



Financial Support Services

David Clazie, CA
Director of Corporate and Financial Services

STAFF REPORT 09-34CFS

DATE: December 14, 2009

TO: Mayor Williams and Members of Council

FROM: David Clazie
Director of Corporate & Financial Services

Chris Angelo
Director of Public Works & Environmental Services

SUBJECT: Water and Wastewater

Recommendation:

That Council approves the Water and Wastewater rates outlined in Option # 1 effective January 1, 2010;

And further that Council approves the remaining rate structure effective January 1st of each year for the years 2011 to 2020 also outlined in Option # 1.

Background:

Over the past year the Quinte West Water and Wastewater Municipal Enterprise has encountered a number of financial issues which has led staff to re-evaluate the current rate structure put in place by Council in 2007. Over the past year the Enterprise has been struggling to have sufficient funds at the end of the month to cover their operational costs. Currently there is a temporary loan from the City to the Municipal Enterprise for approximately \$750,000 in order for all of the bills to be paid. While this is a temporary solution this cannot continue into the future as current Provincial legislation outlines that all water and wastewater operations must be self sufficient. Furthermore, any loans from the City will affect the City's cash flow and ability to fund projects.

There are a number of issues that have arisen since the last rate study was completed in 2007 which have led us to this point. In the previous study annual consumption volumes were estimated based on previous years consumption. Since 2007 we have been faced with an economic slowdown which has resulted in lower than expected consumption from existing Commercial, Residential and Industrial users as well as the closure of a couple of large users.

Furthermore, since 2007 we have had two large users install sewage meters. This allows the businesses to only pay for the actual wastewater that they discharge into the system rather than paying on the water they actually use. The two companies use a large amount of water in their product and therefore have a much smaller discharge back into the system. This when combined with two summers that have been wetter than normal have resulted in consumptions being less than 70% of originally estimated.

In 2007 operating and capital plans were forecasted based on the consumption numbers being met. Staff has adjusted their spending as much as possible to account for the lower than expected revenues, but being a tightly legislated area, operational activities and capital plans still needed to be completed.

An additional operational and capital expense this year has been the repair of the wastewater digesters which resulted in almost all of the City's biosolids being dried and taken to a landfill rather than being land applied. These issues have resulted in almost \$1 million of additional unexpected expenses to the Municipal Enterprise in 2009.

Another issue that has arisen since the completion of the previous study is the capacity of the Trenton Wastewater Plant. Recent studies have shown that the plant is currently at 83% of its current capacity and with the amount of development already approved and committed to full servicing the plant is close to its full capacity. In 2010 the City must commence the process to expand wastewater treatment plant capacity.

Staff has done some initial research into the potential price for either an upgraded plant or possibly a second wastewater plant in Trenton Ward (west side of the river). Either way the Municipal Enterprise is looking at the potential of a \$25 to \$30 million expenditure for a plant in the next five years. In our analysis we have allowed for the next two years to complete studies and design work and then have allowed for construction over a three year period after that. This has allowed us to smooth out the financial impact to the users as much as possible.

Finally our current rate structure is just covering our operations. With a projected capital outlay of over \$90 million over the next ten years, it is imperative that more money is raised through increased rates to help fund some of this capital. Otherwise virtually all of this capital will have to be debt financed.

Current Legislation:

The City's Municipal Enterprise operates under the Sustainable Water and Sewage Systems Act 2002. This Act lays out all of the requirements that the City must operate our water and wastewater operations under. The Act further outlines the City's financial reporting obligations to the Ministry. Please see the Appendix A attached to this report that has excerpts from the Act outlining our financial reporting requirements.

We draw particular attention to Section 9. (1) which states, "Every regulated entity that provides water services to the public shall prepare and approve a plan describing how the entity intends to pay the full cost of providing those services". It is therefore important that Council adopts the entire plan and not just the first year of the plan. Assumptions have been made to defer capital and contributions to the lifecycle reserves based on the entire 11 year plan, not just one year.

