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WATER AND WASTEWATER SERVICING USER RATE AND RESERVE FUND ADEQUACY REVIEW

The Finance and Administration Committee recommends the adoption of the recommendations contained in the following report, November 24, 2005, from the Commissioner of Finance and the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. The report entitled “Water and Wastewater User Rate and Reserve Fund Adequacy Review prepared by Hemson Consulting be received.
2. Effective April 1, 2006, the first instalment of a five-year program, the water and wastewater user rates be adjusted to a blended rate of 6.25% as follows:
 - a) Water rate – increase from 48.64 cents per cubic metre to 49.86 cents per cubic metre (2.5% increase)
 - b) Water replacement reserve contribution – remain at 4 cents per cubic metre
 - c) Wastewater rate – increase from 44.59 cents per cubic metre to 49.05 cents per cubic metre (10% increase)
 - d) Wastewater replacement reserve contribution – increase from 3 cents per cubic metre to 5 cents per cubic metre

2. PURPOSE

The purpose of this report is to advise Council of the recommendations resulting from the water and wastewater user rate and reserve adequacy study, and to seek Council approval for the recommended increases to the respective user rates.

3. BACKGROUND

The Region provides water supply and sanitary sewage servicing capacity to the nine area municipalities within the Region. The operating costs associated with the provision of these services are recovered through a uniform region-wide water and wastewater user rate, based on actual flows per cubic metre. A fixed component of each user rate is contributed to a reserve which is used to fund the replacement and rehabilitation of water and wastewater infrastructure. These reserves are also used to mitigate any large fluctuations in the water or wastewater user rates. Currently, 4 cents per cubic metre is contributed to a water capital replacement reserve, and 3 cents per cubic metre is contributed to a wastewater capital replacement reserve.

Growth-related water and wastewater capital infrastructure is funded primarily from development charges. However, Regional Council has approved a policy of discounting the non-residential development charge rate to encourage economic development, resulting in a portion of the cost of infrastructure being funded from the water and wastewater capital replacement reserves. With the Region's aggressive growth capital plan, the development charge discount has placed a significant pressure on the replacement reserves and the user rates, estimated to be \$2.2 million for water and \$18 million for wastewater in 2006 alone.

In 1999, a review of water and wastewater user rates and capital replacement reserves was completed, which outlined long term user rate and reserve requirements. Since that time, several events have occurred which have had a significant impact on the Region's reserves and user rates. These include:

- The Region accelerating its capital plans, which increases the reserve and user rate funding requirements
- Significant operating and capital cost increases due to additional Provincial environmental requirements
- Bill 175 being enacted, which among other things, will require municipalities to demonstrate full cost recovery for all water and wastewater services, and provide a capital asset management plan
- The Region's infrastructure is aging to a point where serious consideration must be given to rehabilitation and replacement of its assets
- Public Sector Accounting Board (PSAB) proposal for financial statement reporting of capital assets by 2008

These events have created a need to revisit the Region's user rate and reserve requirements and develop recommendations to address the impact of growing costs.

4. ANALYSIS AND OPTIONS

The Region's uniform water and wastewater user rates provide for the following:

- Rehabilitation and replacement of existing assets
- Rehabilitation and replacement of assets built in the future
- The funding component of new infrastructure (i.e. upgrades) not related to growth
- The component of growth-related infrastructure not recovered from development charges due to reduced DC rates (discount)
- Costs associated with operating water and wastewater services

A component of the user rate is contributed to a capital reserve, to fund the above-noted capital requirements. The firm of Hemson Consulting has undertaken an analysis of water and wastewater user rate and reserve requirements to the year 2031. A summary of their findings is outlined below.

In addition, Hemson has provided the Region with a model to regularly update and refine asset information and operating costs to ensure that the rates remain adequate in the future.

4.1 Asset Inventory

As part of the user rate and reserve adequacy review, a detailed inventory of Region-owned water and wastewater assets was prepared. In total, the Region owns approximately \$2.1 billion in water and wastewater assets. From this inventory, future rehabilitation and replacement requirements were determined. As there is a significant amount of infrastructure owned by the Region that will eventually require rehabilitation or replacement, it is fiscally prudent to create a strategy for funding these future expenditures.

4.1.1 Water Asset Requirements

The estimated replacement value of the Region's water asset inventory totals approximately \$750 million. The following table summarizes the replacement value of the existing water assets by category, the average age and the life expectancy of these components.

**Water Capital Assets
Estimated Replacement Value**

Asset Category	Replacement Value (\$M)	Average Age	Life Expectancy
Watermains	\$416.3	15 years	100 years
Pumping Stations	\$127.5	18 years	75 years
Treatment Plants	\$44.5	13 years	75 years
Well Houses	\$48.4	25 years	75 years
Storage	\$108.4	21 years	100 years
Meter Chambers	\$4.5	18 years	75 years
Total	\$749.6	18 years	83 years

The table above shows that the existing water capital assets total average age is well below the total average life expectancy of these water assets. Based on the estimated life expectancy and replacement cost of these assets, an average annual contribution of over \$9 million (adjusted for inflation) is required to provide for the rehabilitation and replacement of these existing assets.

In addition to the existing assets, provision must be made for the replacement of assets not yet built, but to be constructed in the future. Capital infrastructure with a replacement value of over \$300 million is estimated to be added to the Region's inventory over the next 25 years. This excludes contributions to be made to the Region of Peel and City of Toronto for water supply and distribution. To provide for the rehabilitation and replacement of this future infrastructure, an average annual contribution of approximately \$2 million will be required.

