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November 24, 2014

CORPORATE SERVICES REPORT - FINANCIAL SERVICES - 2014-36

TO: Mayor Tony Van Bynen and Members of Council
Committee of the Whole

SUBJECT: 2015 User Fees and Charges - Water and Wastewater Rates

ORIGIN: MFOA Municipal Intern

RECOMMENDATIONS

THAT Corporate Services Report - Financial Services – 2014-36 dated November 24, 2014 regarding 2015 User Fees and Charges - Water and Wastewater Rates be received and the following recommendations be adopted:

1. **THAT the attached Schedule "A", being the Town of Newmarket Water and Wastewater Rates, be approved and adopted by by-law;**
2. **AND THAT the Water and Wastewater Rate adjustments come into full force and effect as of January 1, 2015;**
3. **AND THAT staff be directed to update the 6-Year Water and Wastewater Financial Plan and to include further review of the rate structure in this update.**

COMMENTS

Purpose

The purpose of this report is to propose increases to the Town's water and wastewater rates in 2015; and to review the rate structure.

Budget Impact

There is no impact on the tax base. The proposed fee adjustments would result in an overall increase of 5.71% or $52.20 for the average resident consuming 200 cubic metres of water per year. This is less than what was projected in the 6-Year Water and Wastewater Financial Plan.

Summary

The proposed fee adjustments include an increase in consumption fees of 4% for water and 14% for wastewater and no increase to the basic monthly charge.

Background

Regulations and Financial Plans

Based on the Town of Newmarket's Service Pricing Policy, water and wastewater rates are categorized as Consumer Goods establishing a cost recovery target level of 100% to recover the full cost of providing the service by the municipality. In addition, the Sustainable Water and Sewage System Act, 2002 (SWSSA) requires that both water and wastewater systems are self-sustaining.

The ability of a municipality to establish water and wastewater rates is prescribed under the Municipal Act.

The proposed water and wastewater rate varies from the Town's Six Year Water & Wastewater Financial Plan approved by Council on February 13, 2012. Since this rate change maintains the current basic monthly charge, the cost for the average resident consuming 200 cubic metres per year will increase by 5.71% rather than 7.9%.

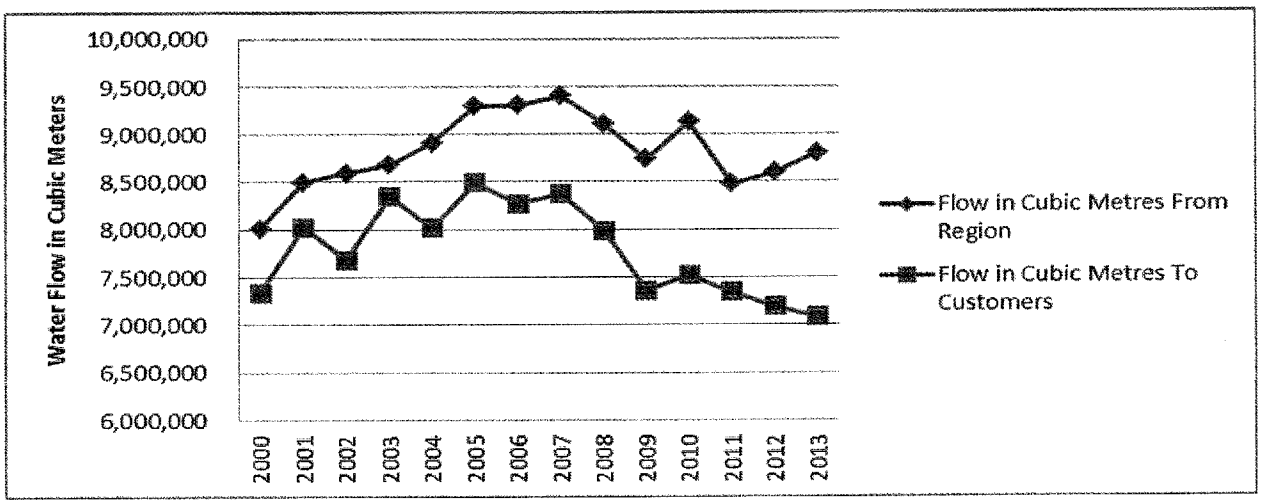
Addressing a Resident Deputation

At Council on April 14, 2014, a debutant raised a concern of the perceived inequity of the current water billing system. The concern was that the recent increase in the fixed cost portion of the water bill (the basic monthly charge) is disproportionately affecting low level water consumers. Those that consume less water have witnessed the greatest percentage increase in their overall water cost due to the recent increase in the fixed cost component of the water and wastewater bill. This report addresses this issue in the fixed rate section.

