



**COMMUNITY & CORPORATE SERVICES DEPARTMENT
CORPORATE SERVICES DIVISION**

Report Number: 2016 - 48

Date: March 21, 2016

SUBJECT: PROPOSED 2016 WATER AND WASTEWATER RATES

1) PURPOSE:

This report is prepared to present to City Council the proposed 2016 Water and Wastewater Rates for the municipality.

2) HISTORY, BACKGROUND, COUNCIL POLICY, PRACTICES

The water and wastewater rate structures are fairly complex spreadsheets which incorporate all of the components of the total expenditure and revenues, including historical flows, maintenance items, capital components, Regional rates for purchase of water, Regional costs for wastewater treatment, unbilled water calculations, increases to salaries and operating costs, administrative charges and the Water Financial Plan approved by Council on June 28, 2010. As in the past, typical low, average and high consumption households are compared to indicate the impact of any rate increases.

3) STAFF COMMENTS AND DISCUSSIONS

Water and Wastewater Rate Structure

There are many issues to consider for the 2016 budget and future budgets to ensure a sustainable financial model. The following issues are being addressed in this budget as recommended by staff:

- Increasing capital allocation of funds by 5% as referred from the water infrastructure needs study (INS) presented to Council in 2014
- Funding of 2015 debentures for water meters and watermain construction
- Funding of 2015 water and wastewater deficits (explained later in the report)
- Funding of 2015 water budget expenditure due to frozen services.

Staff recommends a reasonable rate increase in 2016 and that the 2015 deficits be funded through existing reserves and the 2015 increased fixed charge capital component. In 2015, the 2014 deficits were added to the fixed charge to remain on the rates and be allocated in future years to either increase the rate stabilization reserve, the wastewater reconciliation reserve and/or future capital. The goal is to continue to increase the amount of capital funds by 5% each year to reduce the infrastructure deficit of what the City currently funds for capital to what is required under the City's Asset Management Plan and Public Sector Accounting Board (PSAB) for future capital replacements.

The proposed operating budget rates for 2016 have an overall annual increase of \$34.74 or 2.58% for the average user of 0.75 cubic metres per day. This incorporates an increase to the water usage rate from \$1.123 to \$1.147, an increase to the annual water fixed charge from \$334.14 to \$342.58 (\$8.44), the wastewater usage rate from \$1.208 to \$1.232 and the annual wastewater fixed charge from \$372.93 to \$386.22 (\$13.29).

Water System

Usage Rates

The proposed usage rates for the water system were generated by incorporating the 2016 Regional water rate, which increased 3.17% from 2015 at \$0.537/m³ to \$0.554/m³. Although the Region's net operating budget only increased by 0.3%, the fact that the water flow forecast set by the Region is 1.95% lower and the shared percentage of the 3 year average water flow allocation to the City of Port Colborne increased by 2.61%, the Regional water rate to the municipalities actually increased thereby increasing the cost to the City for water purchases from the Region. There is an increased cost of water purchased from the Region amounting to \$114,787 due to the increased rate from the Region and the estimated water purchases being increased over 2015 by 115,838m³ in addition to the increased cost of the fixed amount charged from the Region amounting to \$26,771, therefore a total cost increase for the purchase of water for \$141,558.

The proposed usage rates include the City's 2016 budget expenditures in general operations and administration with a net operating budget increase of \$47,156. As discussed in the 2015 budget, staff reallocated approximately \$100,000 in savings to capital towards the funding of the water meter replacement debenture. The actual budget increase in operations is the result of annual increases in operating expenditures: including annual staff costs, postage increases, insurance, fuel costs for vehicles, administrative fees, tools and contract services. In addition, it is anticipated that the City will recover approximately \$100,000 in unbilled revenue through the new metering.

The City's non billable water loss has fluctuated between 27% and 33% over the last few years and therefore the 2016 rate structure is compiled based on a 30% unbilled water flow projections to ensure that the sold water is stabilized. In addition, the annual water purchase volumes have increased over the last three years to a 3 year average of approximately 3.1 million m³. In 2015, an increase in water consumption of 117,490m³ to approximately 3,248,500m³ from 3,131,000m³ in 2014. This has been reflected in the usage rate increase of 2.10% or \$6.47 to the average user in 2016.

Water flows have reduced from a high volume in 2003 of 4.5 million m³ declining to 3.6 million m³ in 2006 and 2007 to 3.0 million m³ in 2008 and finally to 2.8 million m³ in both 2009 and 2010. In 2011 to 2013, the water volumes seem to have stabilized at 2.9 million m³. As mentioned above, the volumes again increased in 2014 and 2015. In establishing the 2016 estimated water purchases, staff used the 3 year average of water volumes at 3,093,093m³ to establish the usage rate.

Comparison to Water Financial Plan

Based on the Regional and City expenditures, the water usage rate has increased to \$1.147 from \$1.123, an increase of \$0.024 (2.10%) above 2015 rates. This rate is considerably lower than the Water Financial Plan proposed for 2016 at \$1.291 per cubic metre. This is due to water purchases and sales being considerably higher than anticipated in the Plan and the fact that the water purchases have stabilized at a higher water volume than what was anticipated. It is shown (Schedule C) that the usage rate proposed in the Water Financial Plan was a 1.81% increase for 2016 and the actual increase is slightly higher at 2.10%.

The fixed cost charge in the proposed budget has an increase of \$8.44 or 2.53% which is lower than the Financial Plan of 3.51%. The Water Financial Plan proposed a 2.61% increase to the overall cost to the average consumer, including the fixed cost, whereas the actual increase proposed in 2016 is 2.34% for water consumers.

Overall, the proposed budget estimates that an average user will have an annual cost of approximately \$656.57 in comparison to the Water Financial Plan for 2016 with an annual cost of \$672.03. Therefore, the proposed rate structure and budget is actually below the anticipated annual cost to the average user from the Water Financial Plan approved by Council in 2010.

