42,700	43,600	44,500	45,400
insurance	2%	31,200	32,300	32,100	33,400	34,100	34,800	35,500	36,200
utilities	5%	64,000	65,000	69,000	69,000	72,500	76,100	79,900	83,900
all other materials, supplies, expenses	2%	725,100	792,100	882,400	857,500	874,700	892,200	910,000	928,200
capital reserve fund allocation		425,800	711,400	853,500	1,347,100	see below	see below	see below	see below
Transfer to reserve funds and internal loan payments		206,300	214,100	232,100	258,400	see below	see below	see below	see below
		-	-	-	2,865,000	2,869,900	2,859,600	2,764,400	2,814,800
Additional staff forecasted					105,700	219,700	224,100	228,600	233,200
Total capital forecasted					4,298,100	2,764,500	667,800	882,700	7,932,000
Water meter replacement program					188,100		7,600	13,100	19,400
Total debt issuance forecasted					(1,850,000)	(600,000)			(3,500,000)
Total payments on new debt						197,500	241,700	241,700	241,700
Transfer to (from) reserve funds for capital and internal loan					(1,107,200)	(492,900)	1,238,300	1,413,700	(1,859,600)
Other revenue offset					(174,000)	(174,700)	(175,400)	(176,100)	(176,800)
Total revenue requirement forecasted					4,325,700	4,784,000	5,063,700	5,368,100	5,704,700

Sewer Harmonized including utilities general allocation

	2016 revised budget	2017 revised budget	2018 revised budget	2019 revised budget	2020 forecasted	2021 forecasted	2022 forecasted	2023 forecasted	2024 forecasted
Harmonized revenue (user rate and other)	(2,907,100)	(3,087,000)	(3,212,500)	(3,596,600)					
salaries and wages	2% 672,300	739,100	797,500	745,900	760,800	776,000	791,500	807,300	823,400
internal allocations	2% 411,500	417,700	338,800	343,400	350,300	357,300	364,400	371,700	379,100
debt principal & interest	542,600	509,700	547,000	540,100	536,900	531,800	526,800	521,700	346,600
contracted services	2% 16,800	16,100	17,600	31,000	31,600	32,200	32,800	33,500	34,200
insurance	2% 30,500	31,300	31,100	32,900	33,600	34,300	35,000	35,700	36,400
utilities	5% 175,500	193,500	211,500	241,500	253,600	266,300	279,600	293,600	308,300
all other materials, supplies, expenses	2% 882,600	1,033,300	1,048,800	1,164,600	1,187,900	1,211,700	1,235,900	1,260,600	1,285,800
capital reserve fund allocation	150,000	116,300	170,200	449,800	see below	see below	see below	see below	see below
Transfer to reserve funds and internal loan payments	25,300	30,000	50,000	47,400	see below	see below	see below	see below	see below
					3,154,700	3,209,600	3,266,000	3,324,100	3,213,800
Additional salaries forecasted					83,000	172,700	176,100	179,600	183,200
Total capital forecasted					2,397,800	442,900	534,500	313,400	760,700
Total debt issuance forecasted					(1,800,000)				
Total payments on new debt						132,400	132,400	132,400	132,400
Transfer to (from) reserve funds for capital and internal loan					135,100	82,800	196,500	586,400	522,000
Other revenue offset					(49,350)	(50,100)	(50,850)	(51,600)	(52,350)
Total revenue requirement forecasted					3,921,250	3,990,300	4,254,650	4,484,300	4,759,750