4.1.2 Wastewater Asset Requirements

The estimated replacement value of the Region's wastewater asset inventory totals approximately \$1.4 billion. The following table summarizes the replacement value of the existing wastewater assets by category, the average age and life expectancy of these components.

**Wastewater Capital Assets
Estimated Replacement Value**

Asset Category	Replacement Value (\$M)	Average Age	Life Expectancy
Trunk Sewers	\$547.7	21 years	75 years
Forcemains	\$90.4	18 years	75 years
Pumping Stations	\$104.8	22 years	75 years
Treatment Plants	\$643.0	17 years	75 years
Meter Chambers	\$2.0	21 years	75 years
Total	\$1,387.9	20 years	75 years

The table above illustrates that the total average age of the wastewater capital assets is well below the total average life expectancy of the wastewater assets. Based on the estimated life expectancy and replacement cost of these assets, an average annual contribution of over \$20 million (adjusted for inflation) is required to provide for the rehabilitation and replacement of these existing assets.

In addition to the existing assets, provision must be made for the replacement of assets not yet built, but to be constructed in the future. Capital infrastructure with a replacement value of over \$740 million is estimated to be added to the Region's inventory over the next 25 years. This includes the Region's share of costs associated with the expansion of the Duffin Creek sewage treatment plant. To provide for the rehabilitation and replacement of this future infrastructure, an average annual contribution of approximately \$3 million will be required.

4.2 Non-growth Capital

Non-growth capital, as defined in the Hemson study, includes the following:

- The share of growth-related capital projects not eligible for development charge funding due to the component of works that benefit existing users
- Capital improvements/enhancements that are not recoverable from development charges (e.g. retrofits to existing assets)
- The component of growth-related capital costs that are not recovered from development charges due to Council's policy of reducing the non-residential development charge rate (discount)

On average over the 25 year period, the non-growth capital expenditure requirement for water is estimated at over \$180 million, or \$7 million per year. The corresponding wastewater non-growth capital requirement is estimated at \$590 million, an average of \$22 million per year.

4.3 Operating Costs

The 2006 budget projects operating costs (exclusive of capital-related expenditures) totalling over \$75 million. It is estimated that these costs could increase to over \$145 million by 2031. The respective water and wastewater user rates must be adjusted to fund these costs.

4.4 Blended Water and Wastewater Rate Comparison

The table below illustrates the proposed 2005 to 2006 blended water and wastewater rate increases for the other four municipalities within the Greater Toronto Area:

2006 Proposed Blended Water and Wastewater Rate Changes

Municipalities	% Change
Halton	7.2% Increase
Toronto	9.0% Increase
Durham	9.25% Increase
Peel	4.7% Increase
York	6.25% Increase
GTA Average	7.28% Increase

The proposed 2006 York Region water and wastewater combined rate compared to other municipalities within the GTA is below the average increase.

5. FINANCIAL IMPLICATIONS

User rates provide contributions towards capital reserves, and fund current operations. The following table summarizes the current water and wastewater user rates, reserve contribution rates and reserve balances.

Current User Rates and Reserves

	Water	Wastewater
User Rate per m ³	\$0.4864	\$0.4459
Reserve Contribution per m ³	\$0.04	\$0.03
2004 Reserve Contribution	\$4.3 million	\$3.2 million
Reserve Balance (December 31/04)	\$44.3 million	\$36.8 million

Over the 25 year period, the study estimates that over \$250 million in water reserve funding and over \$550 million in wastewater reserve funding will be required in order to adequately provide for the rehabilitation and replacement of assets. To accumulate the required reserve contributions for rehabilitation and replacement, and to fund non-growth capital and operating expenditures, the study recommends that the water user rate be increased by 2.5% per year. The wastewater user rate is recommended to increase by 10% per year over the next five years, with a 2.5% annual increase thereafter. These increases include a provision for inflation estimated at 2%. Therefore, for the 2006 budget, it is recommended that the water rate be increased by 2.5% to 49.86 cents per cubic metre, and the wastewater rate be increased by 10% to 49.05 cents per cubic metre.

The contribution towards the water reserve is to remain at 4 cents per cubic metre, however, it is recommended that the wastewater reserve contribution to increase from 3 cents per cubic metre to 5 cents per cubic metre. User rates will be reviewed on an annual basis to ensure the adequacy of reserve funds, and that the rates reflect full recovery of expenditures.

6. LOCAL MUNICIPAL IMPACT

The Region provides water supply and sewage servicing to the nine area municipalities, and imposes a uniform Region-wide user rate to fund these services. The cost per cubic metre for these services is charged to the area municipalities, who in turn, charge these costs plus area municipal servicing costs to users of the water and sewer systems. The proposed increase in the Regional user rates increases the local costs that the area municipalities must collect from residential and non-residential users.

The increase in Regional costs help to ensure that the area municipalities are provided with adequate and sustainable water and wastewater servicing now and in the future.

7. CONCLUSION

The firm of Hemson Consulting has undertaken a review of the adequacy of the Region's water and wastewater user rates and reserve funds. The review has concluded that the user rates and reserves would not be adequate to support future operating and capital expenditures, unless the user rates are adjusted. It is recommended that the water user rate be increased by 2.5% per year, and the wastewater rate be increased by 10% per year for the next 5 years, and 2.5% per year thereafter.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the December 1, 2005 Committee meeting.)