

THE 2006 WATER & WASTEWATER BUDGETS

Recommendation

The Commissioner of Finance & Corporate Services, the Commissioner of Engineering and Public Works, the Director of Public Works and the Director of Financial Services recommends:

- 1) That the following report be received;
- 2) That the consumption rates for Water and Wastewater in Schedule "A" of By-Law 12-74 and 167-73 be amended to reflect the Regional rate increase, City operating and capital requirements, Attachment 1;
 - (a) The City's water rate be increased from 76.7 cents to 81.7 cents per cubic meter effective May 2006
 - (b) The City wastewater rate be increased from 67.8 cents to 75.6 cents per cubic meter effective May 2006; and
- 3) That the recommendation from the Budget Committee be forwarded to a Special Council on May 8, 2006 for public input and that deputations be permitted;
- 4) That staff review and report back on the implementation of a single water and wastewater consumption rate;
- 5) That Corporate Communications assist in the development of communication material; and
- 6) That the appropriate notification be provided in accordance with By-law 394-2002.

Economic Impact

The proposed budgets will provide funds for the renewal and operation of the Water and Wastewater system which will generate a 2006 contribution to the water reserve of \$3.7 million and the wastewater reserve of \$1.6 million. Despite the increase in consumption rates the reserves are declining however this decline will be addressed through Bill 175 when full cost recovery is determined.

Purpose

To adopt the water and wastewater operating budgets and the corresponding consumption rates, the recommended effective annual water rate increase is 7.7% (Region increase 2% for Water) and for the wastewater rate 13.4% (Region increase 10% for Wastewater) and in addition to request staff to review the integration of the consumption rates.

Background - Analysis and Options

The major source of revenue for water and wastewater operations are consumption rates, totalling \$55.3 million for 2006. The consumption rate revenues net of operating costs are transferred to the respective Water and Wastewater reserves. These funds provide for the delivery of clean potable water and wastewater services which includes administration, maintenance of the water and wastewater infrastructure and its renewal.

The proposed water and wastewater budgets are attached including the unaudited 2005 actuals for information purposes. Water and wastewater operations, capital expenditures and reserves form part of the City's consolidated Financial Statements.

The water and wastewater rate changes, once approved, will be advertised in the local papers, flyers will be included in the utility bills and the City's website will be updated.

Bill 175 Update

The Sustainable Water and Wastewater Act, Bill 175, is comprehensive in its legislative requirements and includes that Water and Wastewater services be provided on a full cost recovery basis. The Act also stipulates the sources of revenue, reporting requirements to the Ministry on financial and infrastructure plans. At this point the framework for the Act or the Regulations is not currently available. It is anticipated that full cost recovery will increase the rates substantially.

2006 WATER AND WASTEWATER OPERATING BUDGETS

Water and wastewater consumption rates and other revenues generate funds, which provide for the City's potable water operations and purchases from York Region and the cost of the removal and treatment of wastewater. These revenues also provide funds so that the City can maintain the infrastructure, fund debt payments, fund renewal projects and administer the system.

The following is a synopsis of the proposed 2006 water and wastewater budgets including the unaudited 2005 Actuals, Attachment No. 1, and the Municipal Rate Comparison, Attachment No. 2.

Annual Residential Impact

The 2006 budget includes an effective annual rate increase of 7.7% for water and a 13.4% increase for wastewater. The rates for 2006 will be put into place earlier this year starting in May as opposed to July in 2005. The early implementation will closely coincide with the Regional increase in April.

The overall rationale for the rate increases are outlined below:

- To reflect the Regional increase in the cost to purchase potable water 2.5% and increase in the treatment of wastewater, 10.0%. This increase is due to water and wastewater reserve adequacy.
- Increase in the maintenance cost of the City's infrastructure.
- Increase in the City's Capital infrastructure-funding requirements.
- To offset the impact of inflationary pressures.

The impact on a residential customer with a consumption of 360 cubic meters of water per annum will see a water and wastewater impact of \$46.08 or \$3.84 per month.

2006 PROPOSED WATER BUDGET - HIGHLIGHTS

Water Usage Revenue

The budgeted water billings (water sales) in 2006 are expected to be \$29.1 million with expected water purchases from the Region of \$19.7 million resulting in a gross margin of \$9.4 million or 32.2%.

The estimated 2006 water consumption for residential users will be 21.9 million cubic metres and 14.1 million cubic meters for commercial and industrial users. The estimated 2006 water budgeted

billing revenue includes a 2% residential, 1% commercial growth factor. The volumes are based on an average season in terms of weather.

Actual 2005 total Water billings of \$25.5 million are slightly over budget by \$1.2 million as a result of a net higher than expected demand by Residential users and Commercial / Industrial users. Residential consumption was up to a greater extent than expected totalling \$15.5 million or up by \$1.2 million or 8%. Commercial and Industrial actual billings totalled \$9.9 million up slightly compared to a budget of \$9.8 million up by \$128,000.

