



Corporate Report

Report from Financial Management Services, Accounting

Date of Report: February 28, 2017

Date of Meeting: March 20, 2017

Report Number: FMS-078-2017

File: 18.45.254

Subject: 2017 Water and Wastewater Budget and Associated Rates

Recommendation

That the report from the Financial Management Services Department – Accounting, dated February 28, 2017, regarding the 2017 Water and Wastewater Budget and Associated Rates, be referred to City Council for consideration after the Public Meeting scheduled for March 27, 2017, for which notice will be duly given. FORTHWITH

Staff Recommendation

That Council approve the 2017 Water and Wastewater Budget in Appendix 1 of the report from Financial Management Services, Accounting, dated February 28, 2017; and

That the City Solicitor be directed to prepare the necessary by-laws. FORTHWITH

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 2017 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. Forecasting Water Volume
7. Financial Stability of the Wastewater system

1. 2017 Water and Wastewater Proposed Rates

General Rate Structure

The City's current water and wastewater rate 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 2017, staff is proposing an increase to both the water and wastewater fixed and volumetric rates. Staff recommend that effective April 1, 2017, the rates structure for recovering water and wastewater costs be the following:

	2017	2016
Water		
Fixed (annual)	\$153	\$150
Volumetric (per cm)	\$1.207	\$1.199
Wastewater		
Fixed (annual)	\$93	\$87
Volumetric (per cm)	\$1.853	\$1.826

The proposed rates will result in an annual increase to the average ratepayer (at annual consumption levels of 174 cubic metres) of \$15.09 – a 1.98% increase. For further details on the calculations, see the Appendix 2.

Description	Amount
Water Rates	\$4.39
Wastewater Rates	\$10.70
Total Increase - \$	\$15.09
Total Increase - %	1.98%

To comply with BSC directive to increase rates and fees by 2.1%, Staff is recommending that the water certificate fee be increased from \$40 to \$40.85 in 2017.

2. The Fixed Charge – Water and Wastewater

In the City's current water and wastewater rate structure the fixed charged 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 Budget	Wastewater Budget
Improvement program	\$5,500,000	\$2,075,000
Debt Charges	878,619	870,027
Total City Fixed Charges	\$6,378,619	\$2,945,027
Regional Fixed Charges	2,765,866	19,558,745
Total Fixed Costs	\$9,144,485	\$22,503,772

Calculation of Recovery Rates		
Based on 42,450 customers	\$215	\$530
2017 Proposed Rates	\$153	\$93
2016 Rates	\$150	\$87

As the chart indicates, the calculated fixed component of the City’s rate structure should be \$215 for Water and \$530 for Wastewater. While staff does not propose that the 2017 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 2017 will result in the recovery of a larger portion of the fixed costs to operate the water and wastewater systems.

3. Sustainable Funding of Infrastructure

The proposed 2017 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 615km. The estimated replacement value in 2017 dollars is \$488 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 \$9.76 million to maintain a sustainable watermain distribution system.

An aggressive replacement program is required to reduce the annual number of watermain breaks. The number of watermain breaks can fluctuate significantly from year to year – 2016 saw 151 breaks, 2015 saw 120 breaks, 2014 saw 122 breaks while in the previous two years the number was slightly above 100.

The proposed 2017 water budget includes \$5,500,000 for the replacement of watermains. The 2017 program will replace approximately 5km of watermain. The proposed program also includes the addition of approximately 110m of new watermain on Duncan Drive. To achieve sustainability, the watermain replacement program should be replacing 12.3km of watermain annually at a cost of \$9.76 million.

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, 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 problems.

At present, approximately 48% of the watermains in the distribution system are comprised of newer Polyvinylchloride (PVC) pipe – the remaining 52% is comprised of cast iron (30%), ductile iron (11%) or transite (11%)

In 2017, \$3,283,000 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. Other factors used to prioritize the program include upgrading undersized mains and installing new mains to fill in “missing links” to improve the system integrity and increase fire flow protection. Co-ordination with other proposed road or sewer work can also accelerate the replacement of certain mains.

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 100m of lead water services over the last three years.

b. Sanitary Sewer Replacement Program

The City currently has 572 km of combined and sanitary sewers. The estimated replacement value of these sewers in 2017 dollars is \$378 million. A request for funding has been submitted to the region of Niagara under its Combined Sewer Overflow (CSO) Control Policy Funding Program. Should the application prove successful, the region will contribute \$25,000 toward the 2017 Extraneous Flow Elimination program. As a result the proposed 2017 Sewer Improvement Program Budget amounts to \$2,075,000. The budget allows for the replacement or rehabilitation of 1,100 lineal metres of sanitary sewer.