By July 1, 2010 the City must file a report with the Minister outlining our operating, capital and financing plan for the next six to ten years showing that all of the associated costs are being raised through our fee base. This report will also have to be reviewed and approved by our auditors to ensure compliance before it is submitted.

Furthermore, By-Law 07-182 is currently in place outlining the already approved rates under the 2007 Bill 175 study. This by-law will be repealed and replaced with a new rate by-law outlining the new rates approved by Council by adopting this report.

Financial Impact:

In order to give Council a few different options with philosophical differences in how the rates are structured, staff has prepared three different rate options for consideration. It is important to note that all three options include an additional monthly financing charge to all sewer accounts for the financing of the new Trenton Wastewater Plant. These amounts start at \$2.00/month in 2011 and increase to \$12.50/month in 2016 when staff is projecting the last of the financing costs will come into effect.

In our analysis staff have used a 30 year debenture cost at 5.5% for all our debt calculations. There will undoubtedly be projects that will be financed over a longer period of time (40 years), there will also be other capital such as computer system upgrades and equipment upgrades that will need to be financed over a shorter time frame (10 years). Thirty years was used as an average. The only exception to this is the wastewater plant where a 40 year time frame was used.

Option # 1 – Fund all capital from the base charge and fund operations from rates

The fundamental concept behind this option preferred by staff is that the fixed monthly charges are actually tied to the monthly base charge and is independent from the amount of water actually used. The concept is that the vast majority of the infrastructure, whether it be the plants or lines under the street, is required regardless of how much water is actually used. To that end these costs are fixed and therefore the revenue stream should be fixed as well, which is accomplished through a fixed base charge payable by all users to the system.

The operational costs of the system are then covered by the usage rate. For the most part these costs such as chemicals, hydro et cetera are dependent on the amount of water and wastewater flowing through the system.

The following chart outlines the base charges and rates applicable to this option:

Year	Water Base Charge / month	Water Rate /cubic meter	Wastewater Base Charge / month	Wastewater Plant Base Charge	Wastewater Rate / cubic meter
2009	10.00	0.67	10.00	0.00	0.38
2010	10.00	0.67	10.00	0.00	0.58
2011	10.00	0.77	10.00	2.00	0.68
2012	10.00	0.87	10.00	4.00	0.80
2013	10.00	1.02	10.00	6.00	0.92
2014	10.00	1.16	13.00	8.00	0.96
2015	13.50	1.16	15.00	10.00	0.96
2016	16.50	1.16	17.50	12.50	0.97
2017	20.50	1.17	22.00	12.50	1.00
2018	25.00	1.22	26.00	12.50	1.02
2019	27.50	1.23	34.00	12.50	1.03
2020	32.75	1.23	40.00	12.50	1.07

The following chart outlines the monthly water/wastewater bills associated with the above rate increases:

Year	Average Family (3 people)	Average Senior (1.5 people)	Average Bar/Restaurant	Average Small Manufacturing	Average Large Manufacturing
2009	41.88	27.88	402.98	942.66	8,174.64
2010	46.07	29.39	470.71	1,108.20	9,693.34
2011	52.06	32.82	540.13	1,273.64	11,163.87
2012	58.83	36.54	621.99	1,469.50	12,913.40
2013	66.45	40.56	717.70	1,699.18	14,973.27
2014	75.11	46.88	789.20	1,863.60	16,363.23
2015	82.63	54.39	808.41	1,894.51	16,469.07
2016	90.92	62.49	833.06	1,937.86	16,677.22
2017	100.02	71.21	863.06	1,995.50	17,004.65
2018	110.06	80.26	910.08	2,090.23	17,672.34
2019	121.04	90.94	944.10	2,151.21	17,982.94
2020	133.15	120.49	986.06	2,230.03	18,439.44

By 2020 each residential account would be paying a combined water and wastewater base charge of \$85.25 per month and \$1.23 for each cubic meter of water and \$1.07 for each cubic meter of wastewater. An average 3 person home using 250 cubic meters of water per year would have a monthly bill of \$133.15.

