

Corporate Report Budget Standing Committee

Report from Financial Management Services, Accounting

Date of Report: February 15, 2019 Date of Meeting: March 6, 2019

Report Number: FMS-B004-2019 **File:** 18.45.254

Subject: 2019 Water and Wastewater Budget and Associated Rates

Recommendation

That the Water and Wastewater Financial Plan updates, included as Appendix 1, be approved by Budget Standing Committee (BSC); and

That the updates be forwarded to City Council for approval, and upon approval, be used by staff as the guidance for the preparation of the water and wastewater budgets for the 2020-2029 period of the plan; and

That both the 2019-2029 Water and Wastewater Financial Plans be approved by a resolution of City Council in accordance with Ontario Regulation 453/07 ("O.Reg 453/07"); and

That a copy of both the 2019-2029 Water and Wastewater Financial Plans be submitted to the Ministry of Municipal Affairs and Housing as required by O.Reg 453/07 once approved by Council; and

Further, that a copy of both the Water and Wastewater Financial Plans be posted on the City's website.

Report

The Water and Wastewater budget is fully funded by user rates with no reliance on property taxes. The water and wastewater rates fund both operating and capital expenditures. This report seeks approval for the 2019 Water and Wastewater Budget and associated rates. The report is organized with the following sections:

- 1. Proposed Rates
- 2. Fixed Costs
- 3. Sustainable Funding of Infrastructure
 - a. Watermain replacement
 - b. Sanitary sewer replacement
- 4. Regional costs: (a) Regional water (b) Regional Wastewater
- 5. Automated Meter Reading (AMR) project
- 6. Additional FTE for water and wastewater Asset Management
- 7. Low Income Seniors Homeowner Credit Program for Water / Wastewater
- 8. Forecasting Water Volumes
- 9. Financial Stability of the Wastewater system

1. 2019 Water and Wastewater Proposed Rates General Rate Structure

The City's current water and wastewater structure is a combination of fixed and volumetric charges. Each customer account is charged a fixed rate for water and wastewater. In addition, the customer is billed volumetric rates for water and wastewater based on the amount of water used.

Recommended Water and Wastewater Rates

For 2019, staff is proposing an increase to both the water and wastewater fixed and volumetric rates. Staff recommend that effective April 1, 2019, the rate structure for recovering water and wastewater costs be the following:

	2019	2018	
Water			
Fixed (annual)	\$162	\$156	
Volumetric (per cm)	\$1.285	\$1.224	
Wastewater			
Fixed (annual)	\$108	\$96	
Volumetric (per cm)	\$1.966	\$1.890	

The proposed rates will result in an annual increase to the average ratepayer (at annual consumption levels of 170 cubic metres) of \$41.29 – a 5.28% increase. See appendix 2 for further details on the calculations.

Description	Amount
Water Rates	\$16.37
Wastewater Rates	\$24.92
Total Increase - \$	\$41.29
Total Increase - %	5.28%

2. The Fixed Charge - Water and Wastewater

In the City's current water and wastewater rate structure, the fixed charge is defined to be the cost of the City's annual replacement programs and fixed regional charges. For each of the systems these costs are calculated to be:

	Water	Wastewater
	Budget	Budget
Improvement program	\$5,700,000	\$2,500,000
Debt Charges	526,248	624,257
Total City Fixed Charges	\$6,226,248	\$3,124,257
Total City Fixed Charges	\$6,226,248	\$3,124,25

Regional Fixed Charges	2,920,423	20,740,949
Total Fixed Costs	\$9,146,671	\$23,865,206

Calculation of Recovery Rates:		
Based on 42,450 customers	\$215	\$562
2019 Proposed Rates	\$162	\$108
2018 Rates	\$156	\$96

As the chart indicates, the calculated fixed component of the City's rate structure should be \$215 for Water and \$562 for Wastewater. While staff does not propose that the 2019 rates be increased in one year to fully recover these costs, increases over time need to be considered. The increase in the fixed water and wastewater rates in 2019 will result in the recovery of a larger portion of the fixed costs to operate the water and wastewater systems. Due to the increasing cost of construction; especially related to underground services, there will be the need to increase fixed costs just to complete the same level of infrastructure work. Additionally, with the Region's commitment to increase its fees to the municipalities annually, there will be a corresponding increase to the City's fixed portion going forward.

3. Sustainable Funding of Infrastructure

The proposed 2019 Water and Wastewater budget contain the following levels of funding for watermain and sanitary sewer infrastructure replacement:

a) Watermain Replacement Program

The total length of watermain under the City's jurisdiction is approximately 606 km. The estimated replacement value in 2019 dollars is \$1,317 million.

Assuming an average service life of 50 years for the entire system, the annual cost for watermain replacement should be 2% of the total replacement cost of the whole system, or \$26 million, to maintain a sustainable watermain distribution system.

Staff continues to monitor the number and location of existing watermain breaks. A total of 86 breaks had occurred in 2017, which is approximately 23% below the 10-year average of 112 breaks per year. In 2018 there were a total of 116 breaks. Figure 1 presents a summary of the annual and rolling 10-year average number of watermain breaks over the past 15 years. As shown in the figure, the annual number of watermain breaks fluctuates significantly from year to year. Although the rolling average number of breaks has been declining, the rate of that decline has lessened over the last few years. This can largely be attributed to the fact that the watermain replacement budget has remained at \$5.5 million since 2008.

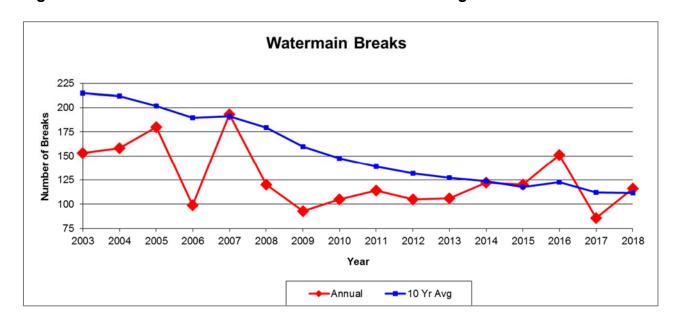


Figure 1 - Watermain Breaks - Annual and 10-Year Average

The proposed 2019 water budget includes \$5,700,000 for the replacement of watermains. The water budget addresses 1.1 km of previously approved projects and 2.3 km of newly identified watermain replacement. Additionally, there is a 0.075km section of new watermain proposed from Martindale Rd to Sawmill Rd which is also part of the 2019 program.