The combined sewers allow rainwater to enter into the sanitary sewer system. In 2016, the Region supplied the City with approximately 15.2 million cubic metres of potable water and treated 18.6 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 thereby reducing 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.

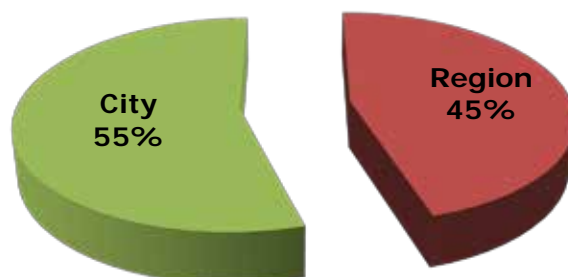
4. Regional Costs

The City and Region are each responsible for various aspects of water. The Region is responsible for supply and treatment including all reservoirs and water towers. In general, watermains sixteen inches (400 mm) 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

Water Budget Summary of Expenditures



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.

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 metre of water purchased or cubic metre 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 2017 (with comparable 2016 rates) are as follows:

Water	2017	2016	% increase (decrease)
Variable rate per cm	\$0.554	\$0.554	0.0%
Fixed Monthly Charge	\$230,489	\$236,517	(2.61%)

The above rates result in the City's 2017 draft Water budget including Regional costs of \$10,854,266, a decrease of \$72,366 (0.66%) from 2016. As \$8,199,200 of these costs are related to the variable rate, this provides some protection to the City should the

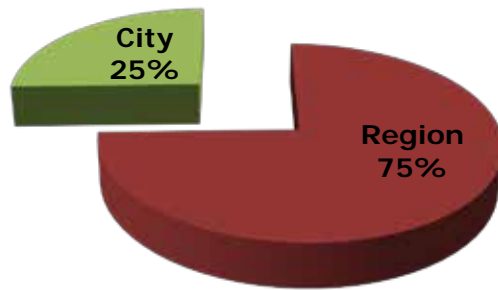
water consumption decline in 2017. The fixed annual charge of \$2,765,866 will be payable to the Region regardless of our water consumption.

b. Regional Wastewater Rates

The Regional wastewater charges contain no variable rates. The rates for 2017 (with comparable 2016 rates) are as follows:

Wastewater	2017	2016	%increase
Fixed Monthly Charge	\$1,629,895	\$1,624,043	0.36%

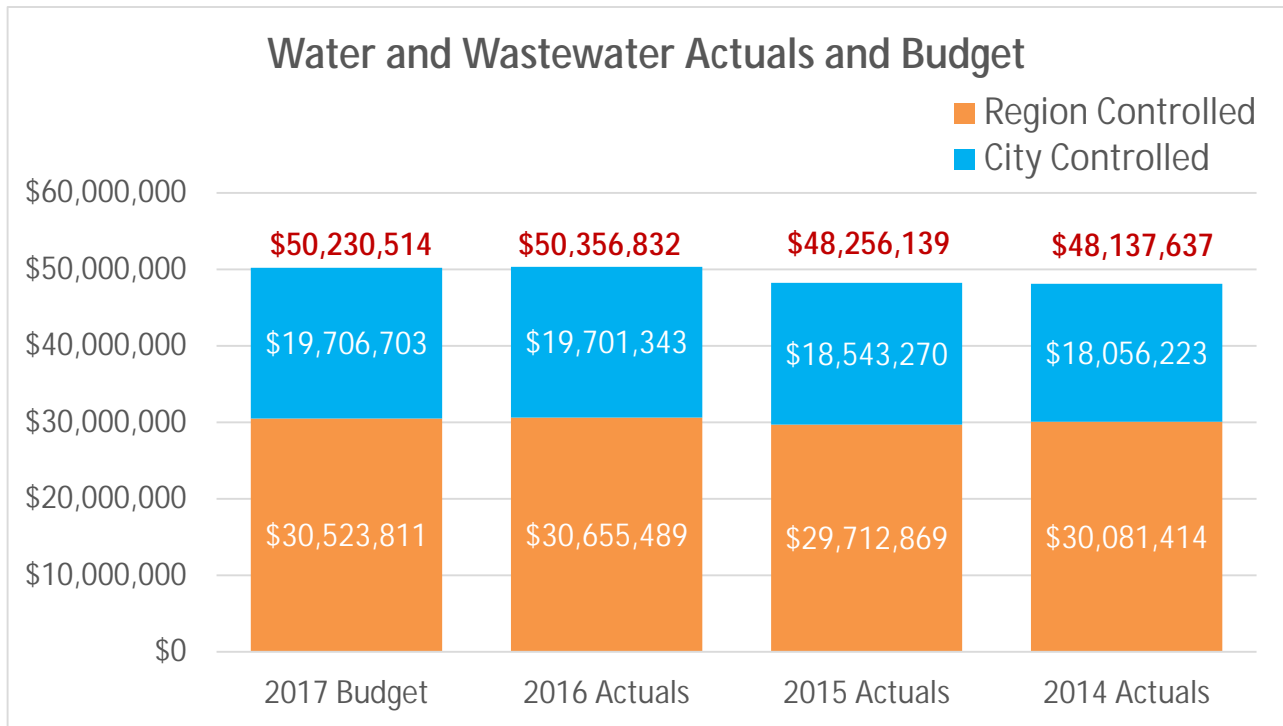
Wastewater Budget Summary of Expenditures