Fixed Charge

The water service fixed charge for capital projects/programs (including the debentures for the water meter replacement program, Lakeshore Road and Killaly Street watermains and replacing frozen water services), vehicle replacements, debentures, unbilled water flows and Regional fixed water purchases will increase from \$334.14 to \$342.58. This is an annual increase of \$8.44 or \$0.70 a month.

The fixed charge annual increases are based on the 2010 Water Financial Plan which allocates an increase of net costs to the fixed charge over the next 10 years to 50% of costs. This budget keeps the net fixed costs at 47% of total budget costs in 2016 (Schedule B). This is related to the Region moving towards water purchases being a fixed cost to the municipality which was 50% in 2015 and 49% in 2016 of the Regional cost of water purchases being allocated to the fixed charge. The \$342.58 proposed fixed charge rate is slightly higher than the Council approved Water Financial Plan proposed rate at \$318.62 but closer to the 2018 proposed rate of \$341.43 (Schedule C). This proposal of fixed charges better aligns with meeting the Asset Management Plan, the current Infrastructure Needs Study and PSAB capital allocations for replacement of infrastructure in the future.

In 2009, the Region of Niagara introduced a new water rate setting and cost recovery method to be charged to the lower tier municipalities. In previous years the Region billed the City for actual flow usage based on a unit rate. In 2009, the Region established a cost recovery based on 25% fixed cost recovery plus the remaining 75% costs, recovered from a unit rate based on actual water volume usage.

The Region would like to move to a larger fixed component for billing of water stating, “that the majority of the Region’s system costs are fixed, in the event that actual volumes are less than the forecast, the Region will incur a requisition deficit because billings to area municipalities will be inadequate to fund the Region’s system operating and capital costs.” The Region continued to use the above method for 2010 to 2015 and has approved the same methodology in 2016. The Region revisited the methodology for the 2016 budget with Area Treasurers and Public Works Officials with the result being to keep the status quo in methodology.

The Regional fixed cost component attributed to the City of Port Colborne should not have a great impact on the consumer water rate as the City’s proposed rate structure currently recovers approximately 47% (47% in 2015) of the total cost on the fixed charge of \$342.58 per customer. The remaining 53% is recovered from the water usage rates passed on to the consumer. As it is anticipated that the Region is progressing toward at least a 50% fixed cost to municipalities, staff have prepared the budget, phasing in the fixed cost over a number of years as approved in Council’s Water Financial Plan.

Average User Annual Cost

As mentioned earlier, the water rate has a blended increase for capital and usage rates of 2.34% for the average residential user which is based on a usage rate increase of 2.10% or \$6.47 and the fixed cost charge increase of \$8.44 or 2.53%. The total increase amounts to a \$14.91 annual increase or \$1.24 a month.

Schedules

In addition to Schedule C, the Water Financial Plan, attached to this report are Schedules B, D and E. The Analysis of Water Systems Costs (Schedule B) provided some comparisons year over year which shows that the overall budget increase in net costs is 3.61% compared to the increase proposed in the Water Financial Plan of 2.57%,. This increase is largely due to the funding of the increased cost to purchase water and the increased 3 year average of water flows, otherwise the increase would be under 1% for operations and capital. The Water System Budget Review (Schedule D) compares 2011 to 2015 actual results and a comparison between the 2015 and 2016 budgets. The Water Rate Calculations 2016 (Schedule E) provides a simple display of the 2016 budget with costs allocated for consumption (usage rate) and fixed costs (fixed charge rate) to calculate both the usage and fixed charge rates.

Wastewater System

Usage Rates

The proposed rates for the wastewater system were generated by incorporating the 2016 Regional wastewater budgeted costs. The overall fixed cost to the City for wastewater treatment increased \$169,013 from \$3,840,990 to \$4,010,003 (4.4% increase). This is due to the fact that flows are based on a 3 year rolling average and depending on weather conditions fluctuations from year to year.

The annual wastewater flows have fluctuated as follows:

- 2010 - 3,784,855 m³
- 2011 - 4,953,455 m³
- 2012 - 3,870,263 m³
- 2013 - 5,062,028 m³
- 2014 - 4,462,442 m³
- 2015 - 4,401,125 m³.

The 3 year average decreased from approximately 4,313,000 m³ in 2012 to 4,188,000 m³ in 2013, increased to 4,628,582 m³ in 2014 and reduced to 4,464,911 m³ in 2015. The 3 year average based on 2013, 2014 and 2015 flows has increased to 4,641,865 m³. As per the above, wastewater flows continue to fluctuate year to year. The Region is billing the City in 2016 based on 4,563,000 m³, from 4,447,000 m³ in 2015 (2.6% increase) and is included in the 2016 budget.

The proposed rates include the City 2016 budget (Schedule F) decrease to general operations with an operating budget decrease of \$23,328. The decrease is attributed to a net reduction in operating costs with increased staff costs, decreased costs in maintenance/upgrading to Pumping Stations and outlet structures, reduced costs in vehicle operations and annual cost of living. Based on the Regional increase and City decreases, the wastewater usage rate has increased to \$1.232 from \$1.208 per cubic metre, an increase of \$0.024 above 2015 rates. This is reflected in the usage rate increase of 1.98% or \$6.55 to the average user in 2016.

Fixed Charge

The wastewater service fixed charge for capital projects, equipment, extraneous flows, CSO Programs and debentures increased 3.56% or \$13.28 from \$372.93 to \$386.22. This increase is due to the increased wastewater flows and increased share of costs from the Region for the treatment of wastewater. The wastewater flows are unpredictable and fluctuate year to year.