Watermain replacement is prioritized based on a number of criteria with the primary consideration being the previous number of breaks on a particular section. In addition, previous Council has directed that each year's water budget include an allocation of at least \$750,000 for the replacement of watermains in areas experiencing coloured water. In the 2019 budget, \$3,490,000 is proposed to be spent on replacement of old and deteriorated cast iron watermains, which are usually the cause of coloured water in the system.

At present, approximately 53% of the pipes in the watermain system are comprised of relatively new PVC (polyvinylchloride) pipe or other currently approved materials. The remaining 47% is comprised of various other older materials such as cast iron, ductile iron or transite.

Lead water services are replaced if encountered during a new watermain construction project or when repairing a water service leak. The City will replace the portion of the service on public property at the City's expense. As part of the Community Wide Lead Testing Program, the City will replace the public property side of a lead service when a lead exceedance is found or if the property owner replaces the private portion of the lead service line. Lead service lines are replaced with either copper or plastic service lines. The City has replaced approximately 188 metres of lead water services over the last three years.

b) Sanitary Service Replacement Program

The City currently has 570km of combined and sanitary sewers. The estimated replacement value of these sewers in 2019 dollars is in the order of \$900 million. The proposed 2019 Sanitary Sewer Improvement Program, funded by the wastewater budget, is \$2.5 million.

Sewers for replacement and rehabilitation have been selected on a priority basis. These priorities are set principally from the results of CCTV inspection reports. Information from Operations field personnel is also solicited when developing the program.

The combined sewers allow rainwater to enter into the sanitary sewer system. In 2018, the Region supplied the City with 15.5 million cubic metres of potable water and treated 22.2 million cubic metres of wastewater. The City's regional wastewater cost is not only influenced by the amount of water used but also the amount of precipitation the city received in the year.

Although funded from the Capital Budget, the construction of new storm sewers in combined sewer areas reduces the amount of surface water entering the sanitary or combined sewer system. This reduces the amount of rainwater that is treated at the treatment plants in addition to providing relief of potential basement flooding to the immediately adjacent areas as well as the properties upstream and downstream of the new sewers.

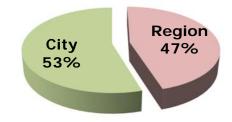
4. Regional Costs

Figure 2 – Region vs. City Water Expenditures

The City and Region are responsible for various aspects of water distribution. The Region is responsible for supply and treatment including all reservoirs and water towers. In general, watermains sixteen inches (400 mm) in diameter or larger are a Regional responsibility and the City is responsible for the smaller distribution watermains. There is also a shared responsibility for collection and treatment of wastewater between the City and the Region. The Region is responsible for treatment facilities, pumping stations, sludge disposal and sewers with

flows of six cubic feet per second or greater or sewers spanning a municipal boundary. The City is responsible for the remaining wastewater pipelines.

In effect, the Region is the service provider to the City, supplying potable water and treatment of wastewater. The cost to provide the service to lower tier municipalities is part of the Region's budget and each municipality



is charged its respective portion. The Region has committed to increasing its water and wastewater rates annually for the next ten years to ensure program sustainability. These increases will result in annual increases to City water and wastewater rates.

Determination of St Catharines' share of the Regional Costs

The calculation of each municipality's share is dependent upon the municipality's usage of each system (i.e. cubic metres of water purchased or cubic metres of wastewater treated). This means St Catharines' share of the total budget will change over time with our water and wastewater flows.

A) Regional Water Rates

The Region charges the lower tier municipalities for the supply of potable water using both a fixed monthly charge and a variable rate per cubic metre. The rates for 2019 (with comparable 2018 rates) are as follows:

Water	2019	2018	% increase (decrease)
Variable rate per cm	\$0.580	\$0.566	2.47%
Fixed Monthly Charge	\$243,369	\$232,163	4.83%

The above rates result in the City's 2019 draft Water budget including Regional costs of \$11,620,423, an increase of \$457,670 (4.10%) from 2018. As \$8,700,000 of these costs are related to the variable rate, this provides some protection to the City should the water consumption decline in 2019. The fixed annual charge of \$2,920,423 will be payable to the Region regardless of City water consumption.

B) Regional Wastewater Rates

The Regional wastewater charges contain no variable rates. The rates for 2019 (with comparable 2018 rates) are as follows:

Wastewater	2019	2018	%increase
Fixed Monthly Charge	\$1,728,412	\$1,621,805	6.57%

Figure 3 – Region vs. City Wastewater Costs

The Region is recommending increasing the wastewater bill to the Municipalities by over 6% per year for the next ten years to approach program sustainability.





Expenditure	Wa	ter	Wastewa	ter
City Costs	\$6,980,947	28.02%	\$3,711,799	13.40%
Water / Sewer Improvement Program	5,700,000	22.88%	2,500,000	9.03%
City Debentures	526,248	2.11%	624,257	2.25%
Capital Out of Revenue	86,000	0.35%	120,000	0.43%
Region	11,620,423	46.64%	20,740,949	74.89%
Total	\$24,913,618	100%	\$27,697,005	100%
Region Controlled Costs	\$11,620,423	46.64%	\$20,740,949	74.89%
City Controlled Costs	13,293,195	53.36%	6,956,056	25.11%
Total	\$24,913,618	100%	\$27,697,005	100%

The 2019 water and wastewater budget recommends an increase above the rate of inflation to both meet the Region's annual prescribed increase and to address the City's infrastructure deficit. The City is committed to increasing its own portion of the water / wastewater program as presented in the 10-year plan, to start to minimize the funding gap.

The details of the water and wastewater expenditures are available in Appendix 1.

5. Automated Meter Reading (AMR) Project

The City has been installing new automated water meters in residential properties since August 2014. The City's AMR program uses wireless technology to automatically collect water consumptions, diagnostic and status date from the City's water meters and automatically transfers that data to a database for billing, troubleshooting and analyzing.

The battery operated AMR transmitter is wired directly to the water meter inside the home and wirelessly communicates with mobile reading equipment installed in City owned meter reading vehicles. The AMR transmitter sends wireless signals to the mobile reading equipment three times per year currently and operates on Industry Canada licensed 900 MHz spectrum. These transmissions last for less than 1/8th of a second at power levels less than 2 watts.