2017 Water and Waste Water Summary of Expenditures

Expenditure	Water		Wastewater	
City Costs	\$6,532,652	27.22%	\$3,665,405	13.97%
Water/Sewer Improvement Program	5,500,000	22.91%	2,075,000	7.91%
City Debentures	878,619	3.66%	870,027	3.32%
Capital Out of Revenue	125,000	0.52%	60,000	0.23%
Region	10,965,066	45.69%	19,558,745	74.57%
Total	\$24,001,337	100%	\$26,229,177	100%
Region Controlled Costs	\$10,965,066	45.69%	\$19,558,745	74.57%
City Controlled Costs	13,036,271	54.31%	6,670,432	25.43%
Total	\$24,001,337	100%	\$26,229,177	100%

Looking at the trend in the water and wastewater expenditures over the past four years, the 2017 budget is slightly below the 2016 actuals. As shown below, the change in the water and wastewater expenses from 2014 to 2017 is 4.35% over this four year period which normalizes to annual increases below inflation.



Details of 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 data from the City's water meters and automatically transfers that data to a database for billing, troubleshooting and analysing.

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 was used. 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 billing may make it easier for customers to pay a monthly bill than a larger four month bill and 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, maintenance and some general overhead expense. Further technology upgrades will provide additional efficiencies in billing processes and reduction of postage costs.

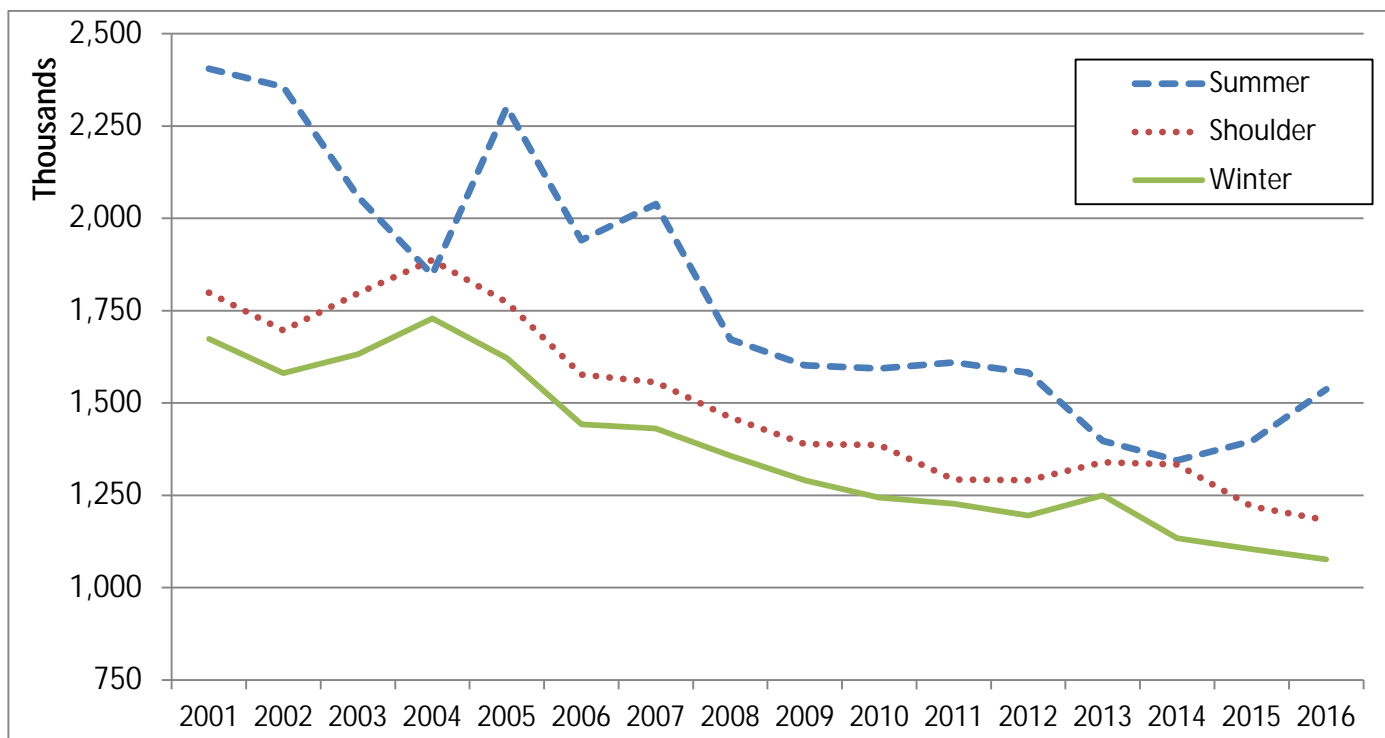
At the start of the program the City had 41,556 residential water meters that were scheduled to be updated. To date 23,338 water meters have been upgraded to the AMR technology. There will be additional sections completed during 2017. The entire upgrade project is expected to be completed by the end of 2019.