The Regional cost recovery model for wastewater bases the charges to the City on a 100% fixed cost. As previously mentioned, it is based on previous 3 year average wastewater volumes (October 2012 through September 2015). The dramatic increase in the 2013 wastewater flows caused an increase to the City's share of Regional costs with higher 3 year averages being 4,563,000 m³ for 2016.

The City's extraneous flows have fluctuated between 35% and 50%. Unfortunately, the increase in flows continues to inflate the 3 year average volumes from 4,447,000 m³ in 2015 to 4,563,000 m³ for 2016.

Average User Annual Cost

The wastewater rate has a blended increase for capital and usage rates of 2.8% for the average residential user which is based on a usage rate increase of 1.98% or \$6.55 and the fixed cost charge in the proposed budget increase of \$13.28 or 3.56%. The total increase amounts to a \$19.83 annual increase or \$1.65 a month.

2016 Rates

The rates proposed in this report for the average user consuming 0.75 m³ per day, will have an approximate increase of \$34.74 for the year or \$2.89 per month or 2.58% increase. Schedule A provides the impact on the cubic metre usage for various users.

The following are the proposed changes compared to 2015 for an average user:

Table "A"

2015 annual cost	2015 rate	Item	2016 rate	2016 annual cost	Annual Increase		Increase (Decrease)
\$	\$		\$	\$	\$		%
1345.25				1380.00	34.74		2.58
307.53	1.123/m ³	Water usage rate	1.147/m ³	314.00	6.47		2.10
334.14	334.14	Water fixed rate	342.58	342.58	8.44		2.53
330.65	1.208/m ³	Sewer usage rate	1.232/m ³	337.20	6.55		1.98
372.93	372.93	Sewer fixed rate	386.22	386.22	13.28		3.56

Capital Program

The capital program for water and wastewater capital projects is provided in Schedule G and H.

Water

Water projects for 2016 include the updating of the SCADA Monitoring system, the completion of the financial commitment on the Lakeshore Road Watermain project, the replacement of frozen water services and the meter replacement program.

The funds allocated in 2015 for the replacement of water services that were frozen in 2015 will be expended by April. The current contract will expire at that time. There remain approximately 50 water services on the City-side that need remediation by lowering and insulation, to prevent future freezes. Staff recommends that the remaining services be remediated under a new tender this year, to be funded from the current capital water

reserve. The estimated cost for the work is \$250,000k (\$5,000 per service). The current capital reserve is \$690,000. The alternative would be to defer the service remediation to 2017 and consider running the water on the services should the weather conditions dictate. The City would have to pay the additional water costs for that period as per policy.

The replacement of the Bulk Water Station on the west side is earmarked for 2016. In addition, staff will be completing the installation of a fire service meter at one or two industrial facilities at a cost of \$60,000 to \$70,000 each to be recovered in a short period with increased revenues. There are no watermain replacements scheduled for 2016 as the City is partnering with the Region of Niagara to replace the Elm Street watermain between Rosedale Avenue and Barrick Road, as outlined in Report #2014-25. The cost for the City's portion of the project will not be billed until 2017/2018. It is anticipated that any remaining cast iron watermains will be replaced in 2017 in the Nickel Area along with the Storm Sewer Project approved by Council. This cost will be determined during the design of the Nickel Area Project.

The capital program provides for an annual increase to capital of 5% or approximately \$50,000 annually to continue to grow the capital funds required under the City's Asset Management Plan, PSAB and future water capital infrastructure. Currently, the water capital budget contributes approximately \$1 million which is considerably low in comparison to the annual requirement based on replacement cost amounting to approximately \$2.3 million.

Wastewater

The wastewater capital work will continue with a commitment to the Combine Sewer Overflow (CSO) program. With \$534,000 budgeted for wastewater capital in 2016, an annual increase is recommended to capital of 5% or approximately \$36,000 annually to continue to grow the capital funds required under the City's Asset Management Plan, PSAB and future wastewater capital infrastructure. Currently, the wastewater capital budget contributes \$534,000 plus the 2015 addition of funding of \$202,000 for a total capital funding amount of \$736,000. This capital funding is still considerably low in comparison to the annual requirement based on replacement cost for wastewater infrastructure amounting to approximately \$1.2 million.

For 2016, it is recommended by staff that a Wastewater Infrastructure Needs Study (INS) be completed as part of the requirements under the Asset Management Plan for a condition assessment of the infrastructure and plan for future replacements and the required funding. This is budgeted at \$150,000. Completion of the Elm Street Storm Sewer Outlet for \$270,000 is planned as part of the CSO Program and tied into the Elm St Watermain project in 2017 with detailed design work to be completed in 2016. It is anticipated that a Storm Sewer Funding program will be in place for storm sewer projects in 2017/2018 at which time the wastewater replacements for such areas will be completed at the same time. This will be funded through the capital funds reserve for wastewater projects and anticipated debentures of \$500,000 in each year of 2017/2018.

Further reports will be presented to Council to outline the specific capital projects as they are determined.

Regional Wastewater Reconciliation

Regional Council endorsed a wastewater requisition methodology which provides for a reconciliation of the estimated share of costs based on the previous 3 year average, as discussed above, with a subsequent adjustment to the actual flows over the period, that being 2014. (The Region subsequently bills this amount in the following year). With the comparison of actual flows in 2014 to the estimated, the over/under payments are to be incorporated into the monthly requisition amounts in the 2016 budget period of each local municipality. The reconciliation for Port Colborne provides an under payment of \$214,000 which will now be billed to the City as part of the annual requisition for the 2016 budget. This amount accrued in 2014 and was set up as a liability and expensed in the 2014 year, therefore having no effect on the 2016 budget.

