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Region of Peel
Working for you

REPORT
General Committee

For Information

DATE: October 28, 2009

REPORT TITLE: **BACKGROUND INFORMATION ON UTILITY RATE PROCESS**

FROM: Dan Labrecque, Commissioner of Public Works

OBJECTIVE

The purpose of this report is to provide Regional Council with an overview of the approach to the setting of the 2010 utility rates prior to the formal budget review process in December and early 2010. The report includes background information on the consumption patterns over the past years, key changes to the expenditure levels and a discussion of the future direction with regard to the utility rate structure and the billing system.

REPORT HIGHLIGHTS

- The 2010 proposed rate increase is driven mainly by consumption adjustments.
- Over the past ten years consumption per customer has dropped mostly due to weather and has been impacted by water conservation efforts and lower Institutional/Commercial and Industrial (ICI) sector usage.
- The current rate structure is over 15 years old and therefore future work will consider the overall rate structure, the systems used to collect fees and meter reading technology.
- The 2010 proposed increase represent on average a $20 annual increase in costs per residential household and will not severely impact the competitiveness of Peel as the Region continues to have one of the lowest utility rates in Ontario and the Greater Toronto Area (GTA).

DISCUSSION

1. Background

The water and wastewater system for the Region of Peel includes four major plants, five municipal wells systems and several thousand kilometers of watermains and wastewater sewers. The estimated replacement value of the infrastructure exceeds $12 billion and services over 286,000 customers.

The utility rates include the charges for water and wastewater services and generate on average $215 million in funds necessary to operate the system. The rates are traditionally increased on April 1st each year. The rate structure has been in place for over 15 years with no substantial change in structure during that time.

In simplest terms the utility rates are set by dividing the net funds required by the anticipated water sale volume to develop a per unit rate. Net funds represent the funds needed to operate for the year after all other revenue sources are subtracted (including the funds

raised through sale to York Region). For residential customers, the water charge is based on the water rate multiplied by the water meter reading while the wastewater charge is based on the wastewater rate multiplied by 85 percent of the water meter reading.

In Peel, the water and wastewater rates, for residential users, is the same as it is for industrial and commercial users. Rates do not change with the amount of water or wastewater used (unlike the block rates seen for hydro use in the province). The rates include fully variable cost recovery and there is no annual administration or set fees per customer. There are, however, user fees charged for services, such as setting up a new account which is not a common service for the entire customer base, that are subtracted from the net costs prior to the setting of the rates.

2. Preliminary Rate Increases Estimates for 2010

The preliminary increase to the combined utility rate is approximately five percent.

Rate increases are driven by various factors. The major factor is consumption. Both consumption and expenditures are discussed in the following sections.

Historically as consumption of water was increasing expenditure increases would be offset by increased sales. For example a five percent increase in expenses in past years may be offset by a two percent decrease due to sales resulting in a three percent overall rate increase.

In 2010, the situation differs than the past in that there has been a decrease in usage (discussed in Section 3 of the report). The preliminary rate increase of five percent is mainly due to consumption adjustments.

3. Consumption Patterns and Budget Estimates for Revenues

The accuracy of the budget estimates for revenues is always subject to variability. That variability is driven mainly by weather. Other factors include the level of growth in the Region, economic activity in the area, and the consumption rate per customer. Compounding the challenge of estimating annual revenues is the impact of conservation on demand.