The benefits associated with automated meter reading technology is the ability to monitor consumption levels on a property-by-property basis, and to use this consumption data to potentially assist property owners with leak detection.

AMR data has the ability to focus on inactive accounts to ensure there is no unauthorized usage. AMR has the ability to store 35 days of data which provides hourly data and assists staff in determining when the consumption occurred. AMR can reduce estimated reads and costs associated with re-billing accounts. Since AMR systems have very high accuracy and read percentages, the system reduces re-bill costs. An automated system will prove to be a more efficient method for obtaining these reads.

Currently the City bills every four months. Changing to monthly or bi-monthly billings may make it easier for customers to pay a monthly bill rather than a larger four-month bill. It could also result in a possible change in the collection process and collection rates. Once the AMR project is complete, Staff will be reviewing the options to increase the frequency of billing water accounts. Further reporting will occur prior to any changes in billing frequency. In addition, other costs that would be associated with manual meter reading could be eventually eliminated with automation which may include vehicle costs, cellular phone expenses, labour, maintenance and some general overhead expenses. Further technology upgrades will provide additional efficiencies in billing processes.

To date, 33,586 water meters have been upgraded to the AMR technology. The upgrade project is expected to be completed by the end of 2019.

6. Additional Full-Time Employee (FTE) for Water and Wastewater Asset Management

One of the recommendations is to hire an additional FTE for water and wastewater asset management. This position is required to assist with the delivery of Provincial Regulation 588/17, as the existing staff complement do not have the capacity to adequately address the enhanced asset management requirements while continuing to effectively deliver the construction program related to these assets.

The asset management responsibilities related to the water and wastewater system are one of many duties that are currently undertaken by engineering staff working in Transportation and Environmental Services. These asset management responsibilities include activities such as:

- Evaluation and rating the condition of the watermains / sewers through various means (watermain break records, water colour and pressure issues, CCTV sewer inspections, dye and smoke testing, operational issues, etc.)
- Updating and maintaining the watermain / sewer inventory and database, determination of the system replacement value and the proposed project cost estimates based on recent tender results
- Undertaking hydraulic, hydrologic modelling, master servicing studies, providing comments as required to Planning and Building Services staff related to servicing requirements for proposed developments

- Reviewing and applying for various external funding opportunities that may develop from time to time
- Establishing the annual proposed water and wastewater construction program while coordinating with other construction programs (i.e. City road and storm sewer programs, Region of Niagara works, etc), which includes capital budget estimates
- Coordinating with Financial Management Services staff to ensure project costs are properly allocated to the appropriate asset

The same staff that are responsible for these asset management activities are also responsible for the project management related aspects of the resulting construction projects. These project related aspects include preliminary design, detailed design (if utilized), utility coordination, construction tendering, contract administration and construction maintenance follow-up.

Due to current workload, project staff working on linear infrastructure projects (which include water and wastewater projects) are typically responsible for, on average, 15-20 active projects at any one time, worth approximately \$10-\$15 million per project staff person. Based on industry standards, this is considered to be at the upper limit of the number and value of projects that can be effectively managed per project staff person. Some of these staff are also tasked with the aforementioned asset management responsibilities associated not only with the water and wastewater infrastructure, but also all other of the City's linear assets (roads, sidewalks, storm sewers, watercourses, etc.)

With the enhanced asset management requirements related to Provincial Regulation 588/17, staff believe that the provision of an additional FTE dedicated to asset management related to water and wastewater infrastructure is necessary at this time. This additional FTE will also free up time to assist project management staff to more effectively deliver the construction program related to these assets.

7. Low Income Seniors Homeowner Credit Program for Water / Wastewater and Tenant Mailing Contracts

At the Budget Standing Committee (BSC) meeting of April 16, 2018, BSC directed staff to report back on the opportunity to extend the Low-Income Seniors Homeowner Credit Program for Water / Wastewater to renters who pay water bills and with information on how landlords pass on costs of water bills to renters.

Staff does appreciate the financial hardship that many of our residents encounter when they live on a fixed income. There are a number of factors that need to be considered prior to extending the Low Income Seniors Credit program to tenants. Staff will need to determine how to identify which tenants have leases where the utilities are included in their rent; if they pay independent of their monthly rent; if the Tenant Mailing Contract is current; how many would actually qualify; and finally, how the program would be funded.

There are certain risks and rewards associated with homeownership that do not apply to individuals who rent. Offering the credit to seniors who still own their own home is a

courtesy to the homeowner. The City's existing policy to provide annually a \$100 credit to Low-Income Senior homeowners was created for the benefit of those individuals continuing to own their homes. Staff identifies program eligibility for the rebate through the legal ownership of the property.

The City of St. Catharines offers the property owner a Tenant Mailing Contract for their tenant occupied properties. The water bill stays in the homeowner(s) name but it is mailed to the service address "c/o tenant." At no time is the account changed into the tenant's name. The Tenant Mailing Contract is a courtesy. Ultimately the owner is responsible for the water account at their property. The table below shows the history of Low-Income Senior Credit Program.

Table 1 – Budget to Fund Low-Income Senior Credit Program

YEAR	AMOUNT	NUMBER OF APPLICATIONS
2014	\$18,900	189
2015	\$20,300	203
2016	\$21,700	217
2017	\$20,900	209
2018	\$23,800	238
Total past five years	\$105,600	Average: 211

The cost to fund the program from 2014-2018 was \$105,600 and the average number of yearly submitted applications was 211. Appendix 3 provides full details of the City's Comparators. There are two comparator municipalities that provide a water account credit to low-income seniors who own their home. There is one additional Niagara municipality that offers a water account credit to Low-Income Seniors with the additional requirement that the annual consumption must be below 50 cubic metres. None of the comparator municipalities, nor other Niagara Region municipalities, provide a water account credit for low-income seniors who are tenants residing in or renting a residential property. Therefore, it is recommended that the City of St. Catharines continue its existing policy of an annual credit of \$100 on the water accounts for low-income seniors owning their home and that this credit not be extended to tenants.

Staff recommend that the City's Water collection policy be updated to remove Tenant Mailing Contracts and allow for unpaid arrears to be directly added to property taxes, which would free up staff resources to focus on tasks other than trying to collect on unpaid tenanted properties.