Fairfield Water

	2016 revised	2017 revised	2018 revised	2019 revised	2020	2021	2022	2023	2024		
	budget	budget	budget	budget	forecasted	forecasted	forecasted	forecasted	forecasted		
salaries and wages	2%	409,900	366,500	350,600	359,700	366,900	374,200	381,700	389,300	397,100	
internal allocations	2%	386,700	344,600	329,500	366,800	378,100	380,700	401,500	413,500	425,800	
debt principal & interest		513,200	461,500	449,200	441,800	438,700	394,000	331,100	186,200	183,800	
contracted services	2%	20,400	21,400	37,400	37,400	38,100	39,700	40,500	41,300	41,300	
insurance	2%	5,200	6,800	6,300	8,400	8,600	8,800	9,000	9,200	9,400	
utilities	5%	24,000	24,000	24,000	24,000	25,200	26,500	27,800	29,200	30,700	
all other materials, supplies, expenses	2%	451,800	486,400	532,400	507,200	517,300	527,600	538,200	549,000	560,000	
capital reserve fund allocation		375,800	617,900	723,100	979,700	see below	see below	see below	see below	see below	
Transfer to reserve funds and internal loan payments		296,300	299,100	297,100	238,600	Note 1	Note 1	Note 1	Note 1	Note 1	
		2,393,300	2,738,000	2,890,200	3,163,600	1,972,900	1,959,700	1,931,000	1,816,900	1,848,100	
Capital projects forecasted											
431- Fairfield Water Treatment Plant					161,986						Replacement
431- Fairfield Water Treatment Plant					8,160						Fairfield Main Building building mechanical
431- Fairfield Water Treatment Plant					424,843						Reject drives to VFD
431- Fairfield Water Treatment Plant					99,728						Membranes
432- Fairfield Water Distribution					1,469,437						GAC and media
432- Fairfield Water Distribution					405,697						Water Pipes on Tareyton, Deerfield, Chesterfield, Bakers, Upper Park, Bayview
431- Fairfield Water Treatment Plant						8,323					Reject drives to VFD
431- Fairfield Water Treatment Plant					569,021						Intake Equipment
431- Fairfield Water Treatment Plant					38,081						Waste water pump, piping, chemical storage
431- Fairfield Water Treatment Plant					400,000						Membranes
432- Fairfield Water Distribution					1,246,188						Water Pipes on Manitou, Sherwood
435- Amherstview Water Tower					81,182						Building Fixtures
431- Fairfield Water Treatment Plant						8,490					Reject drives to VFD
432- Fairfield Water Distribution						20,581					Water Meters - various
434- Odessa Water Tower						6,239					Mechanical equipment
434- Odessa Water Tower						73,087					Piping, valves, re-chlorination system
435- Amherstview Water Tower						44,163					General Site Services
435- Amherstview Water Tower						61,312					Building Electrical
435- Amherstview Water Tower						8,759					Mechanical Equipment
431- Fairfield Water Treatment Plant								281,694			General Site Services
431- Fairfield Water Treatment Plant								8,659			GAC Scada / Electrical
432- Fairfield Water Distribution								417,412			Reject drives to VFD
432- Fairfield Water Distribution								36,487			Water Pipes on Westfield, Park
434- Odessa Water Tower								92,730			Water Meters - various
431- Fairfield Water Treatment Plant									24,820		Building Fixtures
431- Fairfield Water Treatment Plant										49,638	Intake Scada / Electrical
431- Fairfield Water Treatment Plant										52,120	Raw Water Scada / Electrical
431- Fairfield Water Treatment Plant										8,833	High lift Scada / Electrical
431- Fairfield Water Treatment Plant										225,350	Reject drives to VFD
432- Fairfield Water Distribution										4,576,144	High lift Pumps
432- Fairfield Water Distribution										21,453	Water Pipes on Aubury, Hevergal, Rothwell, Littlefield, Addington, Amherst
432- Fairfield Water Distribution										9,453	Hydrant replacement - various
432- Fairfield Water Distribution											Water Meters - various
					2,569,491	2,342,795	266,794	836,983	4,267,809		

Note 1: The draft rate model is based on hamorized user rates therefore transfers are reflected in the total revenue requirement in page 1 for rate smoothing.