Staff has phased in the capital and required financing as well as the contributions to the lifecycle reserve in order to smooth the increases as much as possible. **The result is an increase in 2010 of \$1.51 per month over the already approved rate structure.** From 2011 to 2014 customers would see an average increase of \$5.00 per month over the previously approved rates with a further \$8.00 to \$12.00 per month increase from 2015 to 2020. The main reason for the larger increases in the next few years is to allow for the building in of the financing costs for the new wastewater plant, the repayment of the accumulated water deficit and the repayment of the temporary loan from the City.

Option # 2 – Maintain the Bill 175 rates and increase the base charge accordingly

The concept behind this option is that in order to help maintain a constant revenue stream the current usage rates would be maintained and the monthly base charge would be increased over time to cover any further capital cost increases.

The value of this option is that regardless of the amount of consumption there is still a guaranteed revenue stream to the Municipal Enterprise. However, it does not generate as much guaranteed revenue as in option # 1 where the base charges would be much higher and a lower consumption rate.

The following chart outlines the base charges and rates applicable to this option:

Year	Water Base Charge / month	Water Rate /cubic meter	Wastewater Base Charge / month	Wastewater Plant Charge	Wastewater Rate / cubic meter
2009	10.00	0.67	10.00	0.00	0.38
2010	10.00	0.75	14.25	0.00	0.42
2011	10.00	0.85	15.50	2.00	0.47
2012	10.00	0.96	17.00	4.00	0.53
2013	10.00	1.06	18.75	6.00	0.59
2014	11.25	1.14	20.75	8.00	0.66
2015	11.50	1.25	20.75	10.00	0.73
2016	11.50	1.38	21.75	12.50	0.80
2017	11.50	1.52	24.75	12.50	0.88
2018	13.75	1.67	26.50	12.50	0.97
2019	13.75	1.84	32.75	12.50	1.06
2020	14.00	2.02	37.00	12.50	1.17

The following chart outlines the monthly bills associated with the above rate increases:

Year	Average Family (3 people)	Average Senior (1.5 people)	Average Bar/Restaurant	Average Small Manufacturing	Average Large Manufacturing
2009	41.88	27.88	402.98	942.66	8,174.64
2010	48.53	32.99	452.45	1,054.61	9,101.01
2011	54.94	37.38	511.47	1,191.99	10,284.43
2012	61.97	42.15	577.28	1,345.46	11,609.46
2013	69.13	47.13	641.55	1,494.61	12,889.04
2014	77.50	53.50	705.10	1,638.85	14,087.95
2015	83.50	57.10	771.24	1,795.74	15,474.00
2016	91.13	62.09	846.55	1,972.41	17,011.97
2017	98.66	66.72	927.26	2,163.35	18,692.69
2018	107.65	72.52	1,017.80	2,376.18	20,550.59
2019	119.39	80.74	1,122.02	2,617.70	22,618.32
2020	129.93	87.42	1,230.72	2,873.87	24,861.95

By 2020 each residential account would be paying a combined water and wastewater base charge of \$63.50 per month and \$2.02 for each cubic meter of water and \$1.17 for each cubic meter of wastewater that they consume. An average 3 person home using 250 cubic meters of water per year would have a monthly bill of \$129.93.

Staff has phased in the capital and required financing as well as the contributions to the lifecycle reserve in order to smooth the increases as much as possible. The result is an increase in 2010 of \$5.12 over already approved rates, and an average increase from 2011 to 2014 of \$5.00 per month with an additional increase of \$4.00 to \$8.00 from 2015 to 2020. As previously mentioned the main reason for the larger increases over the remaining years is to allow for the building in of the financing costs for the new wastewater plant as well as the required building of the lifecycle reserves.