The *Municipal Act, 2001* is clear that fees and charges for the supply of a public utility may be collected in the same manner as taxes and added to the tax roll of the property where the public utility was supplied. There is no distinction as to who the recipient of the service was. Ontario Regulation 586/06 states that fees and charges for the supply of water and use of a sewage system are a public utility and as such are a priority lien against the property where it was supplied.

With respect to the tenant mailing contracts, there are many staff resources that are involved in managing tenanted occupied properties from our administration staff to the operation staff. Most comparator municipalities do not provide tenant mailing contracts to renters. See Appendix 3 for details. Although there are a number of municipalities that still allow for water bills to be transferred into the tenant's name, we are seeing a shift moving away from this practice.

The Town of Grimsby has eliminated the disconnection of water service as a means of collecting on overdue water accounts. Overdue water bills are now transferred directly to the respective property tax account.

The City of St Catharines has the ability to transfer any unpaid water account to the property tax account as a priority lien against the property and the property owner is ultimately responsible for the unpaid water account. An unpaid water account for a rented property is not the responsibility of the renter, but that of the property owner. Therefore, staff recommend that the City should discontinue its current practice to offer tenant mailing contracts for water accounts for rented properties.

8. Forecasting Water Volumes

An analysis of water purchases has shown conservation efforts by St Catharines water customers have resulted in significant reduction in cubic metres of water purchased from the Region. Since 1999 annual water purchases have decreased 43% from 27,310,000 cubic metres annually to 15,507,000 cubic metres in 2018. From 2007 to 2018 alone the decrease was 4.59 million cubic metres (22.9%). Each year staff review the history of water purchase volume and utilize that information to forecast what future volumes will be. Over the past years there has been concern as to the determination of how much further the volumes can decline. In effect, are we nearing the end of volume decreases, or is a significant decline still to come? In the process of this estimation, staff analyzed the water purchase based on three separate "seasons" of the year: **summer –** June to September; **winter** – November to February; **shoulder months –** March to May and October.

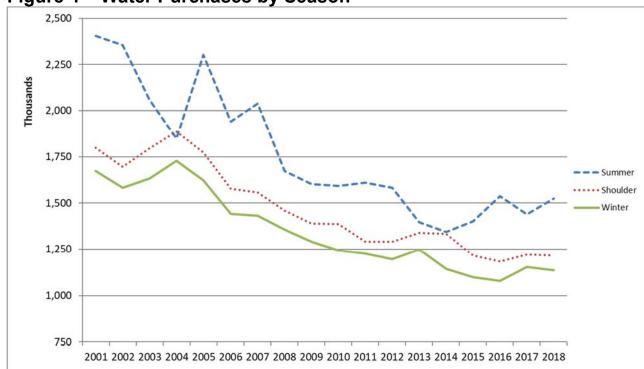


Figure 4 – Water Purchases by Season

The chart clearly depicts the average monthly summer consumption (the blue or top line) as the most volatile line. It fluctuates significantly each year. While the volume rebounded in 2016, in 2017 it declined and in 2018 rebounded again. The summer monthly consumption is still higher than either of the other "seasons" which are less volatile.

Reviewing 2018 water purchases, it appears that water consumption may be levelling off. The 2018 purchases from the Region totaled 15.5 million cubic metres of water. In 2017, the City purchased 15.25 million cubic meters and in 2016 purchased 15.18 million cubic meters. Staff estimate water purchases for 2019 will be more in line with more recent years and slightly higher than the 2015 levels of 14.8 million cubic metres of water. Staff estimate the 2019 purchases of 15.0 million cubic metres of water from the Region. With the changes to our climate, adaptation planning will be needed to manage the risks. Some climate related impacts St. Catharines has already felt include; extreme winds / fallen trees (2011), severe rainstorms / basement flooding (2014, 2017 and 2018), extreme cold / frozen water services (2015) and extreme dry periods / fire ban (2016). Additionally, record high water levels in Lake Ontario in the spring and summer of 2017 resulted in the closure of Lakeside Park. The severity and unpredictability of these events will be a challenge in the future. As the City moves forward with its Covenant of Mayors Program Requirements Action Plan in 2019 and future years, the impact on the City's water consumption and potential changes required to annual forecasts will be closely monitored by staff, as there will be financial impacts on the water and wastewater rates.

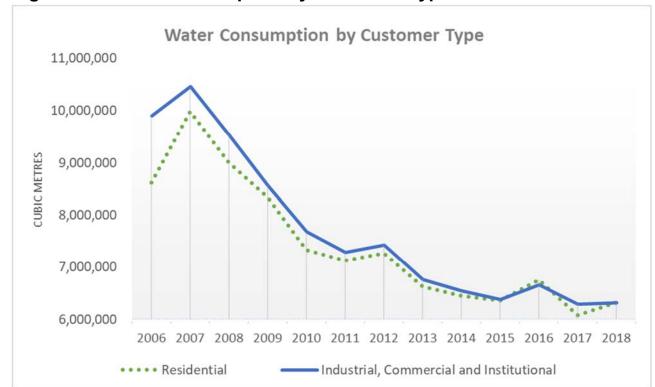


Figure 5 – Water Consumption by Customer Type

As shown in the graph above, since 2007 the City has seen a relatively steady decline in consumption (in cubic metres) of both the Residential and Industrial, Commercial and Institutional (ICI) customers. In 2011, ICI sector consumption began to move closer to the Residential sector until 2015 and 2016 where the ICI transitioned to below the Residential sector. Reflected in 2018 is a slight rebound in Residential consumption to meet the ICI consumption.

9. Financial Stability of the Wastewater System

A significant portion of the costs of the wastewater system are fixed. While the wastewater rates include a fixed portion, the majority of the revenue is collected through a variable rate based on water purchased by the customer.

When the majority of a rate structure consists of a variable rate, periods of declining consumption result in the reduction of the overall revenue. Consequently, the revenue generated does not cover the cost of the system. In the past number of years, this trend is changing. Details are shown in Table 2 below.