6) Forecasting Water Volumes

An analysis of water purchases over the last 17 years has shown conservation efforts by St Catharines water customers have resulted in a significant reduction in cubic metres of water purchased from the Region. Since 1999 annual water purchases have decreased 45% from 27,599,000 cubic metres annually to 15,189,000 cubic metres in 2016. From 2007 to 2016 alone the decrease was 4.91 million cubic metres (24.4%). Each year staff review past history of water purchase volume and utilize that information to forecast what future volumes will be.

Over the past several 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 there a significant decline still to come? In the process of this estimation, staff analysed the water purchased based on three separate “seasons” of the year: **summer** - June to September; **winter** – November to February; “**shoulder**” **months** – March to May and October.

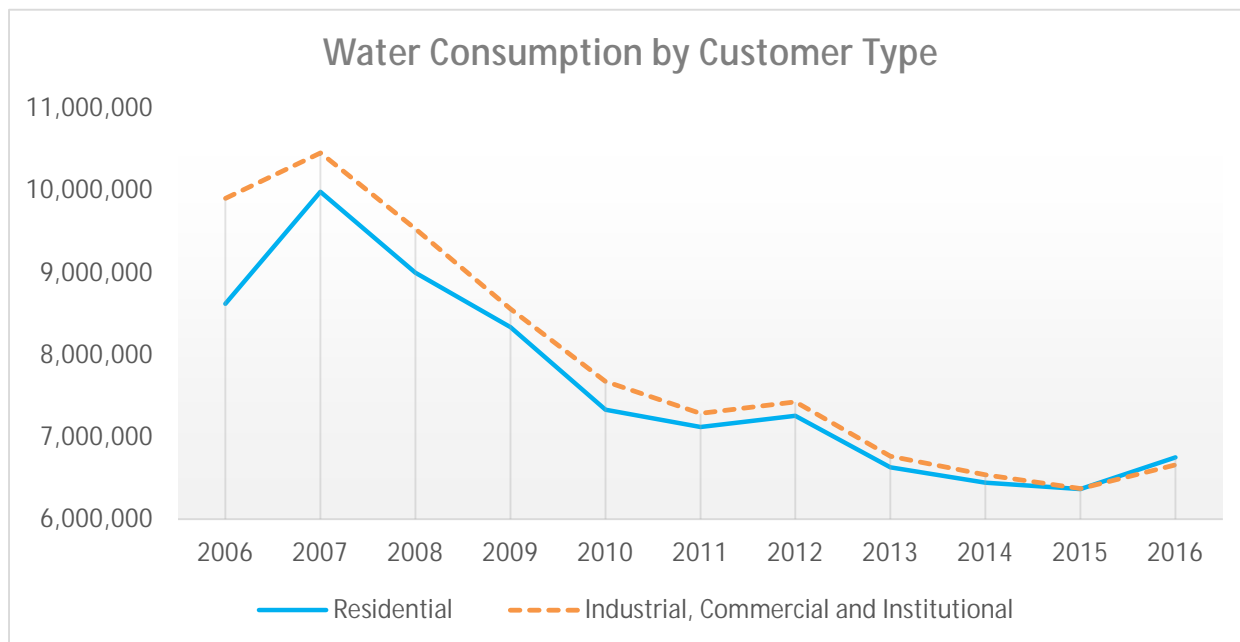
The following graph depicts the decline in purchases during these “seasons” since 2001:



The chart clearly depicts the average monthly summer consumption (the blue or top line) as the most volatile line. It fluctuates significantly each year. This fluctuation appears to have rebounded some in the summer months of the last year. This provides additional support to the consumption levelling or reaching its bottom. The summer monthly consumption is still higher than either of the other two “seasons” but is no longer as volatile. The summers of 2009, 2010, 2011 and 2013 were some of the more rainy summers in recent history. However, when the hot dry summer of 2012 occurred, the consumption did not rebound. The drier summers of 2015 and 2016 did see the consumption rebound some. The winter and “shoulder” seasons show consumption patterns that move fairly consistently together, with the shoulder months slightly higher.