Consumption Trends

Customer water consumption has decreased by 15.2% from 2003 to 2013. This can be attributed to rising water prices, increasing intensification where the residents do not water lawns or fill pools, increasing adoption of water efficient technology, and new building standards requiring more water efficient technology. All of these trends reducing consumption are likely to continue in the future and continue to offset population growth. See figure 1 for an illustration of the water flow that enters Newmarket's distribution system and the flow that is sold to customers. The gap between the two lines is referred to as "non-revenue water."

Figure 1 Annual Water Flow from Region and to Customers



Residential Consumption
The Town has acquired data on its water meters, which enables the sorting of customers by type. Customer consumption data can be sorted into residential and non-residential categories. It was determined that the average residential customer consumes 200 cubic metres of water per year down from 250 cubic metres, which was used in previous reports. With this information we can better determine the impact of our rate structure on residents.

Main Cost Drivers
The main drivers for the rate increases are:

- An 8% increase in Regional charges for the treatment and distribution of water and the collection and treatment of wastewater.
- Conservation measures and weather have resulted in less revenue.
- Building up a rate stabilization reserve to protect from volatile revenue streams.
- Costs related to additional flushing of the water system.
- Other general cost increases.

These factors will be included in the relevant 2015 budget submissions.

Guiding Principles

The following guiding principles help evaluate the water rate structure. They were previously introduced in the second quarter utility budget report.

Fairness and Equity
Rates should reflect each customer's fair share of the costs to provide them with water and wastewater services.

Water Resource Management
Water is a precious resource. Water rates should be structured to encourage customers to conserve water, reduce waste, and meet all environmental regulatory water requirements. This ensures that we will continue to protect public health by ensuring a high quality supply of water today and in the future.

Simplicity
Customers' bills should be predictable and easy to understand. This will ensure that customers are informed when making their water consumption choices and can make the best decision for their households.

Financial Sustainability
The water utility receives no funding from property taxes, so rates must fund all necessary investments in the water infrastructure. These investments allow the Town to expand, operate and maintain a reliable water system to meet the needs of current and future customers.