Table 2 – Water / Wastewater Annual Recovery / (Loss)

In millions of \$	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Revenue	\$26.45	\$26.64	\$27.38	\$25.71	\$25.80	\$24.86	\$25.32	\$23.46	\$22.50	\$20.12
Expenditures	\$25.58	\$25.66	\$26.02	\$25.18	\$25.53	\$25.07	\$25.25	\$24.00	\$23.35	\$21.65
Recovery / (Loss)	<u>\$0.87</u>	<u>\$0.98</u>	<u>\$1.36</u>	<u>\$0.53</u>	<u>\$0.27</u>	(\$0.21)	<u>\$0.07</u>	(\$0.54)	<u>(\$0.85)</u>	<u>(\$1.53)</u>

The positive results the last number of years have assisted in eliminating the accumulated deficit of \$1.87 million at the end of 2015. In effect, the water rates had been subsidizing the operations of the wastewater system. While many of the City's customers have both water and wastewater charges on their bills, there are customers who do not. As per guidelines from the Province, rates should be structured so that both systems maintain their own financial stability through separate rates.

Financial Implications

The proposed 2019 water and wastewater rates result in an increase for both water and wastewater rates. For the average ratepayer (at annual consumption levels of 170 cubic metres) they will pay \$822.67. This is an increase of \$41.29 or 5.28% over the amount they paid in 2018 of \$781.38.

Relationship to Strategic Plan

Economic Sustainability will be enhanced through:

• Optimizing capital infrastructure through effective asset management and sustainable investment.

Environmental Sustainability will be enhanced through:

 Review and update all municipal operations to minimize the impacts and ensure preparation for climate change. All sanitary sewer and storm sewer designs are undertaken using updated design criteria

Conclusion

Staff recommends that Council approve the 2019 water and wastewater rate increase, which for the average customer annual consumption of 170 cubic metres is 5.28% or \$41.29.

Prepared by:

T Sorrenti, Accounting and Budget Clerk M Kreuk, Manager, Budgets and Capital

Submitted and Approved by:

D Dillon, P.Eng. Director, Transportation and Environmental Services K Douglas, CPA, CMA Director, Financial Management Services / City Treasurer

Attachments:

Appendix 1 – 2019 Water and Wastewater Budgets

Appendix 2 – 2019 Water and Wastewater Annual Bill Change

Appendix 3 – Comparator Municipalities and Niagara Municipalities – Senior Credit Program and Tenant Mailing Contract Information

City of St Catharines Water/Wastewater Budget Summary

	Estimate			Actuals	
_	2019	2018	2018	2017	2016
Reserve at Beginning of Year	5,449,486	3,824,317	3,824,317	3,844,722	3,319,840
Revenues Less: Region expenditures	52,244,811 32,361,372	49,703,983 30,624,413	49,419,991 30,893,197	49,275,913 30,660,277	50,881,713 30,655,488
Net Revenue	19,883,439	19,079,570	18,526,793	18,615,637	20,226,224
City Expenditures Water Operating costs Water Debenture debt Water Infrastructure costs Sewer Operating costs Sewer Debenture debt Sewer Infrastructure costs	6,980,947 526,248 5,786,000 3,711,799 624,257 2,620,000 20,249,251	6,538,867 571,022 5,500,000 3,643,094 599,806 2,450,000 19,302,789	6,049,674 587,026 4,014,732 3,274,065 640,958 2,335,169 16,901,624	6,500,390 878,619 5,038,678 3,518,601 870,027 1,829,727	6,687,392 957,099 5,430,659 3,472,586 923,547 2,230,059 19,701,342
Annual Surplus/(Deficit)	-365,813	-223,219	1,625,169	-20,406	524,882
Reserve at End of Year	5,083,674	3,601,098	5,449,486	3,824,317	3,844,722
City total Region total	20,249,251 32,361,372 52,610,623	19,302,789 30,624,413 49,927,202	16,901,624 30,893,197 47,794,821	18,636,042 30,660,277 49,296,319	19,701,342 30,655,488 50,356,831
cm - purchased	15,000,000	14,800,000	15,507,748	15,258,218	15,189,384

WATER SYSTEM (515.XXX)

2019 Water Budget Summary

			Estim	nate	Α	ctual	
	Dept.	Acct.	2019	2018	2018	2017	2016
Operating Expenditures:							
General Administration	FMS	105	1,363,886	1,290,091	1,044,900	1,156,934	1,206,063
Engineering Overhead	TES	110	1,766,162	1,467,771	1,578,150	1,948,351	1,756,771
Mains, Valves, Hydrants	TES	115	2,217,207	2,209,110	1,899,743	2,014,559	2,221,978
Water service lines	TES	120	551,981	510,183	549,494	489,406	511,026
Meters	TES	125	912,208	894,225	801,809	785,795	815,943
New Mains, Valves, Hydrants	TES	135	169,503	167,487	138,263	113,235	134,413
Services Rendered	TES	145	0	0	37,315	-7,890	41,198
Total Operating Expenditures:			6,980,947	6,538,867	6,049,674	6,500,390	6,687,392
Capital Expenditures:							
Water Capital/Revenue	FMS	190	86,000	0	0	124,000	
Debenture Debt	FMS	195	526,248	571,022	587,026	878,619	957,099
Water Improvement Program	TES	520	5,700,000	5,500,000	4,014,732	4,914,678	5,430,659
Total Capital Expenditures:			6,312,248	6,071,022	4,601,758	5,917,297	6,387,758
Total Water Expenditures			13,293,195	12,609,889	10,651,432	12,417,687	13,075,149

Note: FMS - Financial Management Services

TES - Transportation and Environmental Services

City of St Catharines 2019 Water Improvement Program

Account	520.	Budget 2019
520.'s 951	St Davids Road	\$905,000
	P17-067	
739	Terry Lane Reconstruction P17-068	40,000
743	Haig/Ventura Underground Improvements P17-103	1,690,000
952	Champa Drive Watermain Replacement P18-100	430,000
953	Rendale Avenue Watermain Replacement P18-101	725,000
954	Hampstead Place Road Reconstruction P19-002	260,000
955	Avalon/Bernhardt/Embassy P19-020	55,000
956	Bradmon Drive watermain P19-100	670,000
957	Arran/Dixie watermain P19-102	700,000
958	Valves, Hydrants & Services P19-118	50,000
959	Design for 2020 Projects P19-119	50,000
960	Martindale Rd reconstruction RN19-xxa	125,000
		5,700,000