The increase in the winter of 2013 is attributed to a large watermain break in January, 2013. Reviewing 2016 water purchases, it appears that water consumption may be levelling off. In 2016, the City purchased 15.18 million cubic meters and in 2015 purchased 14.82 million cubic meters. Consumption is definitely not declining at the same rate today as it did nine or ten years ago. Staff expect consumption for 2017 to remain very similar to 2015 at 14.8 million cubic meters. This projection is based on historical data and that the increased water purchase of 2016 was mainly due to the extremely dry summer. Although the summer weather of 2016 is considered to be an anomaly, there are other impacts of a changing climate that are already being felt and they are likely to increase with further warming. 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 (2013 and 2014), extreme cold/frozen water services (2015) and extreme dry periods/fire ban (2016). 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 2018 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.



As shown in the graph above, since 2007 the City has seen a relatively steady decline in the consumption of both the Residential and ICI customers. Starting in 2011, ICI sector consumption began to move much closer to the Residential sector until 2015 and 2016 where the ICI sector transitioned to below the Residential sector. With this transition, the Residential sector moves towards becoming the larger contributor to this budget.

7) 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 overall revenue. Consequently, the revenue generated does not cover the costs of the system. In the past three years, this trend is changing. In 2014, 2015 and 2016 the wastewater system ended the year in a positive position.

The net results by year are as follows:

In millions of \$	2016	2015	2014	2013	2012	2011	2010	2009
Revenue	\$27.17	\$25.71	\$25.80	\$24.86	\$25.32	\$23.46	\$22.50	\$20.12
Expenditures	\$26.02	\$25.18	\$25.53	\$25.07	\$25.25	\$24.00	\$23.35	\$21.65
Recovery/ (Loss)	<u>\$1.15</u>	<u>\$0.53</u>	<u>\$0.27</u>	<u>(\$0.21)</u>	<u>\$0.07</u>	<u>(\$0.54)</u>	<u>(\$0.85)</u>	<u>(\$1.53)</u>

The positive results the last couple of years has assisted in reducing the accumulated deficit of \$1.87 million at the end of 2015 to \$730,096 at the end of 2016. In effect, the water rates have been subsidizing the operations of the wastewater system. While many of our customers have both water and wastewater charges on their bills, there are customers that do not.

As per guidelines from the Province rates should be structured so that both systems maintain their own financial stability through separate rates, it is necessary for our rates to be structured to eliminate this deficit. This will be achieved over time by focusing rate adjustments on the wastewater rates.

To eliminate this deficit in 2017 would require a larger increase in wastewater rates. Wastewater fixed rates are proposed to increase by \$6 in 2017 from \$87 to \$93 annually. Although, the wastewater system ended 2016 with a positive position, with grant programs from upper levels of government expected in current and future years, it is important that the City display fiscal sustainability through the reduction of the accumulated deficit in the wastewater system. With the rate increase proposed in 2017, there is a high possibility that the accumulated deficit may be eliminated in the next three years. This is an improvement in the previous forecast to eliminate this deficit in the next five to ten years. It is also a very positive step in having the wastewater rates fully fund the wastewater system.

Financial Implications

The proposed 2017 water and wastewater rates result in an increase for both water and wastewater rates. For the average ratepayer (at annual consumption levels of 174 cubic metres) they will pay \$778.44 annually. This is an increase of \$15.09 or 1.98% over the amount they paid in 2016. The increase in the rates in 2017 will move the wastewater system closer to fully funding itself. In addition, this rate increase will assist the water system in maintaining a positive accumulated surplus, as the last two years have resulted in a net deficit in the water systems. With the city's consumption level continuing to show signs of levelling out, this will also lead to more stable forecasts and increase the likelihood of positive year end results.

Relationship to Strategic Plan

Economic sustainability will be enhanced through:

- Being an affordable city for young people, families and retired older adults through maintaining water and wastewater rates increase for 2017 at 1.98% which is an increase that is at or below inflation.