Bath Water

	2016 revised budget	2017 revised budget	2018 revised budget	2019 revised budget	2020 forecasted	2021 forecasted	2022 forecasted	2023 forecasted	2024 forecasted
salaries and wages	267,800	192,000	194,000	257,400	262,500	267,800	273,200	278,700	284,300
internal allocations	2%	280,200	300,700	297,100	302,300	308,300	314,500	320,800	327,200
debt principal & interest	87,000	59,300	54,900	61,300	61,300	61,300	61,300	61,300	61,300
contracted services	2%	-	2,000	3,000	3,000	3,100	3,200	3,300	3,500
insurance	2%	3,400	3,800	3,700	3,800	3,900	4,000	4,200	4,300
utilities	5%	40,000	41,000	45,000	45,000	47,300	49,700	52,200	54,900
all other materials, supplies, expenses	2%	205,400	240,100	250,200	209,600	213,800	218,100	222,500	227,000
capital reserve fund allocation	50,000	93,500	130,400	367,400	see below	see below	see below	see below	see below
Transfer to reserve funds and internal loan payments	-	5,000	5,000	8,200	Note 1	Note 1	Note 1	Note 1	Note 1
	913,800	937,300	983,300	1,258,000	900,200	918,600	937,400	956,600	976,100
Capital projects forecasted (net of CSC funding where eligible)									
441- Bath Water Treatment Plant				39,001					
441- Bath Water Treatment Plant				850,000					
442- Bath Water Distribution				485,250					
442- Bath Water Distribution				176,646					
443- Bath Water Tower				61,171					
443- Bath Water Tower				10,444		345,450			
441- Bath Water Treatment Plant						122,984			
441- Bath Water Treatment Plant						299,308			
442- Bath Water Distribution						755			
442- Bath Water Distribution							13,282		
442- Bath Water Distribution								2,034,740	
442- Bath Water Distribution								14,415	
442- Bath Water Distribution									2,589,155

Replacement
 Bath WTP Building mechanical
 Bath Water System Redundancy
 Oversizing Water Pipes on Main
 Water Meters - various
 Piping and valves
 General Site Services
 Water Pipes on Main
 General Site Services
 Package Plant Scada / Electrical
 Water Meters - various
 Water Meters - various
 Water Pipes on Easement, Main, Sir John, Academy, Mott
 Water Meters - various

Note 1: The draft rate model is based on hamorized user rates therefore transfers are reflected in the total revenue requirement in page 1 for rate smoothing.

Loyalist East Sewer

	2016 revised Budget	2017 revised budget	2018 revised budget	2019 revised budget	2020 forecasted	2021 forecasted	2022 forecasted	2023 forecasted	2024 forecasted	
salaries and wages	2%	334,800	305,800	262,000	256,500	261,600	266,800	272,100	277,500	283,100
internal allocations	2%	323,800	463,800	448,000	454,400	463,500	472,800	482,300	491,900	501,700
debt principal & interest		399,500	366,000	403,900	397,000	393,800	388,700	383,600	378,500	203,500
contracted services	2%	7,500	7,500	9,000	17,500	17,900	18,300	18,700	19,100	19,500
insurance	2%	5,200	5,600	5,400	7,500	7,700	7,900	8,100	8,300	8,500
utilities	5%	75,500	79,500	77,500	88,500	92,900	97,500	102,400	107,500	112,900
all other materials, supplies, expenses	2%	502,700	599,900	563,300	580,500	592,100	603,900	616,000	628,300	640,900
capital reserve fund allocation		100,000	66,300	88,200	365,400	see below	see below	see below	see below	see below
Transfer to reserve funds and internal loan payments		21,000	25,000	25,000	30,800	Note 1	Note 1	Note 1	Note 1	Note 1
		1,770,000	1,920,000	1,882,300	2,198,100	1,829,500	1,855,900	1,883,200	1,911,100	1,770,100
Capital projects forecasted										
402 - Loyalist East Sewer Collection System					1,175,399					replacement
402 - Loyalist East Sewer Collection System					250,000					Sanitary Mains on Tareyton, Bakers, Chesterfield
403 - Lakeview Sewage Pumping Station					376,729					Sanitary Main Replacement Reserve Fund
401 - Loyalist East Sewage Treatment Plant					97,000					Lakeview PS Building equipment
402 - Loyalist East Sewer Collection System						116,567				Piping and Valves
401 - Loyalist East Sewage Treatment Plant						250,000				Final Effluent Instrumentation
402 - Loyalist East Sewer Collection System							10,394			Sanitary Main Replacement Reserve Fund
401 - Loyalist East Sewage Treatment Plant							250,000			Alum Chemical Feed System
402 - Loyalist East Sewer Collection System								5,000		Sanitary Main Replacement Reserve Fund
401 - Loyalist East Sewage Treatment Plant								250,000		Blot/Filter Media
402 - Loyalist East Sewer Collection System									250,000	Sanitary Main Replacement Reserve Fund
405 - Bridge Street Pumping Station									61,649	Building mechanical
					1,899,128	366,567	260,394	255,000	111,649	