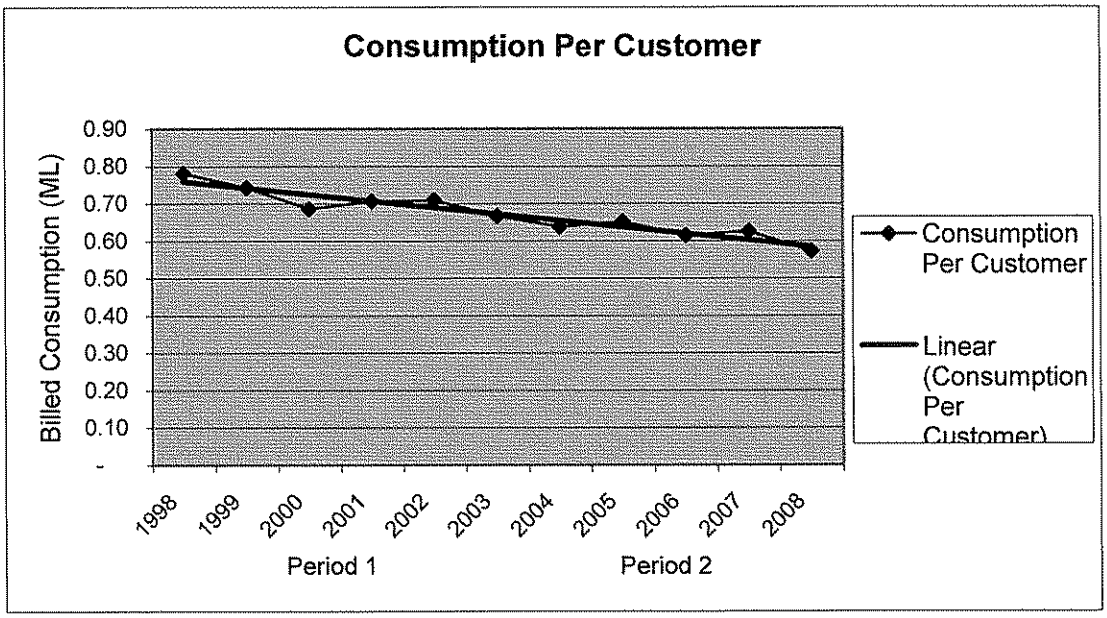
The following discussion focuses on these factors and the impact they have had on consumption per customer and the overall budget estimates and revenues since 1998.

Customer Base Growth versus Consumption

In 1998 Peel had 199,391 metered customers versus 286,840 today. This represents a growth of approximately 44 percent or about four percent per year (over the 11 years). In comparison the average consumption over those same 11 years has only increased by five percent or about 0.4 percent per year.

Combining the two measures provides the more important factor which is consumption per customer. In the five-year period 1999 to 2003, "Period 1", the average annual consumption per customer was .70 ML (MegaLitres). For the five-year period 2004 to 2008, "Period 2", the average annual consumption was .62 ML representing a drop of 12 percent.

Figure 1



Therefore in summary while the number of customers has grown the average consumption per customer has dropped by 12 percent.

Impact of Rainfall, Industrial Commercial and Institutional (ICI) Sector Consumption Trends, and Water Conservation

There are various reasons for the 12 percent drop in the rate of consumption.

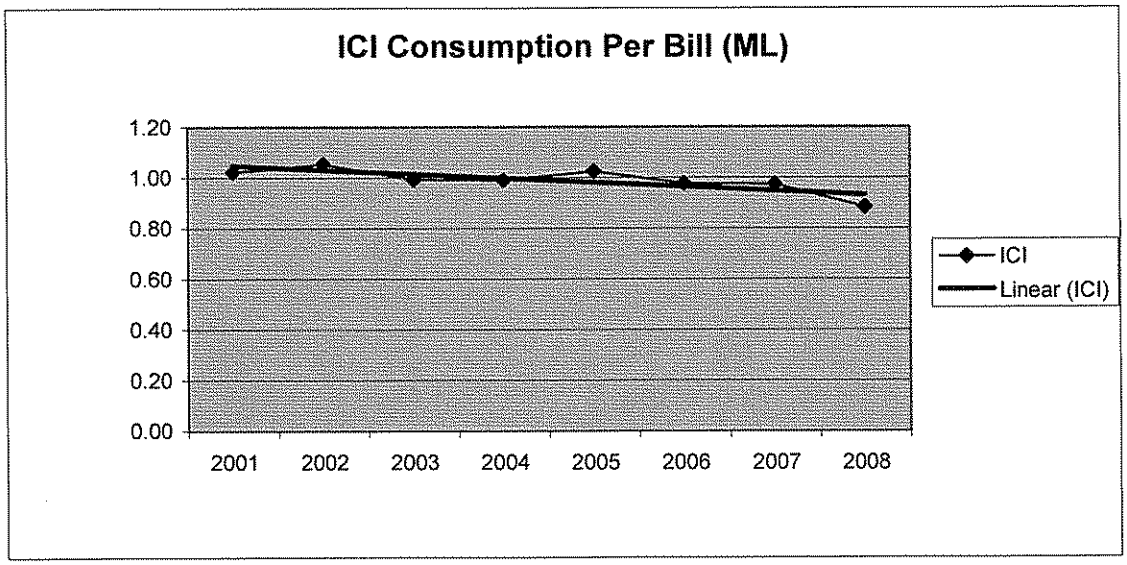
Rainfall

A change in rainfall is likely first and foremost. During Period 2, there was a 10 percent higher average rainfall compared to Period 1. While 2007 was a dry summer, this year is more than offset by the other four years. Additionally, throughout Period 2, the budgeted revenue continued to be based on a relatively dry (lower rainfall) summer.