The 2015 reconciliation has been provided by the Region with Port Colborne's actual flows being 4,401,000 m³ which is slightly lower than the 3 year average flows used at 4,447,000 m³. Due to the fact that the overall Region's wastewater flows decreased dramatically from the budgeted 3 year average of 76,591,000 m³ to the actual of 67,754,000 m³, the City's percentage share of the Region's overall cost has increased from 5.8% to 6.5%, creating an underpayment by the City amounting to \$456,000 and thus created a deficit in the 2015 year. As the wastewater reconciliation reserve was depleted in 2013 and 2014, it is recommended that the deficit amount be funded from the reserve for the CSO program.

Surplus (Deficit)

As noted previously in this report, the water and wastewater systems incurred a deficit in 2015. The water deficit amounted to \$762,000 and the wastewater deficit amounted to \$517,885.

The water deficit for 2015 amounted to \$762,457 and the water rate stabilization reserve was depleted in 2014, although, Council approved the creation of a rate stabilization reserve from the funds budgeted in the 2015 budget which funded the 2014 deficit of \$279,633. These funds are recommended to reduce the deficit to \$482,824. As the City cannot carry a deficit, it must be funded in the next budget year or through current reserves. It is recommended that the deficit be funded from the capital reserve. The majority of the 2015 deficit was the result of the costs of frozen water services but also included costs from a number of watermain breaks (non-billable), Regional water purchases were over budget by \$145,000 due to higher consumption of unbilled/unaccounted for water, and continued declining sales from the industrial sector compared to 2014.

The wastewater deficit for 2015 amounted to \$517,885 and the wastewater rate stabilization reserve was depleted in 2014, although, Council approved the creation of a rate stabilization reserve from the funds budgeted in the 2015 budget which funded the 2014 deficit of \$202,189. As the City cannot carry a deficit, it must be funded in the next budget year or through current reserves. It is recommended that the deficit be funded from the CSO program reserve which reduces the reserve from \$1.5 million to \$1 million. The 2015 deficit was a result of the reconciliation of actual to budget wastewater flows at the Region as described previously and charged to the City in the amount of \$456,000. This amount has been accounted for and expensed in 2015 and set up as a liability to the Region as they will bill this charge in 2017 to the City.

It is recommended that the deficits be funded through existing current reserves as they must be funded in 2015 as a fixed amount to be collected.

4) OPTIONS AND FINANCIAL CONSIDERATIONS:

a) Do nothing.

The water and wastewater rates would remain at the 2015 levels resulting in a potential shortage of revenues to operate the system. (Not recommended)

b) Other Options

Council can approve alternate rates for water and wastewater. Council can approve the funding for the 2015 deficits to be financed through an increase to the capital fixed charges or usage rates. This is not recommended. Staff recommends that the 2015 deficits be funded through current reserves.

Staff is presenting for Council's consideration a budget and rate structure which continues to build on future capital requirements to continue to help meet the Asset Management Plans for future capital replacement, pass along the Regional costs and maintain the City's infrastructure at a manageable level. The water rates were adjusted in accordance with the Water Financial Plan approved by Council.

5) COMPLIANCE WITH STRATEGIC PLAN INITIATIVES

To continue the capital program to reduce unaccounted for water and extraneous flows for a sustainable infrastructure capital program. To comply with the Water Financial Plan as approved by Council.

6) ATTACHMENTS

- Schedule A - Proposed Water & Wastewater Rates (typical consumptions)
- Schedule B - Analysis of Water System Costs
- Schedule C - Anticipated Future Water Rates (Water Financial Plan-2010)
- Schedule D - Water System Budget Review
- Schedule E - Water Rate Calculations 2016
- Schedule F - Wastewater System Budget Review
- Schedule G - Water Capital Budget
- Schedule H - Wastewater Capital Budget
- Schedule I - Water and Wastewater Reserves at December 31, 2015



7) RECOMMENDATION

That Council set the 2016 Water and Wastewater Rates as follows:

<i>Water Usage Rate</i>	<i>\$ 1.147</i>	<i>per m³</i>
<i>Water Service Fixed Charge</i>	<i>\$ 342.58</i>	<i>annual fixed rate</i>
<i>Wastewater Usage Rate</i>	<i>\$ 1.232</i>	<i>per m³</i>
<i>Wastewater Service Fixed Charge</i>	<i>\$ 386.22</i>	<i>annual fixed rate</i>

And that the 2016 Water and Wastewater budgets as presented be approved,

And that the Water and Wastewater rate bylaws be approved by Council

And that the 2015 Water and Wastewater deficits be funded through the current reserves as recommended in the report

8) SIGNATURES

Prepared on March 11, 2016 by:

Reviewed by:

Peter Senese
Director of Community
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Ron Hanson, C.E.T.
Director, Engineering & Operations

Reviewed and Respectfully Submitted:

C. Scott Luey
Chief Administrative Officer

2016 Proposed Water and Wastewater Rates

SCHEDULE A

total fixed water costs at 47% includes Regional costs fixed at 49%

2015		2016		Annual Increase	Total %	
Annual Cost	Rate	Rate	Annual cost			
Average User .75 Cubic Meter Per Day						
\$1,345.25			\$1,380.00	\$34.74	2.58%	
\$307.53	\$1.123	WATER USAGE RATE	\$1.147	\$314.00	\$6.47	2.10%
\$334.14	\$334.14	WATER SERVICE FIXED CHARGE	\$342.58	\$342.58	\$8.44	2.53%
\$330.65	\$1.208	SEWER USAGE RATE	\$1.232	\$337.20	\$6.55	1.98%
\$372.93	\$372.93	SEWER SERVICE FIXED CHARGE	\$386.22	\$386.22	\$13.28	3.56%
High Usage 1.2 Cubic Meter Per Day						
\$1,728.16			\$1,770.72	\$42.56	2.46%	
\$492.05	\$1.123	WATER USAGE RATE	\$1.147	\$502.40	\$10.35	
\$334.14	\$334.14	WATER SERVICE FIXED CHARGE	\$342.58	\$342.58	\$8.44	
\$529.04	\$1.208	SEWER USAGE RATE	\$1.232	\$539.52	\$10.48	
\$372.93	\$372.93	SEWER SERVICE FIXED CHARGE	\$386.22	\$386.22	\$13.28	
Low Usage 0.58 Cubic Meter Per day						
\$1,200.60			\$1,232.39	\$31.79	2.65%	
\$237.82	\$1.123	WATER USAGE RATE	\$1.147	\$242.83	\$5.00	
\$334.14	\$334.14	WATER SERVICE FIXED CHARGE	\$342.58	\$342.58	\$8.44	
\$255.71	\$1.208	SEWER USAGE RATE	\$1.232	\$260.77	\$5.07	
\$372.93	\$372.93	SEWER SERVICE FIXED CHARGE	\$386.22	\$386.22	\$13.28	
Single User .25 Cubic Meter Per day						
\$919.80			\$945.86	\$26.06	2.83%	
\$102.51	\$1.123	WATER USAGE RATE	\$1.147	\$104.67	\$2.16	
\$334.14	\$334.14	WATER SERVICE FIXED CHARGE	\$342.58	\$342.58	\$8.44	
\$110.22	\$1.208	SEWER USAGE RATE	\$1.232	\$112.40	\$2.18	
\$372.93	\$372.93	SEWER SERVICE FIXED CHARGE	\$386.22	\$386.22	\$13.28	
One Cubic Meter Per day						
\$1,557.98			\$1,597.06	\$39.08	2.51%	
\$410.04	\$1.123	WATER USAGE RATE	\$1.147	\$418.67	\$8.63	
\$334.14	\$334.14	WATER SERVICE FIXED CHARGE	\$342.58	\$342.58	\$8.44	
\$440.87	\$1.208	SEWER USAGE RATE	\$1.232	\$449.60	\$8.73	
\$372.93	\$372.93	SEWER SERVICE FIXED CHARGE	\$386.22	\$386.22	\$13.28	

SCHEDULE B

**City of Port Colborne
Analysis of Water System Costs**

	Budgeted		Budgeted		Budgeted		Financial Plan Approved By Council in 2010						
	2014		2015		2016		2014	2015	2016		2017	2018	2019
Budgeted Expenditures													
City Operating costs	1,382,288	32.9%	1,424,779	30.8%	1,371,935	28.4%	1,199,038	1,235,010	1,272,061	28.1%	1,310,221	1,349,530	1,390,015
Regional Water Purchases	\$2,093,119	49.9%	\$2,137,442	46.2%	\$2,279,000	47.2%	2,361,659	2,432,509	2,505,485	55.4%	2,580,649	2,658,069	2,737,811
Capital Contribution-deficit	-	0.0%	279,633	6.0%	279,633	5.8%							
Capital Contribution	633,000	15.1%	693,000	15.0%	810,386	16.8%	198,085	202,047		0.0%	210,209	214,414	218,702
Amortization		0.0%		0.0%		0.0%	364,000	376,300	374,800	8.3%	379,465	377,295	377,758
Water Study	-	0.0%	-	0.0%	-	0.0%			206,000	4.6%			
Long Term Debt Payments	89,146	2.1%	88,986	1.9%	88,582	1.8%	166,818	166,659	166,255	3.7%	166,635	165,788	77,672
Total Costs	4,197,553	100%	4,623,840	100%	4,829,536	100%	4,289,600	4,412,525	4,524,601	100%	4,647,179	4,765,096	4,801,958
Other Revenue	-49,000		-109,000		-151,817		-70,761	-71,469	-72,183		-72,905	-73,634	-74,371
Net Costs	4,148,553		4,514,840		4,677,719		4,218,839	4,341,056	4,452,418		4,574,274	4,691,462	4,727,587
Percentage Increase in Net Costs	1.98%		8.83%		3.61%		2.39%	2.90%	2.57%		2.74%	2.56%	0.77%
Net Costs allocated to Fixed Rate	43.70%		47.40%		46.90%		44.83%	45.25%	45.67%		46.13%	46.45%	46.57%
Net Costs allocated to Usage Rate	56.30%		52.60%		53.10%		55.17%	54.75%	54.33%		53.87%	53.55%	53.43%
Fixed Regional Water Purchases	50.60%		50.10%		48.70%		49.22%	50.13%	51.34%		52.45%	53.48%	55.80%
Water Consumptions													
Estimated Water Purchases m3	2,929,295		2,977,255		3,093,093		2,640,000	2,640,000	2,640,000		2,640,000	2,640,000	2,640,000
Unbilled UFW m3	790,910	27%	863,404	29%	927,928	30%	765,600	765,600	765,600	29%	765,600	765,600	765,600
Estimated Water Sold m3	2,138,385		2,113,851		2,165,165		1,874,400	1,874,400	1,874,400		1,874,400	1,874,400	1,874,400
	-0.42%		-1.15%		2.43%		-1.12%	0.00%	0.00%		0.00%	0.00%	0.00%