Note 1: The draft rate model is based on hamorized user rates therefore transfers are reflected in the total revenue requirement in page 2 for rate smoothing.

Bath Sewer

		2016 revised	2017 revised	2018 revised	2019 revised	2020	2021	2022	2023	2024	
		budget	budget	budget	budget	forecasted	forecasted	forecasted	forecasted	forecasted	
salaries and wages	2%	242,100	165,100	260,300	236,400	241,100	245,900	250,800	255,800	260,900	
internal allocations	2%	275,100	310,200	305,300	313,500	319,800	326,200	332,700	339,400	346,200	
debt principal & interest		143,100	143,100	143,100	143,100	143,100	143,100	143,100	143,100	143,100	
contracted services	2%	4,500	4,500	7,500	12,000	12,200	12,400	12,600	12,900	13,200	
insurance	2%	2,700	3,800	3,800	4,200	4,300	4,400	4,500	4,600	4,700	
utilities	5%	100,000	114,000	134,000	153,000	160,700	168,700	177,100	186,000	195,300	
all other materials, supplies, expenses	2%	312,000	367,800	385,700	443,400	452,300	461,300	470,500	479,900	489,500	
capital reserve fund allocation		50,000	50,000	82,000	84,400	see below	see below	see below	see below	see below	
Transfer to reserve funds and internal loan payments		4,300	5,000	5,000	5,000	Note 1	Note 1	Note 1	Note 1	Note 1	
		1,133,800	1,163,500	1,326,700	1,395,000	1,333,500	1,362,000	1,391,300	1,421,700	1,452,900	
Capital projects forecasted (net of CSC funding where eligible)											
411- Bath Sewer Treatment Plant						11,211					replacement
413- Bath Sewage Pumping Station #1						82,543					Alum Chemical Feed
413- Bath Sewage Pumping Station #1						298,846					General site services
411- Bath Sewer Treatment Plant								243,810			Building mechanical
413- Bath Sewage Pumping Station #1								12,817			Generator and transfer switch
411- Bath Sewer Treatment Plant									25,991		General site services
411- Bath Sewer Treatment Plant										23,993	General site services
411- Bath Sewer Treatment Plant											Headworks grinder
						392,600	-	256,628	25,991	23,993	

Note 1: The draft rate model is based on hamorized user rates therefore transfers are reflected in the total revenue requirement in page 2 for rate smoothing.

Utilities General (split)

		2016 revised budget	2017 revised budget	2018 revised budget	2019 revised budget	2020 forecasted	2021 forecasted	2022 forecasted	2023 forecasted	2024 forecasted	
Other revenue	2%	(6,700)	(6,700)	(6,700)	(6,800)	(6,900)	(7,000)	(7,100)	(7,200)	(7,300)	
salaries and wages	2%	190,800	536,400	550,300	505,900	516,000	526,300	536,800	547,500	558,500	
internal allocations	2%	(374,700)	(712,600)	(829,000)	(849,000)	(866,000)	(883,300)	(901,000)	(919,000)	(937,400)	
debt principal & interest		-	-	-	-	-	-	-	-	-	
contracted services	2%	9,600	8,100	2,100	3,000	3,100	3,200	3,300	3,400	3,500	
insurance	2%	45,200	43,700	43,700	42,400	43,200	44,100	45,000	45,900	46,800	
utilities	5%	-	-	-	-	-	-	-	-	-	
all other materials, supplies, expenses	2%	135,800	131,100	199,600	281,400	287,000	292,700	298,600	304,600	310,700	
capital reserve fund allocation		-	-	-	-	see below	see below	see below	see below	see below	
Transfer to reserve funds (fleet general)	2%	-	-	40,000	23,100	23,600	24,000	24,400	24,800	25,200	
		-	-	-	-	-	-	-	-	-	
Capital projects forecasted - asset type											
451- Utilities Vehicles/Equipment						55,566	152,570	34,993	64,841		replacement vehicles/equipment
452 - Millhaven Garage						156,625					steel roof
452 - Millhaven Garage										850,142	General site services
						212,191	152,570	34,993	64,841	850,142	