ICI Sector Consumption Trends

Water consumption by the ICI sector was also a contributing factor in the overall drop of consumption per customer. The annual increase in the number of ICI customers has been two percent on average. However, in 2008 the ICI billed consumption was comparable to 1999/2000 levels. Figure 2 shows the consumption per bill for ICI since 2001. When looking at ICI billed consumption, prior to the economic downturn in late 2008, there is a downward trend in ICI consumption despite the growth in customers.

Figure 2

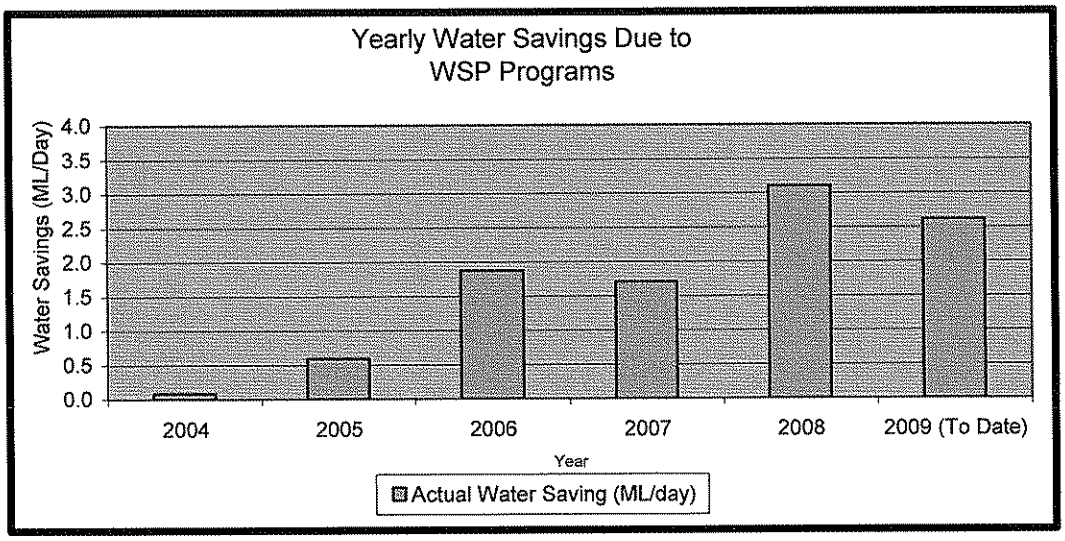


Water Conservation

Conservation efforts have also increased significantly since 1998. Regional Council endorsed the "Water Smart Peel" program (the Water Efficiency Program) that set as its goals up to a 10 percent decrease in water consumption and up to an 8 percent decrease in wastewater flows. Numerous initiatives such as rebates for low flow toilets, promotional campaigns, ICI audits and retrofits on Peel Housing facilities have impacted overall water use. Since the program began in 2004, the estimated annual savings have grown to over 1,100 ML per year which is equivalent to more than the water used by the largest ICI customer serviced by Peel. Figure 3 shows the savings per year since the start of the program in 2004.

In summary, combining all of these factors together (Rainfall, ICI Use and Conservation) each has contributed to the 12 percent drop in consumption per customer over the last five years.