Option # 3 – Constant Base Charge and increase consumption rates accordingly

The concept behind this option is that the fixed monthly charges are left at the current \$10.00 per month for both water and wastewater and the consumption rate will then be used to cover the remaining operating and capital costs of the Enterprise. While this rate structure is the most volatile to economic and weather conditions (for example a wet summer will decrease consumption and therefore have a direct decrease in revenues), it does however promote conservation. Since the larger portion of the bill is directly related to the amount of water consumed, the more families and businesses conserve, the more control they have over their monthly bill.

The following chart outlines the base charges and rates applicable to this option:

Year	Water Base Charge / month	Water Rate /cubic meter	Wastewater Base Charge / month	Wastewater Plant Charge	Wastewater Rate / cubic meter
2009	10.00	0.67	10.00	0.00	0.38
2010	10.00	0.68	10.00	0.00	0.59
2011	10.00	0.78	10.00	2.00	0.68
2012	10.00	0.90	10.00	4.00	0.80
2013	10.00	1.05	10.00	6.00	0.92
2014	10.00	1.21	10.00	8.00	1.08
2015	10.00	1.33	10.00	10.00	1.15
2016	10.00	1.44	10.00	12.50	1.26
2017	10.00	1.60	10.00	12.50	1.45
2018	10.00	1.84	10.00	12.50	1.61
2019	10.00	1.95	10.00	12.50	1.95
2020	10.00	2.16	10.00	12.50	2.22

The following chart outlines the monthly bills associated with the above rate increases:

Year	Average Family (3 people)	Average Senior (1.5 people)	Average Bar/Restaurant	Average Small Manufacturing	Average Large Manufacturing
2009	41.88	27.88	402.98	942.66	8,174.64
2010	46.27	29.46	473.92	1,116.05	9,765.44
2011	52.43	32.95	545.96	1,287.89	11,294.60
2012	59.40	36.74	631.25	1,492.12	13,120.94
2013	67.22	40.84	730.06	1,729.39	15,250.43
2014	75.54	45.11	837.03	1,986.61	17,562.89
2015	81.56	48.56	907.04	2,153.49	19,046.61
2016	88.16	52.22	986.21	2,342.76	20,735.71
2017	96.16	55.42	1,108.39	2,640.30	23,453.66
2018	104.29	58.34	1,239.62	2,961.04	26,396.33
2019	113.60	61.69	1,389.83	3,328.15	29,764.44
2020	123.68	65.33	1,552.60	3,725.95	33,414.09

By 2020 each residential account would be paying a combined water and wastewater base charge of \$32.50 per month and \$2.16 for each cubic meter of water and \$2.22 for each cubic meter of wastewater that they consume. An average 3 person home using 250 cubic meters of water per year would have a monthly bill of \$123.68.

Staff has phased in the capital and required financing as well as the contributions to the lifecycle reserve in order to smooth the increases as much as possible. The result is an increase in 2010 of \$1.58 over the previously Council approved rates with an average increase from 2011 to 2020 of \$4.00 per month. As mentioned previously the main reasons for the larger increases in the years ahead is to allow for the building in of the financing costs for the new wastewater plant as well as the lifecycle reserves.

Capital Plan

The 11 year capital and financing plan has been attached as Appendix B for Council's information. Over the next 11 years staff has proposed water capital of \$38.8 million of which just over \$20.7 million will be debt financed. Wastewater capital including the new Wastewater Plant totals \$53.6 million of which approximately \$47.5 million will be debt financed.

In total over \$92 million worth of infrastructure improvement will be carried out over the next 11 years with just over two thirds of it being debt financed. The City of Quinte West currently has a debt capacity of approximately \$200 million over a 30 year term. By effectively pre-approving \$68.2 million worth of debt financing for water and wastewater this only leaves \$132.8 million of debt capacity for future City Capital projects.