APPENDIX A - Summary of comments at user rate public consultation on September 23, 2019 (responses in *italics*)

- Some users expressed concern regarding rate increases of 8% in the past five years and that any further increases may be detrimental to many residents on a fixed income. One user noted that they expressed their concerns to their Councilor with no response. *(both scenarios in this study do not propose increases of this magnitude. General inflation in operating and construction costs, along with the fluctuations in capital requirements lead to a smoothed annual rate increase. The Chief Engineer provided some history of user rates in past years (pre-2008), in that the Township would have only collected revenue mainly to cover operating costs, which resulted in significant increases over the past 10 years to meet provincial regulations in both environmental and financial planning capacities (i.e. asset management))*
- Under status quo scenario, one user concerned over initial increase in year one of 6% and why they cannot see a lower increase earlier as outlined in years 3-5. Additionally, there were questions regarding overall consumption patterns and the relationship with rates *(Structure of rate increases under this scenario are in draft. Overall impact of further smoothing will affect overall cash flow and reserve fund continuity from year to year depending on volume of planned capital replacements. Overall consumption patterns are constant despite forecasted growth to account for overall trending reduction in consumption per household)*
- Under status quo scenario, a user questioned whether annual increases would be split between fixed and consumption portions, whereby majority of the increase would be to the consumption rate. *(Second proposed scenario outlines transition from to a more volumetric rate structure)*
- One user had questions relating to costs by area (Amherstview, Odessa, Bath) and whether Odessa is subsidizing costs for Amherstview. One user requested a breakdown of costs by area. *(the Chief Engineer discussed the history of capital works occurring within areas and that Odessa had some significant work completed in past years. It was reiterated by staff and Hemson that rates are now harmonized, however, costs by area were subsequently posted on the Township's website, as requested)*

- Some users had questioned why the Township's water and sewer utilities cost more to operate compared to neighboring municipalities, and furthermore, how much of costs are subsidized by Corrections Services Canada ("CSC"). *(The Director of Community & Customer Services (formerly the Utilities Manager) explained that the Township runs four treatment plants which results in a much higher cost compared to Napanee. Additionally, Kingston has multiple treatment plants with a much higher user base. The costs to run a treatment plant in some capacities can be comparable, nonetheless. The Director also provided some history in that due to amalgamation the Township had six treatment plants to operate, of which one was decommissioned in 1999 and one in 2008-2009. The costs to decommission a plant would be substantial. The Chief Engineer outlined the approximate share by CSC being a portion of operating costs as per the agreement and approximately 55% of eligible capital costs (for Bath collection and treatment only))*
- One user claimed they consume very little but advocated for larger families that consume more. They noted that if rates continue at this rate that it will lead to housing vacancies.
- One user asked whether the Township could subsidize a portion of costs from the general rate *(Hemson noted that this is uncommon, and utilities tend to be self-sustaining. Additionally, there are several residents in the rural community that currently do not have these services)*
- Two users asked whether the Township provides incentives to residents such as replacing a toilet or providing barrels to water their lawn. The Township previously partnered with a third party, however, there was not enough demand. One user claimed that despite the demand, this should still be offered by the Township to promote conservation and reduce costs to treat water associated with lawn care and assist with stormwater function.
- One user requested clarification of proposed changes to multi-residential rates *(Currently, the Township charges a number of fixed rates based on the units, which may not be a direct relationship of usage. It will be proposed that the fixed charge is based on actual equivalent residential units ("ERUs") in relation to the consumption of that dwelling).*