310.112	WATER/WASTEWATER EQUIPMENT RESERVE:	
	OPENING BALANCE	\$1,371,226
	ANNUAL RESERVE PROVISION	305,000
	EXPENDITURES,2019	-806,000
	CLOSING BALANCE	\$870,226
	EXPENDITURE DETAILS TWO (2) BACKHOES (REPLACE UNIT#46,53) THREE (3) CUBE VANS EQUIPPPED FOR UTILITY OPERATIONS (REPLACE UNIT#55,63,64) ONE (1) VALVE TURNING MACHINE (REPLACE UNIT#296) TWO (2) 3/4 TON PICKUP TRUCKS (REPLACE UNIT#75,77) ONE (1) COMPRESSOR WITH UNDERGROUND PIERCING TOOL AND JACK HAMME	\$280,000 240,000 100,000 80,000 40,000
	(REPLACE UNIT#184) TWO (2) SEWER CAMERAS ONE (1) GPS DATA COLLECTION UNIT ONE (1) HYDROSEEDER ONE (10 WATER SERVICE TRACING MACHINE THREE (3) GAS DETECTION METERS	30,000 15,000 10,000 7,000 4,000 \$806,000

WASTEWATER SYSTEM

APPENDIX 1 2019 Water/Wastewater Budget

2019 Wastewater Budget Summary

			Estima	ate	Δ.	ctual	
	Dept.	Acct.	2019	2018	2018	2017	2016
On a vertice of Franco distribution							
Operating Expenditures:							
Sewers - General	TES	730.100	697,188	694,303	619,953	636,856	658,138
Sewers - Insurance	FMS	730.105	0	0	28,485	54,743	95,043
FLAP Program	TES	732.115	311,555	308,237	258,087	267,211	267,992
Lateral Replacement	TES	732.100	705,535	711,001	665,805	588,634	576,765
New Laterals	TES	732.105	0	0	32,917	25,636	-4,053
Drain Clearing	TES	732.110	321,546	324,499	179,176	140,281	195,018
Overhead	TES	732.190	669,068	592,240	635,658	810,478	760,206
Pollution Control	TES	735.300	782,204	754,450	526,949	676,317	625,274
Overhead	TES	735.305	224,703	258,364	327,035	318,446	298,204
Total Operating Expenditures:		-	3,711,799	3,643,094	3,274,065	3,518,601	3,472,586
Debenture Debt	TES	731.195	624,257	599,806	640,958	870,027	923,547
Sewer Improvement Program	TES	731.100	2,500,000	2,300,000	2,185,169	1,769,727	2,173,059
Capital Out of Revenue	FMS	735.304	120,000	150,000	150,000	60,000	57,000
Total Capital Expenditures:		.	3,244,257	3,049,806	2,976,127	2,699,754	3,153,607
Total City Wastewater Expenditu	es	-	6,956,056	6,692,900	6,250,192	6,218,355	6,626,193

Note: FMS - Financial Management Services

TES - Transportation and Environmental Services

City of St Catharines 2019 Sewer Improvement Program

Account 731.	Budget 2019
7041	
731.'s 946 Moffatt Street Reconstruction P15-066	\$211,000
725 Yale Crescent Underground Improvements P17-009	400,000
947 St Davids Road P17-067	610,000
948 Haig/Ventura Underground Improvements P17-103	150,000
824 Wastewater Master Plan ST18-01	154,000
949 Clover/Niagara Sewer Improvements P19-001	355,000
950 Hampstead Place Road reconstruction P19-002	245,000
951 2019 Extraneous Flow Elimination P19-003	50,000
952 2019 Sanitary Sewer Spot Repair Program P19-011	100,000
953 2019 Sanitary Sewer Flushing & Reaming P19-012	25,000
954 2019 CCTV Sewer Inspection P19-014	150,000
955 Design for 2020 Projects P19-015	50,000
	2,500,000

 The following rates shall be paid to The Corporation of the City of St. Catharines for the use of water supplied by The Corporation of the City of St. Catharines:

(a)	Consumption - Cubic Metres (For each four month billing period)	<u>Current</u>	<u>Proposed</u>
	Customer Charge	\$52.00	\$54.00
	Consumption Charge - per cubic metre	1.224	1.285
	*Note: Large Industrial Users are billed monthly		

Water meter size of 1" or greater will be subject to a water meter equivalency charge when calculating the Customer Charge.

Exemption: Single Family Residential classificiation. See (b) below.

(b) Meter Equivalency

Water meter size of 1" or greater will be subject to a water meter equivalency charge when calculating the Customer Charge.

Exemption: Single Family Residential classificiation.

1" meter = 1.4 meter equivalency units 1 1/2" meter = 1.8 meter equivalency units meter = 2.9 meter equivalency units 3" meter = 11 meter equivalency units 4" meter = 14 meter equivalency units * 6" meter = 21 meter equivalency units * >6" meter = 21 meter equivalency units

- * Note: Where a single 6" meter or greater is installed for the purpose of additional fire protection, the multiplier equivalency shall be discounted to 50%.
- (c) Flat Rates (For each four month billing period)

Per Dwelling unit \$175.00

Note: Where more than 20 units are being constructed, the maximum number of units charged is 20.

(d) Estimated Billing

(f)

Where consumption and/or Flat Rate does not apply, estimates are based on previous actual readings. In the absence of previous actual readings, amount to be determined at the discretion of the Treasurer.

(e) Rates for Services Outside City (For each four month billing period)

Per sq. m.

Multiple of Regular Rate	2X	2X
Customer Charge	\$104.00	\$108.00
Consumption Charge - per cubic metre	2.448	2.57
Bulk Water (Key Pad Operated)		

Multiple of Regular Rate	2X	2X
Per cubic metre	\$2.448	\$2.570

(g)	Water Under Construction		
	First four month period Per sq. ft. Water Increase 2017 1.22 %, 2018 1.64%, +	\$0.026	\$0.028
	2019 4.50% increase		

0.282

0.303

APPENDIX 1

2019 Water/Wastewater Budget

<u>Current</u> <u>Proposed</u>

Next Flat Rate per dwelling unit for each four month period until meter is installed

\$175.00

\$133.00

If there are extenuating circumstances or if large Industrial/Commercial building, "Next Flat Rate" to be determined at the discretion of the Treasurer.