Unmetered Consumption/Loss - General

Water is consumed or lost from various sources which includes water main breaks, natural water infrastructure leaks and water usage during fire training and fire emergency call outs and unmetered City usage.

The Water for Tomorrow program undertaken by the Region of York is ongoing with the initial creation of three flow modulated areas in the City. These are in residential areas where devices have been installed in the water distribution system that reduce pressure during off peak periods such as overnight when there is little demand for water. Every water distribution system develops minor leaks over time that are either difficult to locate or so minor they are not economical to repair. Collectively though, these leaks can represent a significant loss of water. The modulation devices installed reduce the pressure during off peak periods thus reducing water loss.

In addition, City staff have taken proactive steps over the past number of years to detect unmetered properties or irregular water usage and to test large water meters. These initiatives have been successful and are ongoing. The pilot project for the placement of fire hydrant locks is in place in specific locations in the City.

Unmetered Consumption/Loss - 2006 Budget

The 2006 water loss is budgeted at 9.0%, the City's overall average water loss experience. The 2005 actual water loss is down from last years 9.3% coming in at 8.9%. The unmetered water/loss over the past number of years has been stable, excluding 2000, 2001, ranging from 7.5% to 9.3%.

Unmetered water can take place through many different forms, including: water used for fire suppression and fire training, water used to irrigate sports fields, water used by City staff in water main flushing and maintenance, water used for street sweeping and flushing, water lost due to water main breaks and service leaks, water used to test and flush new water mains in new developments, water used by builders in the construction of new homes, etc.

The National Drinking Water Clearinghouse in the USA has indicated that unaccounted for water in the 10-20 percent range is normal, while the National Research Council of Canada reported in 1998, that the range is anywhere from 25-30%, with some municipalities reaching close to 60%.

Water Loss - Update 2000 Actual

As reported previously to Council, the 2000 actual water loss was significantly higher than normal coming in at an adjusted 16.0%. The reason for the higher than expected water loss in 2000 has yet to be determined. City Engineering and Finance staff have met on several occasions with Regional Engineering staff, and in addition, have had a number of discussions and meetings with staff of the City of Toronto on potential metering issues. The water infrastructure system is large and the metering system is complex. In 2002 the Region hired a consultant with the cost being shared with the City however the resulting report was inclusive in its determination of the cause.

Other Revenues

Rent and concession revenues are generated from temporary water usage and hydrant rentals and for 2006 these revenues are budgeted at \$130,000 compared to 2005 actual of \$96,000. In 2005 the number of water meter installations were below budget, the actual revenue totalled \$0.9 million vs. budget of \$1.4 million. The number of installations in 2006 is expected to be the same level as 2005 and is budgeted to come in at \$1.0 million.

Expenditures

Maintenance and installation costs in 2005 totaling \$3.7 million were under budget by \$0.9 million. This reduction is due in large part to the rebuilding program and leak management efforts of recent years that reduced the material replacement expenditures. For 2006, maintenance and installation costs are budgeted higher at \$4.9 million. This increase will permit a more proactive maintenance approach in some under serviced areas such as valve and hydrant maintenance and repairs, the valve turning program and inspections of older large diameter water meters and increases in water sampling activity. These are all activities regulated by the Province of Ontario.

For 2006 the estimated general administration expenditures, and administration overhead is expected to remain at the same level. Joint services costs are budgeted at \$773,000 as a result of a proposed increase in service costs from PowerStream Inc. Insurance costs are budgeted to increase by \$10,000 as a result of premium increases. Bad debt write offs remain at \$30,000 based on experience.

Water Reserve Balance

In 2005 through water operations, \$2.7 million was transferred to the water reserve fund. The 2006-budgeted transfer from water operations to the water reserve is expected to be at \$3.7 million.

Transfers to the Capital Fund in 2006 for water related infrastructure needs are expected to be \$10.2 million of which \$5.0 million has been committed in previous years and \$4.0 million budgeted for 2006 the largest component is watermain replacement and a net provision of \$1.2 million for the Hwy 7 & Jane St. infrastructure repairs, these costs are net of any Regional share. The total committed cost for water reserve fund projects may not be spent at the end of year 2006.

The water reserve fund including commitments has been decreasing over the past few years due to the increasing need to maintain the water infrastructure; the budgeted reserve balance at the end of 2006 is projected to be \$8.7 million after all committed capital projects and operating costs.

2006 PROPOSED WASTEWATER BUDGET - HIGHLIGHTS

Wastewater Usage Revenue

Wastewater billings are based on the cubic meters of water used for each property. The wastewater rate is then applied to the amount of water consumed. The volume of wastewater is not metered. The current wastewater rate is discounted by approximately 8% when compared to water so as to reflect that not all water is returned to the wastewater system.