**Loyalist Township Staff Report
Water and Sewer Charges and Rates – Results of Developer and Public
Consultations
SR-1171 ADDENDUM**

Meeting: Regular Council – 15 Oct 2019
Department: Business Services Department
Addendum date: October 11, 2019
Author: Brianne MacNevin, Senior Financial Analyst

Status:

The Township received feedback from a developer subsequent to approval of Staff Report-1171. There were some initial questions and requests of information relating to connection charges and user rates that have been provided and will also be available to the public on the Township's website. All verbal concerns expressed are related to multi-residential user rates associated with the Township's existing rate structure of how these units are billed for water and wastewater services. The key messages were as follows:

- Loyalist Township's rate structure is an anomaly for multi-residential users as compared to many other municipal utilities;
- Developers and landlords would like to see one equivalent fixed charge per meter size regardless of the number of meters within a unit as whole;
- Investing in apartments in Amherstview is not attractive, largely due to the reduced overall return on investment from utility user rates;
- Developers are concerned about available water and sewer capacity in the future within the Township and the impact on future development;
- Township's Council has advocated for apartments within Amherstview and should work together with major developers and landlords as partners to increase overall population density; and
- Perception that user rates for multi-residential units should reflect the overall cost to provide water and sewer services specific to the infrastructure associated with each multi-residential building (i.e. water and sewage pipe).

Analysis:

The comparison of structures discussed weighted heavily on Kingston's structure whereby apartments are considered commercial properties if they exceed three units and one fixed charge is imposed based solely on meter size. The Township's structure requires multi-residential units to pay the number of equal fixed charges by the number of units. The current draft rate structure proposes that the number of fixed charges be based on equivalent residential units ("ERUs") which would provide a more direct correlation with consumption. This would be the same structure as the Township's current commercial, industrial, and institutional user rates are billed on. While Kingston's by-law is not specific as to whether the number of fixed charges will depend on the number of

meters held by one apartment building, it is worth noting that the majority of apartment buildings within the Township have a meter for each unit (with the exception of some older buildings). It is important to note that Kingston's previous user rate study outlined the fact that cost recovery was inequal with their previous rate structure between residential and commercial areas and thus, has passed a 36% increase in rates from 2019 to 2022 for specific meter sized commercial users with only an 11% rate increase residentially during the same period. Kingston also has the demographic to allow for some recovery between other commercial users to reach for an eventual 1:1 cost recovery between areas, as they claim.

The Township's multi-residential rate structure is an anomaly; however, it is staff and Hemson's opinion that it provides for an overall equal distribution of costs based on consumption between user groups, especially as staff are proposing a fixed rate charge to be based on ERUs, as mentioned. The Township is 100% metered and therefore has the data to measure consumption by service address, and in some cases also by individual apartment unit and analyze the trend in ERUs. If the Township decided to use a standardized meter equivalency factor, it is staff's opinion that the Township would not be using its data to its full potential by providing fair and equitable rates to all user groups. With the proposed changes in multi-unit billing method, all buildings and homes will pay on an equal basis for the water that they consume.

While it is important to have a diverse Township and affordable housing, the revenue requirement for the water and sewer systems is constant regardless of rate structure chosen (i.e. the costs do not fluctuate relative to the rate structure employed). If Council chooses to modify the proposed rate structure to the advantage of the multi-residential community, a shift in revenue would need to be placed on other user groups, which would put upward pressure on the rates. This would acknowledge, in staff's opinion, that apartments would pay a lower rate for receiving the same water and sewer services as one means to attract the development of more apartments in the Township. The consideration of subsidization of housing units through more favourable water and sewer rates should be part of a much broader strategic evaluation and discussion around the economic factors that may or may not discourage apartment development.