Rate Comparisons from other Municipalities for 2010

The following analysis compares a number of neighbouring municipalities with water and wastewater services to those rates proposed by staff for Quinte West. From the list below the new proposed rates in Quinte West are still below and in many cases well below our neighbours.

Municipality	Monthly Base Charge - Water	Monthly Base Charge - Wastewater	Water Rate – per cubic meter	Wastewater Rate – per cubic meter	Average Monthly Bill
Quinte West – Option # 1	10.00	10.00	0.67	0.58	46.07
Quinte West – Option # 3	10.00	10.00	0.61	0.56	46.27
Brockville	11.08	15.07	0.644	0.876	46.80
Quinte West – Option # 2	10.00	14.00	0.61	0.42	48.53
Cobourg	10.45	11.41	0.52	0.78	48.95
Kingston	13.32	26.87	0.00	0.6642	54.03
Port Hope	10.77	10.77	0.87	1.12	63.00
Quinte West – 2013 rates	10.00	16.00	1.02	0.92	66.45
Belleville	20.87	0.00	1.50	0.87	70.25
Quinte West – 2016 rates	16.50	30.00	1.16	0.97	90.92
PEC (2010)	20.86	30.17	1.13	1.02	95.82

Based on the above comparison information it would take Quinte West customers until 2013 to reach the current Belleville rates and until 2016 to reach the current Prince Edward County rates.

It is virtually certain that both of these municipalities will be increasing their rates before then, which will continue to allow Quinte West to still maintain the lowest water and wastewater rates in the area.

Mobile Home Parks Base Charge

When the original Bill 175 study was completed a monthly base charge of \$3.00 was established for all mobile home parks currently on water and wastewater services. This charge however was inconsistent with the base charges being charged to other multi-residential units. In all other cases the \$10.00 base charge for water and wastewater was billed to each unit in a complex. For example, a 10 unit apartment complex in Bayside would pay a base charge of \$200.00 (10 units x \$10/month water and \$10/ month wastewater) per month plus usage, compared to a 10 unit mobile home park which would pay \$60.00 (10 units x \$3 / month water and \$3/ month wastewater).

This difference in rate structure causes inequities within the rate structure. In order to rectify this, staff is proposing a phased in base charge increase for the mobile home parks in order to bring them in line with the standard base charges. This will take place by 2013 for both water and wastewater. While this will create a larger than average increase for these units it is important to rectify this in order to ensure all residential units are treated in a consistent manner.

External Internal Consultation:

The meeting being held on December 14, 2009 will allow for an open public discussion on these proposed rates. Once the rates are approved staff will provide updated information to the media and customers, as well on our website.

Comment/Analysis:

By the year 2020 the City's water and wastewater rates will be covering all of our operating costs as well as a significant portion of our capital costs as well as making contributions to our lifecycle capital reserves.

While the rates do represent an increase to the average residential and commercial user, the City's proposed rates are still well below Belleville and Prince Edward County's rates. Current Provincial legislation combined with a number of years of virtually no rate increases has lead us to a point where large yearly increases are now required to ensure that the City's water and wastewater system is self sustainable today and into the future.

Attachment

“Appendix A”

SUSTAINABLE WATER AND SEWAGE SYSTEMS ACT, 2002

COST RECOVERY PLAN

Cost recovery plan for water services

9. (1) Every regulated entity that provides water services to the public shall prepare and approve a plan describing how the entity intends to pay the full cost of providing those services. 2002, c. 29, s. 9 (1).

Auditor's review

(2) The regulated entity shall not approve the plan before giving the plan to the municipal auditor for review and receiving the written opinion of the municipal auditor on the plan. 2002, c. 29, s. 9 (2).

Same

(3) The opinion of the municipal auditor shall address the prescribed matters, contain the prescribed information and be in the prescribed form and shall be submitted to the regulated entity by the date specified by the regulated entity, which shall not be later than 30 days before the regulated entity is required to submit its plan to the Minister. 2002, c. 29, s. 9 (3).