Conclusion

Staff recommends that Council approve the 2017 water and wastewater rate increase, which for the average customer annual consumption of 174 cubic meters is 1.98% or \$15.09. This increase is below the rate of inflation.

Prepared and Submitted by:

Kristine Douglas, Director FMS

Approved by:

Shelley Chemnitz, Commissioner Corporate Services

City of St Catharines
Water/Wastewater Budget Summary

	Estimate		Actuals		
	2017	2016	2016	2015	2014
Reserve at Beginning of Year	3,631,544	3,319,840	3,319,840	3,393,467	2,796,556
Revenues	49,218,742	48,862,826	50,668,535	48,182,511	48,734,548
Less: Region expenditures	30,523,811	30,525,922	30,655,488	29,712,869	30,081,414
Net Revenue	18,694,931	18,336,904	20,013,046	18,469,643	18,653,134
City Expenditures					
Water Operating costs	6,532,652	6,439,234	6,687,392	5,977,573	5,918,893
Water Debenture debt	878,619	957,099	957,099	1,040,785	1,076,261
Water Infrastructure costs	5,625,000	5,500,000	5,430,659	5,188,857	4,492,937
Sewer Operating costs	3,665,405	3,740,203	3,472,586	3,527,865	3,612,558
Sewer Debenture debt	870,027	913,271	923,547	919,186	906,166
Sewer Infrastructure costs	2,135,000	2,124,000	2,230,059	1,889,004	2,049,408
	19,706,703	19,673,807	19,701,342	18,543,269	18,056,223
Annual Surplus/(Deficit)	-1,011,772	-1,336,903	311,704	-73,627	596,911
Reserve at End of Year	2,619,773	1,982,938	3,631,544	3,319,840	3,393,467
City total	19,706,703	19,673,807	19,701,342	18,543,269	18,056,223
Region total	30,523,811	30,525,922	30,655,488	29,712,869	30,081,414
	50,230,514	50,199,729	50,356,831	48,256,138	48,137,637
cm - purchased	14,800,000	14,800,000	15,189,384	14,858,461	15,247,533

WATER SYSTEM (515.XXX)**2017 Water Budget Summary**

	<u>Dept.</u>	<u>Acct.</u>	<u>Estimate</u>		<u>Actual</u>			
			<u>2017</u>	<u>2016</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
<u>Operating Expenditures:</u>								
General Administration	FMS	105	1,289,452	1,406,618	1,206,063	1,211,308	1,241,942	1,279,464
Engineering Overhead	TES	110	1,980,910	1,796,409	1,756,771	1,625,466	1,681,408	1,584,797
Mains, Valves, Hydrants	TES	115	1,855,920	1,842,173	2,221,978	1,762,058	1,817,791	1,775,543
Water service lines	TES	120	406,470	396,142	511,026	607,099	430,229	387,668
Meters	TES	125	844,680	842,998	815,943	718,365	680,905	620,291
New Mains, Valves, Hydrants	TES	135	155,220	154,894	134,413	94,719	72,004	63,386
Services Rendered	TES	145	0	0	41,198	-41,442	-5,386	-20,608
Total Operating Expenditures:			<u>6,532,652</u>	<u>6,439,234</u>	<u>6,687,392</u>	<u>5,977,573</u>	<u>5,918,893</u>	<u>5,690,541</u>
<u>Capital Expenditures:</u>								
Water Capital/Revenue	FMS	190	125,000	0			0	0
Debenture Debt	FMS	195	878,619	957,099	957,099	1,040,785	1,076,261	1,052,872
Water Improvement Program	TES	520	5,500,000	5,500,000	5,430,659	5,188,857	4,492,937	4,770,773
Total Capital Expenditures:			<u>6,503,619</u>	<u>6,457,099</u>	<u>6,387,758</u>	<u>6,229,642</u>	<u>5,569,198</u>	<u>5,823,645</u>
Total Water Expenditures			<u>13,036,271</u>	<u>12,896,333</u>	<u>13,075,149</u>	<u>12,207,215</u>	<u>11,488,091</u>	<u>11,514,186</u>

Note: FMS - Financial Management Services

TES - Transportation and Environmental Services

**CITY OF ST. CATHARINES - WATER/WASTEWATER BUDGET
ESTIMATE 2017**

EXPENDITURE ACCOUNT	2017 BUDGET
310.112 <u>WATER/WASTEWATER EQUIPMENT RESERVE:</u>	
OPENING BALANCE	\$1,369,550
ANNUAL RESERVE PROVISION	255,000
EXPENDITURES,2017	-845,000
CLOSING BALANCE	<u>\$779,550</u>
 <u>EXPENDITURE DETAILS</u>	
TWO (2) WATER SERVICE TRACING MACHINES (NEW)	14,000
ONE (1) TENDEM DUMP TRUCK COMPLETE WITH CONTROL CAPABILITY (REPLACE UNIT #151)	400,000
TWO (2) PICKUP TRUCKS (REPLACE UNITS #70 AND 71)	76,000
ONE (1) BACKHOE (REPLACE UNIT# 23)	130,000
THREE (3) CUBE VANS (REPLACE UNITS #145,#146,#147)	<u>225,000</u>
	<u>845,000</u>