Hemson has completed a high-level analysis on the current revenue generated from the multi-residential community, which is approximately 10% of total water and wastewater revenue requirement from 43 multi-residential units across the Township. If it is assumed at a high level that most meters installed in multi-residential properties are 2", then applying a standardized equivalency factor to the fixed charge would result in approximately \$155,000 of revenue to be picked up by other user groups in the transitional 40:60 fixed/consumption scenario and \$195,000 on the status quo scenario (60:40 fixed consumption). This would translate to at least approximately \$29 per year (\$4.83 bimonthly) per user and would be considered the minimum impact in that some smaller units have smaller meter sizes than what has been assumed for this estimate. Larger multi-unit apartment buildings would see a significant decrease in their bill, and

very low volume apartments with less units would see an increase in their bill if they are using less than the meter's capacity.

It is important to remember that ultimately the final costs to the Township comes down to the amount of water consumed by any building. With metering in place for all buildings there is logic in continuing to bill using the meters and any rate block based on a meter size will ultimately have to be based on the average consumption of the unit types and the cost of providing that volume of water. Charging by the meter or service size would work against the philosophy of ensuring the whole billing system is to be fair and equitable. Loyalist rates may or may not exactly match the overall rates of other communities, as the rate structures were originally set to create a fair and equitable approach for users to share the cost of the services.

Furthermore, it would be prudent to provide the same analysis and treatment to commercial, industrial, and institutional users. This would require further analysis and resources to determine the meter size for each individual service address, since the Township bills strictly based on ERUs (consumption). A similar treatment to this group would result in further rate increases to the residential user to recover this revenue as commercial, industrial and institutional also represent approximately 10% of revenue requirement.

A complete narrative of the discussion and questions with Township responses are included in an Appendix of this addendum.

Appendix – discussion with developer subsequent to report date (Township responses in *italics*)

- **The Township's rate structure is not comparable to other municipalities. If this rate structure is considered equitable why aren't other municipalities following it?**

(Hemson noted that the Township's structure for multi-residential units is considered sophisticated and robust in terms of its ability to track consumption and bill accordingly, however, is not considered common based on rate studies completed in the past. The Chief Engineer noted that other municipalities that are following the meter size equivalency standard method may simply be perpetuating this approach because that is how it has always been done prior to the implementation of water meters and municipalities are reluctant to change and shifts in rates between user groups as a result. At this point, the method in which municipalities allocate costs between user groups is unknown, and ultimately subjective and would require professional judgment. The Township's method of allocating costs is considered equal and fair in the opinion of staff, whereby overall cost is recovered as a factor of consumption at a high level. When comparing multiple municipalities, there are a number of factors at play that determine the appropriate rate structure which would include, but is not limited to, the demographics including user groups and commercial proportion of service addresses, the costs associated with the number of treatment plants and other infrastructure, other available revenue sources relating to utilities in larger municipalities (i.e. appliance rentals), the overall population density in relation to total kilometers of water and sewer, the state of current infrastructure, current debt levels, and overall reserve fund levels that are discretionary to Council).

- **Developers are concerned about available capacity in the future within the Township**

(The Chief Engineer and Director of Economic Growth & Community Development noted that the Township has two water and two wastewater treatment plants. The two water plants have annual maximum day flows that reach 60% of plant capacity in Fairfield and 39% in Bath. Wastewater plants are at 53% in Amherstview and 62% in Bath of its average annual daily flow. The industry standard is that Environmental Assessment and detailed design should start when plants are in the 80-85% capacity range. The Township's capacity allocations are evaluated and confirmed on an annual basis and available capacity is updated as necessary. Each of the three larger communities within the Township have a draft plan approved lot inventory in excess of the expected 10-year growth for those communities. Work on the Bath water treatment plant designed to facilitate future capacity growth is currently underway. Master plan process is currently just underway as the former plans are now completed. Based on the available capacity and growth models the Township is planning to start plant expansion for at least two facilities in the next decade with construction planned shortly thereafter. Since the systems are relatively small, capacity has needed to be carefully managed and this will remain so. The proposed

new impost fee structure includes the evaluation of the necessary projects required to expand critical infrastructure to match the growth expectations).