 The following rates shall be paid to The Corporation of the City of St. Catharines for the use of water related services supplied by The Corporation of the City of St. Catharines:

(a) METER RENTALS (Annually)

50mm(2") Displacement-ECR/Transmitter

METER RENTALS (Annually	
Meter Size	
*16mm (5/8") Displacement	\$19.00
*16mm (5/8")SR II Displacement with ECR	\$35.00
*16mm (5/8") Accustream/Transmitter	\$40.00
*16mm (5/8") IPERL/Transmitter	\$45.00
19mm (3/4") Displacement	\$25.00
19mm (3/4")SR II Displacement with ECR	\$41.00
19mm (3/4") Accustream/Transmitter	\$46.00
19mm (3/4") IPERL/Transmitter	\$50.00
25mm (1") Displacement	\$29.00
25mm (1") SR II Displacement with ECR	\$46.00
25mm (1") Accustream Transmitter	\$51.00
25mm (1") IPERL/Transmitter	\$55.00
38mm (1-1/2") Displacement	\$82.00
38mm (1-1/2") Displacement with ECR	\$115.00
38mm (1-1/2") Displacement /ECR/ Transmitter	\$120.00
38mm(1-1/2") Turbine	\$111.00
38mm(1-1/2") Turbine/Transmitter	\$116.00
38mm (1 1/2") OMNI C2 Compound	\$122.00
38mm (1 1/2") OMNI R2 Residential	\$75.00
38mm (1-1/2") OMNI T2 Turbine	\$96.00
50mm(2") Displacement	\$92.00
50mm(2") Displacement with ECR	\$128.00

	20.0	on, i rabio mato
	Current	Proposed
50mm (2") Compound	\$96.00	
50mm (2") Compound/Transmitter	\$101.00	
50mm (2") Turbine	\$114.00	
50mm (2") Turbine/Transmitter	\$119.00	
50mm (2") OMNI C2 Compound	\$150.00	
50mm (2") OMNI R2 Residential	\$80.00	
50mm (2") OMNI T2 Turbine	\$115.00	
75mm (3") Compound	\$418.00	
75mm (3") Compound/Transmitter	\$423.00	
75mm (3") Turbine	\$375.00	
75mm (3") Turbine/Transmitter	\$380.00	
75mm (3") OMNI C2 Compound	\$402.00	
75mm (3") OMNI T2 Turbine	\$375.00	
100mm (4") Compound	\$498.00	
100mm (4") Compound/Transmitter	\$503.00	
100mm (4") Turbine	\$475.00	
100mm (4") Turbine/Transmitter	\$480.00	
100mm (4") OMNI C2 Compound	\$488.00	
100mm (4") OMNI F2 Fire Assembly	\$798.00	
100mm (4") OMNI T2 Turbine	\$475.00	
150mm (6") Compound	\$671.00	
150mm (6") Compound/Transmitter	\$676.00	
150mm (6") Turbine	\$587.00	
150mm (6") Turbine/Transmitter	\$592.00	
150mm (6") Fire Assembly	\$900.00	
150mm (6") Fire Assembly /Transmitter	\$905.00	
150mm (6") OMNI C2 Compound	\$671.00	
150mm (6") OMNI F2 Fire Assembly	\$980.00	

	Current	Proposed
150mm (6") OMNI T2 Turbine	\$587.00	
200mm (8") Fire Assembly	\$1,340.00	
200mm (8") Fire Assembly /Transmitter	\$1,345.00	
200mm (8") Turbine	\$665.00	
200mm (8") Turbine/Transmitter	\$670.00	
200mm (8") OMNI C2 Compound	\$930.00	
200mm (8") OMNI F2 Fire Assembly	\$1,350.00	
200mm (8") OMNI T2 Turbine	\$830.00	
250mm (10") Fire Assembly	\$1,510.00	
250mm (10") Fire Assembly/Transmitter	\$1,515.00	
250mm (10")Turbine	\$900.00	
250mm (10")Turbine/Transmitter	\$905.00	
250mm (10") OMNI C2 Compound	\$1,125.00	
250mm (10")OMNI F2 Fire Assembly	\$1,810.00	
250mm (10") T2 OMNI Turbine	\$1,000.00	

^{*} NOTE: No charge for 16mm (5/8") meter unless installed outside the City.

Where meter type consists of two meters combined, one rental rate is applicable, based on the predominant use of the meter.

(a)(i) METER PITS (CHAMBER) RENTALS (Annually)

Meter Size		
16mm (5/8")	\$63.00	\$69.00
19mm (3/4")	\$64.00	\$71.00
25mm (1")	\$71.00	\$78.00
38mm (1-1/2")	\$181.00	\$199.00
50mm (2")	\$193.00	\$213.00
75mm (3")	Actual Cost	
100mm (4")	Actual Cost	
150mm (6")	Actual Cost	
200mm (8")	Actual Cost	
250mm (10")	Actual Cost	

Current **Proposed**

3. The following rates shall be paid to the Corporation of the City of St. Catharines for the wastewater system and services as outlined herein:

(a) Wastewater Fees (for each four month period)

Sewer Replacement Program \$32.00 \$36.00 Wastewater charges – per cubic metre 1.890 1.966

Water meter size of 1" or greater will be subject to a water meter equivalency charge when calculating the Customer Charge.

Exemption: Single Family Residential classificiation. See (b) below.

(b) Meter Equivalency

Water meter size of 1" or greater will be subject to a water meter equivalency charge when calculating the Customer Charge.

Exemption: Single Family Residential classificiation.

1" 1.4 meter equivalency units meter = 1 1/2" meter = 1.8 meter equivalency units 2" meter = 2.9 meter equivalency units 3" meter = 11 meter equivalency units 4" meter = 14 meter equivalency units 6" meter = 21 meter equivalency units >6" meter = 21 meter equivalency units

Note: Where a single 6" meter or greater is installed for the purpose of additional fire protection, the multiplier equivalency shall be discounted to 50%.

(c) Flat Rates (For each four month billing period)

Per Dwelling unit \$225.00

(d) Wastewater Under Construction

First four month period 0.00

Next Flat Rate per dwelling unit for each four month period

until meter is installed \$225.00

Note: Where more than 20 units are under construction, the maximum number of units charged is 20.

If there are extenuating circumstances or if large Industrial/Commercial building, "Next Flat Rate" to be determined at the discretion of the Treasurer.