WASTEWATER SYSTEM

2017 Wastewater Budget Summary

	Dept.	Acct.	Estimate		Actual			
			2017	2016	2016	2015	2014	2013
<u>Operating Expenditures:</u>								
Sewers - General	TES	730.100	577,830	571,482	658,138	614,581	646,823	513,917
Sewers - Insurance	FMS	730.105	0	0	95,043	81,751	141,734	86,100
FLAP Program	TES	732.115	302,613	301,019	267,992	462,563	456,530	264,159
Lateral Replacement	TES	732.100	606,912	597,690	576,765	475,541	518,603	556,901
New Laterals	TES	732.105	0	0	-4,053	-16,819	-8,950	-26,876
Drain Clearing	TES	732.110	241,992	237,946	195,018	227,373	261,771	144,555
Overhead	TES	732.190	785,722	847,282	760,206	705,292	674,438	788,711
Pollution Control	TES	735.300	747,314	732,957	625,274	659,136	610,871	628,036
Overhead	TES	735.305	403,022	451,827	298,204	318,447	310,738	327,054
Total Operating Expenditures:			<u>3,665,405</u>	<u>3,740,203</u>	<u>3,472,586</u>	<u>3,527,865</u>	<u>3,612,558</u>	<u>3,282,557</u>
Debenture Debt	TES	731.195	870,027	913,271	923,547	919,186	906,166	992,731
Sewer Improvement Program	TES	731.100	2,075,000	2,075,000	2,173,059	1,708,004	1,904,408	1,514,098
Capital Out of Revenue	FMS	735.304	60,000	49,000	57,000	181,000	145,000	58,000
Total Capital Expenditures:			<u>3,005,027</u>	<u>3,037,271</u>	<u>3,153,607</u>	<u>2,808,190</u>	<u>2,955,574</u>	<u>2,564,829</u>
Total City Wastewater Expenditures			<u>6,670,432</u>	<u>6,777,474</u>	<u>6,626,193</u>	<u>6,336,054</u>	<u>6,568,132</u>	<u>5,847,386</u>

Note: FMS - Financial Management Services
 TES - Transportation and Environmental Services

**City of St Catharines
2017 Sewer Improvement Program**

Account 731.	Budget 2017
731.'s	
323 Queenston Street P13-066	\$200,000.00
611 Churchill Street P16-062	250,000.00
721 2017 Extraneous Flow Elimination P17-003	25,000.00
722 Easement - Strada Boulevard P17-004	225,000.00
723 Bessborough/Daley/Grosvenor/Kilbourne P17-007	235,000.00
724 Burness Drive P17-008	410,000.00
725 Yale Crescent P17-009	150,000.00
726 2017 Spot Repair Program P17-011	200,000.00
727 2017 Sanitary Sewer Reaming P17-012	25,000.00
728 2017 CCTV Sewer Inspection P17-014	125,000.00
729 Design for 2018 Projects P17-015	50,000.00
730 Cecil Street P17-021	150,000.00
731 Sewer Sheds and Capacity Analysis ST17-11	30,000.00
	\$2,075,000.00

WATER, WASTEWATER AND RELATED SERVICE RATES

1. 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:

<u>(a) Consumption - Cubic Metres</u> (For each four month billing period)	<u>Current</u>	<u>Proposed</u>
Customer Charge	\$50.00	\$51.00
Consumption Charge - per cubic metre	1.199	1.207
*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 classification. See (b) below.		
<u>(b) Meter Equivalency</u>		
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 classification.		
1" meter =	1.4 meter equivalency units	
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%.		
<u>(c) Flat Rates</u> (For each four month billing period)		
Per Dwelling unit	\$150.00	
Note: Where more than 20 units are being constructed, the maximum number of units charged is 20.		
<u>(d) Estimated Billing</u>		
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.		
<u>(e) Rates for Services Outside City</u> (For each four month billing period)		
Multiple of Regular Rate	2X	2X
Customer Charge	\$100.00	\$102.00
Consumption Charge - per cubic metre	2.398	2.414
<u>(f) Bulk Water</u> (Key Pad Operated)		
Multiple of Regular Rate	2X	2X
Per cubic metre	\$2.398	\$2.414
<u>(g) Water Under Construction</u>		
First four month period Per sq. ft.	\$0.026	
Per sq. m.	0.282	