- **Perception that growth projects are included in the user rate**
(The Director of Economic Growth & Community Development provided history on the compilation of the budgets in the last 20 years and assured that growth has not been included within the capital replacement schedule and development of the user rate. Additionally, the Senior Financial Analyst concluded that all capital replacement projects provided to public come directly from the Township's asset management software and are existing assets that are reported on the audited financial statements. These assets' lifecycles have come to an end either by condition assessment or age. It was also mentioned that a list of growth projects relating to the connection charge is provided on the Township's website that outlines any appropriate reductions in terms of post benefit periods and benefits to existing shares).

- **Perception that servicing costs for an apartment should be lower than the servicing of an equivalent streetscape of single family or lower density homes on the basis that a smaller length of pipe and one service is less infrastructure per capita for the apartment than for low-density housing**
(The Chief Engineer noted that this point of view is rational, but the effects were likely very minimal as the Township's pipe assets are expected to last for 50 years (ductile iron) or 80 years (PVC). As such, the replacement costs of these assets (a length of pipe the width of an apartment block site) spread over the long life of the asset is a relatively small proportion of the overall costs of the water system which includes operational costs (labour, testing, administrative, chemicals, testing, debt financing and equipment repairs) at the treatment plants and storage facilities as well as distribution/collection operational costs (labour, equipment repairs and energy costs). Additionally, the replacement of major system infrastructure must be recognized such as plants, storage and trunk mains. In short, the total infrastructure costs to needed to service a property for both water and wastewater are much greater than just the costs of the local piping).

Questions and requests received in writing that have not been discussed in detail in past staff reports (Township responses in *italics*):

- **Whether a peer review was completed for the infrastructure improvements and need to increase revenue requirements, and whether there were public processes regarding servicing master plans** *(The Township's existing water and sewer master plans have reached the end of their approximately 20-year implementation window. All the expected construction noted in the plans has been completed. The Township is in the early stages of initiating new Master Plans. The Township is already aware of treatment plant capacity limitations impacting soon for at least three of the four Township operated treatment facilities and will require*

additional technical review and public consultation within the period covered by this rate study. It is expected that the Amherstview treatment facilities will require expansion in approximately ten years and will be eventually incorporated in the connection charge. Currently, due to capacity projections within the planning period, most of these costs are beyond the current benefit period and thus are not included in the connection charge calculation. Work has just been approved which will allow for growth at the Bath water plant in a cost-efficient manner.

All projects on the capital list and incorporated into the user rate represent replacement of the infrastructure as it reaches its lifecycle age. The Township has adopted an asset management policy and the capital replacement schedule follows the guidelines of this policy. Individual projects on the list are reviewed by a project team that includes Utility department's operators, supervisors and manager, the department's Director, the Chief Engineer and the Township's Asset Manager. Capital project lists are updated annually and presented during the annual budget process which are open to the public).

- **How much of the revenue requirement could be considered fixed?** *(At a high-level and upon review of historical budgets of the Township and reviewing the cost allocation chart presented to public consultation on September 23rd, it is apparent that the nature of most costs included in the revenue requirement are fixed in nature except for specific materials and chemicals. Rate study results from the City of Ottawa was mentioned by Hemson that concluded that up to 90% of costs associated with providing water and sewer services are considered fixed while only 10% of the costs actually vary with consumption – the report states that this relationship is common amongst many utilities).*
- **Whether the fixed portion of multi-residential user bills could be reduced and thus redistributed to the remaining residential and non-residential users** *(As noted, this analysis was completed at a high level and is included in the staff report, however, it is likely that Council would have to consider changing the structure for non-residential users to mirror the meter size equivalent as well which would result in further revenue recovery from the residential user base).*
- **Request to run sensitivity analysis on a meter size equivalent structure for multi-residential units and one specific scenario to bring rate for the developer's specific apartment building comparable to Kingston** *(Hemson has provided high-level financial impacts to shifting this revenue to residential users as noted but would require further resources to complete a thorough analysis for both the multi-residential and non-residential shifts. Since fees are based on consumption specifically, data for meter sizes would need to be pulled in order to complete this, should Council direct this additional analysis to be done).*