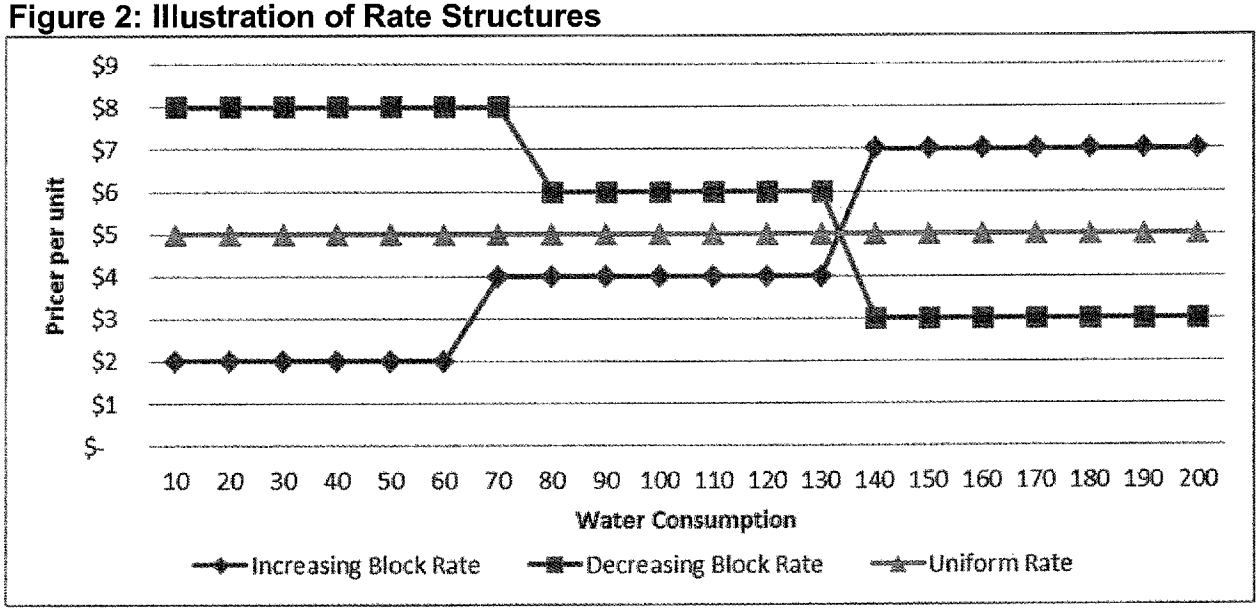
Rate Structure

Volumetric Rate
This report recommends increasing the volumetric rate for water by 4% and wastewater by 14%. The reason for the difference in the increase is that the Asset Replacement Fund (ARF) for water is at 70.0% of accumulated amortization while the ARF for wastewater is at 24.3% of accumulated

amortization. By increasing the wastewater rate proportionately more, the Town can balance the reserve levels while covering operating costs. This report recommends maintaining the current volumetric rate structure. The analysis of rate structures is discussed in the following paragraphs.

There are three major volumetric rate structure types: increasing block rate, decreasing block rate, and uniform rate. With an increasing block rate, as customers consume more, they pay more per cubic meter. With a decreasing block rate, as customers consume more, they pay less per cubic meter. With a uniform rate, customers pay the same amount per cubic metre irrespective of the consumption volume. This report recommends continuing with the uniform volumetric rate.

Figure 2: Illustration of Rate Structures



Uniform rates are usually considered the most **equitable and fair** because all customers pay the same price for water. With an increasing or decreasing block rate, households are punished or rewarded, respectively, for having more inhabitants per household as they would naturally consume more. Uniform rates are also easy to understand compared to other forms of volumetric rates, this fulfills the **simplicity** principle.

Uniform rates provide more revenue stability than increasing block rates. Increasing block rates tend to result in more revenue volatility because proportionally more revenue comes from the more unpredictable portion of customers' water demand. This makes the price structure vulnerable to unexpected shocks, like exceptionally hot or wet summers. Of the three structures, the decreasing block rate has the highest revenue stability. However, the decreasing block rate may be considered unfair. Under the decreasing block rate structure, customers with the lowest ability to change their consumption tend to consume water at the highest priced water block. These customers cannot change their consumption because there are no close substitutes to potable water when servicing basic needs. To summarize, the uniform rate balances the **fairness and equity** principle and the **financial sustainability** principle.

The volumetric rate promotes **water resource management,** which is explained by the concept of price elasticity. Price elasticity measures consumers' responsiveness to price changes. Price elasticity of water demand measures the responsiveness of water use relative to the changes in the price of water, after controlling other factors that change demand, like income and weather.

Each user class responds differently to rate increases. A review of water elasticity studies made by the American Water and Wastewater Association (AWWA) indicates residential customer elasticity have a price elasticity of 10% to 30%. Assuming an average, a price elasticity of 20%, a 10% increase in price would lead to a 2% reduction in consumption and an 8% increase in revenue.

Fixed Rate

This report recommends keeping the combined fixed rate at $28 per month for 2015. The target is to have the fixed portion at 33% of the average residential bill. The fixed portion for the average resident consuming 200 cubic metres per year is 36.8% in 2014. Freezing the fixed rate at 2014 levels will lower the fixed portion to 35.9% in 2015.

With a targeted fixed rate of 33% of the residential bill we can help ensure **fairness and equity** by ensuring residents' ability to pay. The target was set at 33% because at that percentage the fixed rate cost does not exceed 1% of the income of a 3 person family at the low income cut-off. Also, the total cost would not exceed 3% of the family's income. These were set as reasonable initial targets and will be subject to further review.