Plan submitted to Minister

(4) The regulated entity shall submit the approved plan and the municipal auditor's opinion on it to the Minister by the day that is six months after,

(a) the date prescribed for the purpose of subsection 3 (4);

(b) if an extension is granted for the purpose of subsection 3 (4), the extended date; or

(c) if the Minister prepared a report on behalf of the entity, the date the Minister gave the report to the entity. 2002, c. 29, s. 9 (4).

Contents

(5) The plan must meet the requirements of this Act and the regulations. 2002, c. 29, s. 9 (5).

Form

(6) The plan must be made in a form approved by the Minister. 2002, c. 29, s. 9 (6).

Sources of revenue

[\(7\)](#) The regulations may specify those sources of revenue that a regulated entity is, or is not, permitted to include in the plan and may impose conditions or restrictions with respect to different sources of revenue. 2002, c. 29, s. 9 (7).

Restriction

[\(8\)](#) The regulations may specify the maximum amount by which a regulated entity may increase the charges for the provision of the water services for any customer or class of customer over any period of time. 2002, c. 29, s. 9 (8).

REPORT ON FULL COST OF SERVICES

Report on full cost of water services

[3. \(1\)](#) Every regulated entity that provides water services to the public shall prepare and approve a written report about those services. 2002, c. 29, s. 3 (1).

Auditor's review

[\(2\)](#) The regulated entity shall not approve the report before giving the report to the municipal auditor for review and receiving the written opinion of the municipal auditor on the report. 2002, c. 29, s. 3 (2).

Same

[\(3\)](#) The opinion of the municipal auditor shall address the prescribed matters, contain the prescribed information and be in the prescribed form and shall be submitted to the regulated entity by the date specified by the regulated entity, which shall not be later than 30 days before the regulated entity is required to submit its report to the Minister. 2002, c. 29, s. 3 (3).

Report submitted to Minister

[\(4\)](#) The regulated entity shall submit the approved report and the municipal auditor's opinion on it to the Minister by the date specified by regulation. 2002, c. 29, s. 3 (4).

Contents

[\(5\)](#) The report must contain the following information:

1. An inventory of and management plan for the infrastructure needed to provide the water services, prepared and certified by a professional engineer.
2. An assessment of the full cost of providing the water services and the revenue obtained to provide them.
3. Any other matter specified by the regulations. 2002, c. 29, s. 3 (5).

*******(7) The full cost of providing the water services includes the source protection costs, operating costs, financing costs, renewal and replacement costs and improvement costs associated with extracting, treating or distributing water to the public and such other costs as may be specified by regulation. 2002, c. 29, s. 3 (7).**

REG. 170/03

PART V MUNICIPAL DRINKING WATER SYSTEMS

Financial plans

Definition

30. (1) In this Part,

“financial plans” means,

- (a) financial plans that satisfy the requirements of subsection (2), but only if,
 - (i) Bill 175 (*Sustainable Water and Sewage Systems Act, 2002*, introduced on September 23, 2002) receives Royal Assent, and
 - (ii) sections 3 and 9 of Bill 175 (*Sustainable Water and Sewage Systems Act, 2002*) are in force, or
- (b) financial plans that satisfy the requirements prescribed by the Minister, in any other case. 2002, c. 32, s. 30 (1).

Requirements

(2) For the purposes of clause (a) of the definition of “financial plans” in subsection (1), the financial plans must include,

- (a) a report on the full cost of water services, approved and submitted to the Minister in accordance with section 3 of the *Sustainable Water and Sewage Systems Act, 2002*; and
- (b) a cost recovery plan for water services, approved and submitted to the Minister in accordance with section 9 of the *Sustainable Water and Sewage Systems Act, 2002*. 2002, c. 32, s. 30 (2).

Same

(3) References in this section to provisions of Bill 175 and the *Sustainable Water and Sewage Systems Act, 2002* are references to those provisions as they were numbered in the first reading version of the Bill. 2002, c. 32, s. 30 (3).