	<u>Current</u>	<u>Proposed</u>
Next Flat Rate per dwelling unit for each four month period until meter is installed	\$150.00	
If there are extenuating circumstances or if large Industrial/Commercial building, "Next Flat Rate" to be determined at the discretion of the Treasurer.		
2. 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) <u>METER RENTALS</u> (Annually)		
<u>Meter Size</u>		
*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	\$115.00	\$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	
50mm(2") Displacement-ECR/Transmitter	\$133.00	

	<u>Current</u>	<u>Proposed</u>
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	\$128.00	\$150.00
50mm (2") OMNI R2 Residential		\$80.00
50mm (2") OMNI T2 Turbine	\$96.00	\$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

	<u>Current</u>	<u>Proposed</u>
150mm (6") OMNI T2 Turbine	\$587.00	
200mm (8") Fire Assembly	\$1,131.00	\$1,340.00
200mm (8") Fire Assembly /Transmitter	\$1,136.00	\$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	\$1,408.00	\$1,510.00
250mm (10") Fire Assembly/Transmitter	\$1,413.00	\$1,515.00
250mm (10")Turbine	\$794.00	\$900.00
250mm (10")Turbine/Transmitter	\$799.00	\$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)

<u>Meter Size</u>		
16mm (5/8")	\$51.00	\$56.00
19mm (3/4")	\$52.00	\$57.00
25mm (1")	\$58.00	\$64.00
38mm (1-1/2")	\$142.00	\$174.00
50mm (2")	\$151.00	\$186.00
75mm (3")	Actual Cost	
100mm (4")	Actual Cost	

150mm (6")

Actual Cost

200mm (8")

Actual Cost

250mm (10")

Actual Cost

	<u>Current</u>	<u>Proposed</u>
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) <u>Wastewater Fees</u>		
Sewer Replacement Program	\$29.00	\$31.00
Wastewater charges – per cubic metre	1.826	1.853
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 classification. See (b) below.		
(b) <u>Meter Equivalency</u>		
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 classification.		
1" meter = 1.4 meter equivalency units		
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) <u>Flat Rates</u> (For each four month billing period)		
Per Dwelling unit	\$200.00	
(d) <u>Wastewater Under Construction</u>		
First four month period		
Next Flat Rate per dwelling unit for each four month period until meter is installed	\$200.00	
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. <u>Unauthorized Use of Water</u>		
(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.	2X	
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)	1,050.00	

	<u>Current</u>	<u>Proposed</u>
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	
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 - Move to Rates and Fees for 2018	\$40.00	\$40.85
(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, 2017 .		

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

***bolded script = proposed changes for 2017**

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

	<u>New Rates</u>	<u>Old Rates</u>	<u>Change</u>	
			<u>\$</u>	<u>%</u>
<u>Consumption</u>				
Normal Consumption	174	174		
	<u>174</u>	<u>174</u>	<u>0</u>	0.00%
<u>Water - Retail Rate</u>				
Rate per billing period (4 months)	\$51.00	\$50.00		
Fixed Fee	\$153.00	\$150.00	3.00	2.00%
Consumption Rate per CM	\$1.207	\$1.199		
Consumption Fee	\$210.02	\$208.63	1.39	0.67%
Total Water	<u>\$363.02</u>	<u>\$358.63</u>	<u>\$4.39</u>	1.22%
<u>Wastewater - Retail Rate</u>				
Rate per billing period (4 months)	\$31.00	\$29.00		
Fixed Fee	\$93.00	\$87.00	6.00	6.90%
Consumption Rate per CM	\$1.853	\$1.826		
Consumption Fee	\$322.42	\$317.72	4.70	1.48%
Total Wastewater	<u>\$415.42</u>	<u>\$404.72</u>	<u>\$10.70</u>	2.64%
<u>Total Water and Wastewater Bill</u>	<u>\$778.44</u>	<u>\$763.35</u>	<u>\$15.09</u>	1.98%
Fixed Component	\$246.00	\$237.00		
Variable Component	<u>\$532.44</u>	<u>\$526.35</u>		
	<u>\$778.44</u>	<u>\$763.35</u>		
Fixed Percentage	31.60%	31.05%		
Variable Percentage	<u>68.40%</u>	<u>68.95%</u>		
	<u>100.00%</u>	<u>100.00%</u>		

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

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

In 2013/14 did not differentiate between City/Region/Conservation as the water rate was not increased