4. Unauthorized Use of Water

(a) Rate when bypass valve is opened without Authorization or any other unauthorized use of water or determination that water provided has not passed through the meter:

Two **(2)** times the average of last three representative bills. If not applicable, estimate to be determined at the discretion of the Treasurer. (For each four month billing period)

(b) Where property has operated a grow-op, amount is three (3) times the total Flat Rate per dwelling unit as outlined in Sections 1 and 3 (For each four month billing period) \$1,200.00

2X

Page 5

Current Proposed

5. <u>Miscellaneous</u>

(a) <u>Meter Relocation</u> to a more appropriate position to facilitate reading and/or maintenance:

When requested by homeowner, equivalent to applicable Water Service Call as defined in Rates and Fees.

When determined by City Engineer, amount charged at the discretion of the Treasurer

(b) Installation of Automated Meter Reading (AMR) apparatus when performed not in accordance with scheduled deployment:

When requested by homeowner \$350.00 \$375.00

When determined by City Engineer, amount charged at the discretion of the Treasurer

Customer non compliance with AMR installation \$500.00

(c) <u>Late Payment Penalty</u>

A penalty for late payment of 1.5% per month is added the day following the due date and the first day of each month thereafter.

(d) Water Certificate - \$41.65 In rates&fees

Moved to Rates and Fees, effective April 1, 2019 - \$65.00

(e) The rates set out above shall be deemed to have become effective on all accounts with Billing periods ending on or after April 1, 2019.

^{*} NOTE: METRIC CONVERSION: 1 cubic metre (CM) equals 220 gallons or 1,000 litres

^{*}bolded script = proposed changes for 2019

City St. Catharines Water/Wastewater Budget Annual Bill Change Comparison

		2019 New	2018 Old	Ch	Change	
		Rates	Rates	\$	<u>%</u>	
Consumption						
CONSUMPTION	Normal Consumption	170	170			
	·	170	170	0	0.00%	
Water - Retail F	Rate					
	Rate per billing period (4 months)	\$54.00	\$52.00			
	Fixed Fee	\$162.00	\$156.00	6.00	3.85%	
	Consumption Rate per CM	\$1.285	\$1.224			
	Consumption Fee	\$218.45	\$208.08	10.37	4.98%	
	Total Water	\$380.45	\$364.08	\$16.37	4.50%	
Wastewater - R	etail Rate					
	Rate per billing period (4 months)	\$36.00	\$32.00			
	Fixed Fee	\$108.00	\$96.00	12.00	12.50%	
	Consumption Rate per CM	\$1.966	\$1.890			
	Consumption Fee	\$334.22	\$321.30	12.92	4.02%	
	Total Wastewater	\$442.22	\$417.30	\$24.92	5.97%	
Total Water and	d Wastewater Bill	\$822.67	\$781.38	\$41.29	5.28%	
				<u></u>		
	Fixed Component	\$270.00	\$252.00			
	Variable Component	\$552.67	\$529.38			
		\$822.67	\$781.38			
	Fixed Percentage	32.82%	32.25%			
	Variable Percentage	67.18%	67.75%			
		100.00%	100.00%			

History of "Analysis of Average Increase" - per annual budget presentations

	City	Region	Cons	Remove Tax Sup	Total	Stated % Increase
July 1, 2009	(10.70)	26.75	69.55	21.40	107.00	16%
April 1, 2010 April 1, 2011	4.00 2.71	24.01 6.13	26.44 28.96		54.45 37.80	7% 5.32%
April 1, 2012	4.44	16.53	19.23		40.20	5.38%
April 1, 2013 April 1,2014					20.40 20.00	2.59% 2.47%
April 1,2015					12.22	1.63%
April 1,2016 April 1,2017					0.00 15.09	0.00% 1.98%
April 1,2018 April 1,2019					15.18 41.29	1.98% 5.28%

APPENDIX 3 – LOW-INCOME SENIOR CREDIT PROGRAM and TENANT MAILING CONTRACTS

Table 1- Approved Municipal Comparators

Municipal Comparators				
	Senior Credit Program	Tenant Name	Tenant Mailing Contract	
Barrie	NO	YES	YES	
Guelph	NO	YES	NO	
Kingston	NO	YES	NO	
Thunder Bay	YES	NO	NO	
Windsor	NO	YES	NO	
Cambridge	NO	NO	NO	
Kitchener	NO	YES	NO	
Niagara Falls	YES	YES	NO	
Oshawa	NO	NO	NO	
Waterloo	NO	YES	NO	

Table 2 - Local Area Municipalities

Local Area Municipalities					
	Senior Credit Program	Tenant Name	Tenant Mailing Contract		
Wainfleet	NO	N/A	N/A		
Niagara Falls	YES	YES	YES		
Welland	YES	NO	NO		
Thorold	NO	YES	NO		
Niagara on the Lake	NO	YES	YES		
Fort Erie	NO	NO	NO		
Grimsby	NO	NO	NO		
Lincoln	NO	NO	NO		
West Lincoln	NO	YES	YES		
Pelham	NO	NO	N/A		
Port Colborne	NO	NO	NO		

Only two of the Municipal Comparators provide a Low-Income Senior Water credit to their rate payers. Niagara Falls and St Catharines criteria for eligibility is similar. Thunder Bay is based on a total household income and a property assessment value but all identified that the recipient of the credit must own and occupy their property.

Of the Local Area municipalities (LAMS), Welland is the only additional municipality that provides a rebate. The difference in their criteria is their annual consumption must be 50M3 or less. There are no provisions for tenants residing and renting a residential property.

Thunder Bay - \$200.00 Water Credit Program for Low-Income Persons

- Total household income must be \$38,539 or less.
- The value of the property as shown on the latest assessment roll must be less than or equal to \$147,750.
- The applicant must **own and occupy** the property as their principal residence and the property must be in the residential property class.

Niagara Falls- \$100.00 Senior Water Credit

- A City of Niagara Falls water customer
- A City of Niagara Falls Property **Owner** and residing at the property
- Age 65 or over
- In receipt of the Federal Guarantee Income Supplement

Welland – Low Income Seniors \$100.00 Water /Wastewater Rebate

- Applicant (or spouse) is 65 years of age or older; and
- Applicant (or spouse) has been assessed as owner(s) of the residential property in the City of Welland for at least one (1) year preceding the application; and
- Applicant (or spouse) uses the property for which the application is being made for the purposes of a personal residence; and
- Applicant (or spouse) is in receipt of a monthly Guaranteed Income Supplement pursuant to Part II of the Old Age Security Act (Canada); and
- The annual water/wastewater consumption must be 50 m3 or less for the application year (prior year).