SCHEDULE C

**City of Port Colborne
Anticipated Future Water Rates**

	Actual	Actual	Actual	Actual	Actual	Actual	Proposed	Financial Plan Approved By Council in 2010								
	2010	2011	2012	2013	2014	2015	2016	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cost per cu.m	\$1.101	\$1.128	\$1.095	\$1.071	\$1.093	\$1.123	\$1.147	\$1.148	\$1.181	\$1.216	\$1.242	\$1.268	\$1.291	\$1.315	\$1.340	\$1.348
		2.48%	-2.93%	-2.19%	2.05%	2.74%	2.14%	4.30%	2.87%	2.96%	2.14%	2.09%	1.81%	1.86%	1.90%	0.60%
Annual fixed cost	\$223.01	\$251.21	\$259.44	\$276.09	\$282.82	\$334.14	\$342.58	\$247.42	\$264.10	\$284.31	\$296.33	\$307.82	\$318.62	\$330.61	\$341.43	\$345.01
		12.65%	3.28%	6.42%	2.44%	18.15%	2.53%	10.95%	6.74%	7.65%	4.23%	3.88%	3.51%	3.76%	3.27%	1.05%
Annual Cost .75 m3 per day	\$301.31	\$308.79	\$299.76	\$293.19	\$299.21	\$307.42	\$313.99	\$314.27	\$323.30	\$332.88	\$340.00	\$347.12	\$353.41	\$359.98	\$366.83	\$369.02
Total Annual cost	\$524.32	\$560.00	\$559.20	\$569.28	\$582.03	\$641.56	\$656.57	\$561.69	\$587.40	\$617.19	\$636.33	\$654.94	\$672.03	\$690.59	\$708.26	\$714.03
Percentage Increase		6.80%	-0.14%	1.80%	2.24%	10.23%	2.34%	7.13%	4.58%	5.07%	3.10%	2.92%	2.61%	2.76%	2.56%	0.81%

City of Port Colborne

SCHEDULE D

Water System Budget Review

3 year ave flows 3 year ave flows

	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	47.4% fixed 2015 Budget	46.9% fixed 2016 Budget
water usage rate	1.128	1.095	1.071	1.093	1.123	1.123	1.147
water service fixed charge	251.21	259.44	276.09	282.82	334.14	334.14	342.58
Water Purchase Volumes	2,987,130 m3	2,900,986 m3	2,899,770 m3	3,131,010 m3	3,248,500 m3	2,977,255 m3	3,093,093 m3
Fees	\$1,175	\$825	\$775	\$800	\$475	\$1,000	\$750
Other	\$5,468	\$3,680	\$3,789	\$1,386	\$19,468	\$2,000	\$2,042
Capital Reserve	\$0	\$129,426	\$145,864	\$135,717	\$33,203		
Operating Reserve		\$138,660		\$149,620	\$0		
Grants		\$151,100		\$72,900	\$0		
Recovery of unbilled revenue						\$60,000	\$100,000
Water Revenue - RATE	\$2,302,985	\$2,292,355	\$2,093,338	\$1,930,018	\$2,016,172	\$2,374,688	\$2,483,514
Water Revenue - FIXED	\$1,560,990	\$1,661,798	\$1,771,660	\$1,822,626	\$2,159,927	\$2,140,152	\$2,194,205
Water Revenue - OTHER	\$57,950	\$44,978	\$50,089	\$53,628	\$52,529	\$46,000	\$49,025
TOTAL REVENUE	\$3,928,568	\$4,422,822	\$4,065,515	\$4,166,695	\$4,281,774	\$4,623,840	\$4,829,536
Purchase Water - Region	\$1,613,048	\$1,551,301	\$1,557,176	\$1,681,352	\$1,744,445	\$1,598,786	\$1,713,573
Fixed Water Purchases - Region	\$516,130	\$506,345	\$517,719	\$520,087	\$538,656	\$538,656	\$565,427
Vehicle operation	\$923	\$45,849	\$58,856	\$66,544	\$55,546	\$86,121	\$68,648
Mains Maintenance	\$135,269	\$209,487	\$180,125	\$150,101	\$142,285	\$217,120	\$216,220
Fire Hydrants	\$68,295	\$66,695	\$42,486	\$58,651	\$71,297	\$82,779	\$80,413
Meters	\$145,825	\$102,287	\$120,575	\$138,214	\$100,230	\$142,960	\$109,406
Services (including thaws)	\$89,019	\$90,483	\$74,646	\$203,178	\$481,330	\$130,875	\$125,739
Leak	\$99,937	\$95,393	\$50,838	\$34,570	\$20,487	\$58,946	\$56,379
Leak Repairs	\$67,606	\$107,324	\$118,495	\$96,947	\$98,320	\$96,789	\$98,822
Billing and Collection	\$132,838	\$136,001	\$136,995	\$142,729	\$153,498	\$151,380	\$154,453
Locates		\$22,858	\$41,955	\$50,325	\$54,146	\$5,645	\$8,599
Admin	\$275,824	\$346,657	\$367,256	\$358,417	\$472,373	\$418,137	\$428,782
Admin overbilling		\$138,660	\$0				
Capital study	\$190,000	\$129,426	\$35,161	\$22,098	\$0	\$0	\$0
Capital Debentures	\$149,877	\$87,587	\$87,734	\$89,146	\$88,986	\$88,986	\$88,582
Capital - tsf to Reserve (deficit)		\$65,156	\$20,000		\$279,633	\$279,633	\$279,633
Capital Projects/Programs	\$0	\$85,944	\$101,847	\$186,519	\$93,203	\$60,000	\$71,000
Capital Construction/Debentures	\$296,370	\$542,000	\$542,000	\$542,000	\$542,000	\$542,000	\$672,386
Capital Vehicle Replacement	\$45,000	\$51,000	\$51,000	\$51,000	\$51,000	\$51,000	\$52,000
Capital Water Meter Replacement Prog				\$40,000	\$40,000	\$40,000	\$15,000
Water recoverable	\$4,697	\$3,692	\$7,830	\$6,819	\$8,828	\$7,423	\$7,578
Elm Street	\$4,692	\$21,544	\$3,405	\$3,166	\$2,965	\$13,910	\$8,432
Elizabeth St	\$6,542	\$23,848	\$14,391	\$4,465	\$5,003	\$12,694	\$8,464
TOTAL EXPENDITURE	\$3,841,892	\$4,429,537	\$4,130,490	\$4,446,328	\$5,044,231	\$4,623,840	\$4,829,536
Surplus (Deficit)	\$86,676	(6,715)	(64,975)	(279,633)	(762,457)	\$0	\$0
City Operations	\$966,874	\$1,222,635	\$1,163,200	\$1,108,692	\$1,593,836	\$1,375,779	\$1,320,118
City Capital	\$681,247	\$680,587	\$691,878	\$722,146	\$1,061,619	\$1,001,619	\$1,078,601
Regional costs	\$2,129,178	\$2,057,646	\$2,074,895	\$2,201,439	\$2,283,101	\$2,137,442	\$2,279,000
Total costs net of other revenue	\$3,777,299	\$3,960,868	\$3,929,973	\$4,032,277	\$4,938,556	\$4,514,840	\$4,677,719
Region Share of costs	56.37%	51.95%	52.80%	54.60%	46.23%	47.34%	48.72%
City Share of costs	43.63%	48.05%	47.20%	45.40%	53.77%	52.66%	51.28%