Freezing the fixed rate will also help promote **water resource management.** The smaller the fixed rate, the more customers will be incentivized to save by the volumetric rate. This is supported by the concept of price elasticity as discussed above.

Setting the fixed rate at 33% creates **simplicity** in setting future rates. It creates a quick litmus test ensuring costs are affordable for low income families. Meanwhile the target fixed rate is sufficiently large to provide the revenue predictability desired, which satisfies the **financial sustainability** principle. The Town is currently building a Rate Stabilization Fund to reach 10% of annual revenue. This will provide sufficient protection to ensure operating costs are covered on a year-to-year basis.

This report also recommends adopting a tiered fixed rate for 2016. A tiered fixed rate means that customers with larger water meters pay more.

The Canadian Water and Wastewater Association and American Water and Wastewater Association have developed a standardized factor to calculate a tiered fixed rate based on the meter size. The factor is called the meter equivalency factor. See figure 3 for how the factor is assigned to different meter sizes. In practice, this means that a 2 inch meter would be charged 8 times more than a 5/8 inch meter. Further research is required to determine whether this standard or a slightly adjusted one will fit the Town's context.

Figure 3 Meter Equivalency Factor

Meter Size	Factor based on 5/8"
5/8 inch	1
3/4 inch	2
1 inch	3
1-1/2 inch	5
2 inch	8
3 inch	15
4 inch	25
6 inch	50

The soonest possible date to implement a tiered fixed rate is 2016 because the necessary information on water meter sizes is not currently available. Therefore, we will collect information on meters over the course of 2015. This will be factored into the update of the 6-Year Water and Wastewater Financial Plans.

The economic reasoning behind adopting a tiered fixed rate is that the cost for installing, maintaining, and replacing meters and the strain customers put on the water distribution system increase with meter size. Therefore, it is logical that larger meters should pay a higher fixed rate. By doing so, we will better reflect the true cost of our services and therefore reduce the current subsidy to customers with larger water meters. This promotes the **fairness and equity** principle.

Water consumption fluctuates from year to year based on factors like the weather, the economy, technological progress, etc. However, many of the Town's costs do not fluctuate from year to year, like overhead costs, maintenance costs, quality checking, etc. Having a tiered fixed rate enables the Town to raise its fixed revenue from large water consumers while keeping water affordable for residents. Therefore, a tiered fixed rate promotes the **financial sustainability** principle.

Customers with larger meters can afford to pay more. According to the 2013 Municipal Study by BMA Management Consulting Inc., Newmarket residents, those with small meters, pay the second highest price for water in York Region. However, customers with 2 inch meters and larger pay the lowest price. See figure 4 for a table comparing Newmarket's rates to the other local municipalities in York Region, the Greater Toronto Area (GTA) average and the survey average. The current rate structure has been shifting the cost burden from the commercial and industrial users to residential customers. Moving to a tiered fixed rate would reverse this trend.

Figure 4 Water Rate Cost Comparisons

Volume (Cubic Metres)	200	10,000	30,000	100,000	500,000
Meter Size	5/8"	2"	3"	4"	6"
Vaughan	$ 567	$ 28,347	$ 85,041	$ 283,470	$ 1,417,350
Markham	$ 568	$ 28,376	$ 85,128	$ 283,760	$ 1,418,800
Whitchurch-Stouffville	$ 577	$ 28,866	$ 86,598	$ 288,660	$ 1,443,300
Richmond Hill	$ 581	$ 29,074	$ 87,222	$ 290,740	$ 1,453,700
Aurora	$ 596	$ 29,807	$ 89,421	$ 298,070	$ 1,490,350
GTA Average	$ 636	$ 25,526	$ 74,130	$ 239,603	$ 1,169,934
Georgina	$ 655	$ 30,619	$ 91,771	$ 305,803	$ 1,528,843
King	$ 766	$ 34,149	$ 104,055	$ 340,258	$ 1,686,596
Newmarket	$ 839	$ 27,838	$ 82,938	$ 275,788	$ 1,377,788
Survey Average	$ 841	$ 27,772	$ 80,985	$ 263,403	$ 1,293,169
East Gwillimbury	$ 1,034	$ 48,482	$ 146,682	$ 490,382	$ 2,454,382

Water and Wastewater Rebate Program

This report recommends maintaining the current water rebate program. The Town offers a water rebate program to qualified applicants equal to a maximum of $24 per month, or $288 per year. $55,006 is expected to be transferred to residents in 2014 according to the Financial Services report 2013-21 Water and Wastewater Rebate Program.