Figure 3

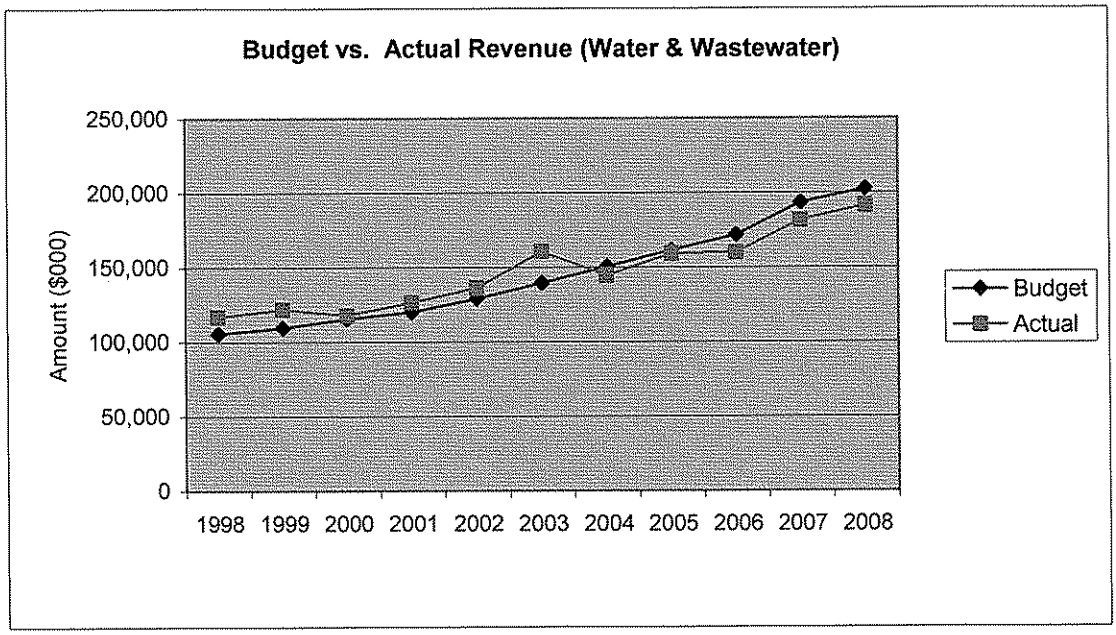


Budget versus Actual Revenues

While it is obvious after the fact, the drop in the consumption rate also explains the variability between revenue estimates and actual revenues experienced over the last 10 years.

Figure 4 shows the budgeted revenues versus actual revenues since 1998. Between 1998 and 2003 revenues exceeded budget estimates. Since 2003 revenues have consistently been lower than budget. The cumulative shortfall since 2004 and expected shortfall for 2009 will ultimately deplete the utility rate stabilization reserves.

Figure 4



2010 Consumption Estimate

In 2009, it is estimated that billed consumption will be approximately 16,440 ML less than budget which represents a two percent drop from 2008 billed consumption. While 2009 has been an extremely wet year and has suffered from the impact of economic slowdowns, returning to the previous level of estimating is not considered prudent.

In 2010, it is proposed that the consumption amount be set at three percent higher than the 2008 actual billed consumption. As of the end of September, the forecasted 2009 billed consumption is five percent lower than the 2010 proposed budget.

While there is no right answer, it is felt that the 2010 proposed consumption gives credit to the growth that continues to happen in Peel but does not continue to compound the error level found to be present in the estimates over the past five years. The 2010 budget assumes a closer to average level of precipitation for the 2010 summer whereas the past several budget years assumed a drier than usual summer/less than average level of precipitation.

From a risk perspective, if the estimate is too conservative and additional revenues are obtained it will assist in replenishing reserves that have been utilized over the past five years due to revenue shortfalls. While it may be perceived that the 2010 proposed consumption estimate is conservative, in the event of 2010 is another year of revenue shortfalls, it is likely the budget shortfall will be slight. If the estimate was increased, then the risk if revenues are not met is higher in that rate stabilization reserve levels are low and potentially Council could face either a mid year rate increase or a higher rate increase in 2011 to compensate for the loss. There is currently approximately $9.5 million available in the stabilization reserves and an overall 2009 deficit for utility rate supported programs is anticipated with the revenue shortfall nearing $18 million. Even with the revenue shortfall being partially offset due to savings in variable costs, at a minimum the stabilization reserves will be depleted.

4. Expenditure Levels

From an expenditure perspective the major components of the proposed 2010 utility budget (water and wastewater) are:

CATEGORY	***$ MILLIONS***	***%***
Operations – Region	51.2	24
Plant Operations – OCWA	25.0	12
Billings/Meters and Support	7.5	4
Contributions to Reserves	82.9	38
Conservation Authorities	16.0	7
Hydro and Chemicals	33.1	15
Total	**215.7**	

Of these components almost all are fixed expenditures that do not change with volume (changes would occur over the long range for large increases such as plant expansions). The hydro and chemical components are variable and do change with volume, however they only represent 15 percent of the overall expenditure levels.

Over the past years, expenditure levels have increased. Regulatory changes have accounted for much of the variance. New and higher levels of treatment and oversight have been implemented to address concerns associated with the Walkerton tragedy. As well, hydro rates, chemicals, natural gas and other inputs have increased in price beyond the annual rate of inflation. In 2009, some relief for hydro and natural gas costs is expected partly due to the current economic state. However, this relief is expected to be temporary.