SCHEDULE E

**City of Port Colborne
Water Rate Calculations
2016**

	Total Costs	Consumption Costs	Fixed Costs
Amortization/Capital	480,956		480,956
2014 Deficit/Capital	279,633		279,633
Contract Services	139,313	139,313	
Salaries and benefits	600,440	600,440	
Regional Water Purchases	2,279,000	1,169,513	1,109,487
Interdepartmental			
Administration	247,617	178,113	69,504
Fleet Charges	57,858	57,858	
Long term debt	88,582		88,582
New Long term debt	329,430	103,386	226,044
General Admin	57,245	57,245	
Materials and supplies			
Utilities and telephone	9,064	9,064	
Repairs and Maintenance	134,025	134,025	
Materials, parts and supplies	68,407	68,407	
Other	22,359	22,359	
Small Tools/Equipment	35,607	35,607	
	4,829,536	2,575,330	2,254,206
Other Revenues	- 151,817 -	91,817 -	60,000
	4,677,719	2,483,513	2,194,206
Estimated Annual Water Sold - m3		2,165,165	
Total Customers			6,405
Water Usage Rate		1.147	
Annual Water Service Fixed Charge			342.58

SCHEDULE F

**City of Port Colborne
Wastewater System Budget
Review**

	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2015 Budget	2016 Budget
Fees	\$244	\$6,871	\$4,628	\$10,373	\$2,735	\$5,000	\$5,000
Sewer Revenue - RATE	\$2,590,108	\$2,690,305	\$2,635,210	\$2,660,198	\$2,645,041	\$3,044,134	\$3,129,966
Sewer Revenue - FIXED	\$1,848,870	\$1,895,850	\$2,002,305	\$2,049,590	\$2,380,452	\$2,368,116	\$2,452,470
Reconciliation refund-Region	\$36,713						
Operating reserve				\$67,151	\$0		
Reconciliation Reserve			\$384,000				
Sewer Revenue - OTHER	\$9,776	\$6,452	\$9,511	\$10,440	\$7,450	\$9,000	\$9,000
TOTAL REVENUE	\$4,485,711	\$4,599,478	\$5,035,654	\$4,797,752	\$5,035,678	\$5,426,250	\$5,596,436
Wastewater treated - Region	\$3,142,232	\$3,341,522	\$3,870,558	\$3,584,169	\$3,771,549	\$3,840,990	\$4,010,003
Reconciliation cost - Region			\$199,000	\$214,000	\$456,000		
Johnson Pumping station	\$19,608	\$23,854	\$21,744	\$33,573	\$17,603	\$42,269	\$33,928
Sugarloaf Pumping station	\$29,792	\$3,398	\$7,823	\$18,884	\$1,894	\$11,504	\$11,746
Scholfield Pumping station				\$17,943	\$27,562	\$41,000	\$42,000
Vehicle operations		\$1,868	\$13,979	\$12,716	\$6,696	\$55,349	\$34,813
sewer mains	\$18,310	\$22,052	\$33,500	\$21,057	\$11,252	\$33,281	\$34,448
laterals	\$79,954	\$113,081	\$84,563	\$72,665	\$58,434	\$109,535	\$111,836
manholes	\$14,027	\$6,878	\$33,707	\$31,081	\$34,999	\$64,228	\$65,577
Locates		\$22,254	\$28,059	\$38,692	\$37,555	\$61,700	\$65,884
general operation	\$261,160	\$256,962	\$251,277	\$282,525	\$303,702	\$308,977	\$320,449
recoverable works	\$2,634	\$1,500	\$2,130	\$3,474	\$1,532	\$2,946	\$3,007
extraneous flows	\$128,698	\$182,252	\$154,451	\$159,661	\$113,095	\$142,783	\$126,556
Tsf to Reconciliation Reserve		\$67,098					
Capital - tsf to Reserve (deficit)					\$202,189	\$202,188	\$202,189
Capital Main Construction	\$250,000	\$270,000	\$270,000	\$270,000	\$270,000	\$270,000	\$283,000
Capital Projects-equip	\$14,500	\$14,500	\$34,500	\$34,500	\$34,500	\$34,500	\$36,000
Capital Projects		\$204,840	\$205,000	\$205,000	\$205,000	\$205,000	\$215,000
Capital Debentures	\$202,245	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL EXPENDITURE	\$4,163,160	\$4,532,059	\$5,210,291	\$4,999,940	\$5,553,562	\$5,426,250	\$5,596,436
Surplus (Deficit)	\$322,551	\$67,419	(174,637)	(202,188)	(517,884)	\$0	\$0
City Operations	\$544,163	\$687,874	\$617,094	\$604,307	\$604,139	\$859,572	\$836,244
City Capital	\$466,745	\$489,340	\$509,500	\$509,500	\$711,689	\$711,688	\$736,189
Regional costs	\$3,142,232	\$3,341,522	\$4,069,558	\$3,798,169	\$4,227,549	\$3,840,990	\$4,010,003
Total costs net of other revenue	\$4,153,140	\$4,518,736	\$5,196,152	\$4,911,976	\$5,543,377	\$5,412,250	\$5,582,436
Region Share of costs	75.66%	73.95%	78.32%	77.32%	76.26%	70.97%	71.83%
City Share of costs	24.34%	26.05%	21.68%	22.68%	23.74%	29.03%	28.17%