The water rebate program alone cannot not be viewed as sufficient to make the water and waste water affordable to low income residents and must be part of an overall package from all levels of government.

To be eligible for the rebate, a person must receive the Guaranteed Income Supplement under the Old Age Security Act, or receive Ontario Disability Support, or receive Ontario Works Assistance, or receive assistance from a similar federal or provincial support program.

Not everyone who needs financial assistance is a part of the eligible programs, either because of a lack of awareness of such programs, difficulty navigating the process to receive assistance, or an unwillingness to ask for help. According to the report *Low Income Trends in York Region – 2000 to 2011*, 14.25% of York Region residents are below the low income cut-off line, which is informally known as a poverty line. At this time, 0.6% of the Town of Newmarket's customers receive the rebate. Therefore, the program may not be perceived as **fair and equitable** as it is not targeting all that need the financial assistance. The relatively low participation rate may indicate that the program does not meet the **simplicity** principle at this time.

The current fixed rate may cause economic hardship for low-income customers. As stated earlier, fixed revenues are a highly desirable source of revenue from a financial point of view as they create predictability in revenue. The benefit of the rebate program is that it helps those who may experience economic hardship while enabling an appreciable fixed portion of the water rate. Therefore, the rebate program helps promote **financial sustainability**.

COMMUNITY CONSULTATION POLICY

The Municipal Act stipulates public notice requirements for changes to water and wastewater rates. Advertisement on the Town's website has been provided for a three-week period in advance of the public meeting. Notice has also been given through advertisement on the Town Page of the local newspaper in advance of Council's consideration of the fee adjustments. The statutory public meeting is scheduled as part of the regular Committee of the Whole meeting on December 8, 2014.

BUDGET IMPACT

Operating Budget
The proposed fee adjustments include increases to the consumption fees for water and wastewater. For an average resident consuming 200 cubic metres of water per year, the increase will be 5.71% or $52.20. For the average industrial, commercial and institutional customer consuming 835 cubic meters of water per year, the increase will be 7.92% or $217.94. There is no impact on the tax base.

Capital Budget
The proposed rates will ensure that we continue to move infrastructure funding, via the Asset Replacement Fund, to a sustainable level.

CONTACT

For more information on this report, please contact Mike Mayes at 905-953-5300, ext. 2102 or *mmayes@newmarket.ca.*

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KY:nh
Attachment

(1) Schedule A - Water & Wastewater Rates (1 pg.)

TOWN OF NEWMARKET

2015 USER FEES

Schedule A - Water and Wastewater Rates

Effective Date: January 1, 2015

	Current 2014 Rates		Proposed 2015 Rates		Change
	per 100 cubic feet	per cubic metre	per 100 cubic feet	per cubic metre	%
Combined Utility Rates					
Taxable Properties	**$8.193**	**$2.892**	**$8.932**	**$3.153**	**9.02%**
Water					
Taxable properties	$4.077	$1.439	$4.240	$1.497	4.00%
Non-taxable properties	$4.518	$1.595	$4.699	$1.659	4.00%
Flat rate - no meter, monthly	$52.926		$55.043		5.71%
Basic charge, monthly	$14.000		$14.000		0.00%
Wastewater					
Taxable properties	$4.116	$1.453	$4.692	$1.656	14.00%
Non-taxable properties	$4.423	$1.562	$5.042	$1.781	14.00%
Flat rate - no meter, monthly	$51.750		$53.820		5.71%
Basic charge, monthly	$14.000		$14.000		0.00%
Average Bill					
Residential annual average charge	$200m^3$	$914.40		$966.60	5.71%
ICI annual average charge	$835m^3$	$2,750.82		$2,968.76	7.92%