Initiatives over the past few years have assisted in offsetting and stabilizing these costs and include:

- Numerous process improvements to reduce the use of energy as well as bulk purchasing;
- A new operating contract with Ontario Clean Water Agency (OCWA) which better allocates risk and reduces projected future operating costs;
- Installation of new incinerators at the treatment plant that reduces the use of natural gas; and
- Improved productivity through implementation of best practices in many of the linear operational areas (for example electronic water books and scheduled maintenance programs).

While the detailed expenditure estimates will be presented during the budget process, the overall impact on the rate of the change in expenditures is minimal compared to the impact of the change in consumption.

Approximately 38 percent of the overall utility rate budget is contributions to reserves. The reserves will fund the over $12 billion replacement value of infrastructure necessary to sustain the water and wastewater programs over the long term. In the 2008 budget report, Council agreed to a three per cent annual utility rate increase achieving a longer term funding strategy to help sustain the assets without the need for heavy reliance on debt.

In 2009 and 2010, funding from the Infrastructure Stimulus Fund (ISF) is being received and will allow for an additional $71.5 million in replacement work beyond the normal level. The impact of the ISF initiative and Peel's reserves will be addressed in a separate Council report.

5. Future Direction

In moving forward, expenditure constraint and efficiency efforts have been successful and will continue to be implemented.

With regard to the rate structure, it is an appropriate time for new rate structures and systems to be considered given the change in consumer behavior. Some of the issues include the fact that the rates are fully variable, the costs are mostly fixed, and whether the assumption that 85 percent of water used by a residential customer is a reasonable proxy for wastewater usage.

The approach to reviewing the rate structures and system is three fold:

The first step is to review rate structures and to improve the quality of the rate and consumption models. There are various rate structures in place across North America. Some rely heavily on fixed administrative costs (for example, meter reading and billing costs which would not vary even if no consumption) and some focus on consumption including inclining block rates that penalize high users. The effectiveness of these rate structures

vary by community and are very dependent on the price elasticity of water and the cost structure associated with the rates. This work is slated to start before the end of 2009. Further updates will be provided as this work progresses.

The second step in reviewing the rates will be to consider a replacement for the current billing systems. The system is dated and has served the Region well however it was developed in house and does not allow for any level of flexibility. Introduction of a fixed rate component or a fee for conservation or even the ability to charge for other services such as waste management through the billings system cannot be accommodated. Once the desired rate structure is defined (and the financial impact indentified through a more robust model) a replacement system can be considered. It is important to note that sufficient funds have been placed in reserves over the years to allow for this replacement.

The final step is to look at the water meter system. The Region is highly effective in its metering and reading operation. Currently, less than two percent of the reads are missed (this compares to an industry average of 10 percent) and costs per read are low as compared to other alternatives such as third party billing or use of Hydro utilities. In the case of the Hydro utilities the legislated movement to the smart meter reading system and incompatibilities in systems makes partnering even less feasible in the future. The Region does take advantage of technologies such as radio frequency (RF) to access difficult reads and has found the system successful. The potential expansion of the RF system would be considered along with other options once the rate structure and system requirements are known.

It is likely that these initiatives will occur over the next two to three years and therefore it is unlikely that any significant rate structure changes will occur until at least 2012.

Inherent in all of this work will be a review of the customer service philosophy and the service fee billing policies. Currently, the Region exercises flexibility in assessing administrative fees but has not entertained any level of flexibility in water and wastewater usage/consumption that is billed. This and other practices will be reviewed.

CONCLUSION

The purpose of this report was to provide Council with background information prior to the consideration of the 2010 utility-rate supported budget. In summary, the rate increase in 2010 is being driven more by the need to adjust consumption estimates due to a drop in consumption per customer rather than due to significant cost increases. The drop in consumption is mainly due to weather as well as other factors including conservation and reduced ICI activity.

The combined impact of volume and cost changes results in a likely rate increase of five percent for 2010. As always, when considering an increase in rates, the overall competiveness and affordability of the annual cost needs to be considered. In terms of affordability, the rate increase will translate into, on average, a $20 per household increase. The rate increase will most likely be lower than other municipalities in the area and will continue to place the Region as one of the lowest cost water and wastewater systems in Canada.

October 28, 2009
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