**CITY OF PORT COLBORNE
WATER CAPITAL BUDGET**

SCHEDULE G

	2016	2017	2018	2019	2020	Total
Carry Forward from Prior Year	1,470,227	441,220	19,085	(307)	324,681	1,470,227
Total capital funds available						
Capital Projects	410,000	410,000	460,232	601,975	657,355	2,539,562
Annual Increase-5%		50,232	52,743	55,380	58,149	216,505
Rate Stabilization	279,633	279,633	279,633	279,633	279,633	1,398,165
Debt (matures 2018)	89,000	89,000	89,000			267,000
Debt (matures 2035)	126,000	126,000	126,000	126,000	126,000	630,000
Debt (matures 2025) - Meters	100,000	100,000	100,000	100,000	100,000	500,000
Meter replacement savings	103,000	103,000	103,000	103,000	103,000	515,000
						-
Deficit Recovery	(762,000)					(762,000)
admin costs	(45,000)	(45,000)	(45,000)	(45,000)	(45,000)	(225,000)
Meter Replacement debt charges - \$1,800,000 (10 years)	(203,000)	(203,000)	(203,000)	(203,000)	(203,000)	(1,015,000)
Killaly St & Lakeshore Rd debt charges - \$1,800,000 (20 years)	(126,000)	(126,000)	(126,000)	(126,000)	(126,000)	(630,000)
Previous debt charges	(89,000)	(89,000)	(89,000)			(267,000)
	1,352,860	1,136,085	766,693	891,681	1,274,818	4,637,458
New Debt						-
	1,352,860	1,136,085	766,693	891,681	1,274,818	4,637,458
Capital Projects						
Equipment	(52,000)	(52,000)	(52,000)	(52,000)	(52,000)	(260,000)
Meter Replacement Program	(15,000)	(15,000)	(15,000)	(15,000)	(15,000)	(75,000)
Watermains				(500,000)	(500,000)	(1,000,000)
- Nickel Area (Storm Project)		(250,000)				(250,000)
- Elm Street		(800,000)	(700,000)			(1,500,000)
Replace Frozen Services (150-carryover 2015)	(594,640)					(594,640)
Replace Frozen Services (50- 2016)	(250,000)					(250,000)
	441,220	19,085	(307)	324,681	707,818	707,818
Annual Capital Contributions	1,004,633	1,054,865	1,107,608	1,162,988	1,221,138	
Annual increase at 5%		50,231.65	52,743.23	55,380.39	58,149.41	

**CITY OF PORT COLBORNE
WASTEWATER CAPITAL BUDGET**

SCHEDULE H

	2016	2017	2018	2019	2020	Total
Carry Forward from Prior Year	615,000	845,189	492,187	386,836	261,067	615,000
Total capital funds available	534,000	534,000	570,809	609,459	650,042	2,898,311
Rate Stabilization	202,189	202,189	202,189	202,189	202,189	1,010,945
Annual Increase-5%		36,809	38,650	40,582	42,612	158,653
Deficit Recovery						-
admin costs	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	(250,000)
new debt charges			(61,000)	(61,000)	(61,000)	(183,000)
new debt charges				(61,000)	(61,000)	(122,000)
	1,301,189	1,568,187	1,192,836	1,067,067	983,909	4,127,909
new debenture debt (10 years @ 4%)		500,000	500,000			1,000,000
	1,301,189	2,068,187	1,692,836	1,067,067	983,909	5,127,909
Capital Projects						
Vehicles/Equipment	(36,000)	(36,000)	(36,000)	(36,000)	(36,000)	(180,000)
CSO Programs/Refurbishments	(270,000)	(270,000)	(270,000)	(270,000)	(270,000)	(1,350,000)
Infrastructure Needs Study	(150,000)					(150,000)
Elm St Storm Sewer Outlet		(270,000)				(270,000)
Capital Projects		(1,000,000)	(1,000,000)	(500,000)	(500,000)	(3,000,000)
Balance	845,189	492,187	386,836	261,067	177,909	177,909

Note: Total capital funds available increased by 5% annually

Projects:

2016 - Infrastructure Needs Study

2017 - Elm St Storm Sewer Outlet

2017 - Replacement with Storm Sewer Project

CITY OF PORT COLBORNE
RESERVES AND RESERVE FUNDS
December 31, 2015

SCHEDULE I

WATER

Lakeshore Rd Watermain	378,015		
Development charges-Lakeshore Rd project	157,777		
SCADA Water Study	83,587		
Water Rate Stabilization	-		
Water Equipment Replacement	41,031		
Lorraine Bay	30,420		
Water Meter Replacements	1,806,163		
Bulk Water Station Replacement	269,692		
INS Water Study	3,314		
Meter Pits	42,484		
Water Capital Projects	113,587		
- 2015 Deficit	762,000		
- Frozen Services Rehab	594,640		
	1,470,227		
		4,282,710	

WASTEWATER

Development charges	6,223		
Sewer Rate Stabilization	-		
Sewer Operations-TV Inspections	99,829		
Sewer Equipment Replacement	16,449		
CSO Sewer Program	1,580,185		
- 2015 deficit	(517,885)	1,062,300	
	195,000		
Sewer Capital Projects	195,000		
- INS Study	150,000		
- Elm St Storm Outlet	270,000	615,000	
	1,799,801		