The sanitary wastewater billings by Vaughan in 2006 are expected to reach \$26.1 million. The 2006-budgeted wastewater increase is a reflection of the increase in water consumption as a result of an estimated 2% residential and 1% commercial growth factor and a normal season of weather. The cost of wastewater disposal service from the Region includes a 10.0% per cubic meter increase and the total 2006 treatment cost is estimated at \$19.1 million. The Region's treatment cost for wastewater is based on potable water purchased by the City.

Other Revenues

The 2006 local improvement revenue is budgeted at \$45,000 and is offset by the cost of debentures of \$45,000. Installation and service fees are budgeted at \$137,000, the same level as 2005 budget.

Expenditures

Maintenance and installation costs for 2006 are budgeted at \$2.5 million, an increase of \$47,000 over the 2005 budget. This is due to increased costs associated with lateral repairs, sanitary lateral installations, flushing/cleaning and other general repairs and maintenance. Storm sewer expenditures are budgeted at \$1.8 million an increase over last years budget of \$63,000 reflecting increased maintenance cost. Joint service costs are estimated to be \$515,000 based on the estimates from PowerStream Inc.

Sanitary Wastewater Reserves

In 2005, through the operation of the sanitary wastewater operations, \$290,000 was transferred to the reserve. For 2006 a forecasted transfer to reserve is up to a total of \$1.6 million.

Transfers to the 2006 Capital Fund for wastewater infrastructure needs total \$3.3 million, \$602,000 budgeted for 2006 mainly for sanitary sewer replacement and a \$1.2 million provision for the Hwy 7 & Jane St. infrastructure repairs, net of the Regional share and \$1.5 million committed for previous years. In addition a transfer to the operating fund of \$1.1 million. The total committed cost for wastewater reserve fund capital projects may not be spent at the end of year 2006.

The sanitary wastewater reserve ending balance for 2006 is forecasted to be \$6.5 million, and reflects all current and previous committed projects.

Single Consumption Rate

The City currently has two separate consumption rates, one each for Water and Wastewater. The wastewater billings are not metered and use the consumption of water as the basis. These rates flow funds to two separate operating statements and reserves. The water and wastewater systems are administratively handled as a single department and from that perspective the rates can be easily integrated. A single rate would simply be the combination of the two existing rates therefore there would be no financial impact to the consumer or the City's reserves. Currently the separate proposed 2006 rates are 81.7 cents for water and 75.6 cents for wastewater, the combined rate would be \$1.57 per cubic meter.

The integration of the rates would require software programming changes to the City's billing agent's system. The changes and costs to the system will be discussed with PowerStream.

Staff will review the integration of rates and will inform Council as to the cost of the proposed integration of rates, implications if any and the timeline.

Relationship to Vaughan Vision 2007

This report is consistent with the priorities previously set by Council under Safeguarding our Environment and the necessary resources are being requested.

Conclusion

Both the Water and Wastewater reserves are expected to decline despite the recommended rate increases. Engineering staff, with assistance from Finance will be undertaking the necessary studies to ensure that future water/wastewater rate recommendations include an appropriate strategy to fund future infrastructure maintenance and renewals. These studies will include the requirements of Bill 175. The annual impact of the proposed rates on residential users which consume 360 cubic meters per year will be \$46.08 or \$3.84 per month.

It is therefore recommended that the City's water rate be increased to 81.7 cents per cubic meter and that the wastewater rate be increased to 75.6 cents per cubic meter both effective May 2006 as outlined below:

Attachments

- Attachment No. 1: The 2006 Water and Wastewater Budgets including 2005 unaudited Water and Wastewater Actuals
- Attachment No. 2: 2006 Water and Wastewater Municipal Rate Comparison

Respectfully submitted,

Clayton D. Harris, CA
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The Corporation of the City of Vaughan
WATER RESERVE FUND
Statement Of Operations
For The Year Ending December 31, 2005

Description	2006 Annual Budget	% of Sales	2005 Annual Budget	% of Sales	2005 Year End Actual	% of Sales
REVENUE						
Water Revenue						
- Residential	\$17,684,000		\$14,321,000		\$15,514,446	
- General Service	11,362,000		9,813,000		9,941,882	
- Other	130,000		128,000		96,390	
Total (Volume based on 2005 actual)	\$29,176,000		\$24,262,000		\$25,552,719	
PURCHASES						
Water Purchases	\$17,994,697		\$16,141,260		\$16,933,152	
Unmetered Consumption/Loss	1,780,303	8.00%	1,403,740	8.00%	1,654,624	8.00%
Total	\$19,775,000		\$17,545,000		\$18,587,776	
GROSS MARGIN	\$9,401,000	32.22%	\$6,717,000	27.69%	\$6,964,942	27.20%
OTHER REVENUES						
Local Improvements	\$6,000		\$0		\$933	
Water Area Taxes	0		0		0	
Installation and Service Fees	1,019,000		1,419,000		941,709	
Total	\$1,025,000	3.51%	\$1,419,000	5.85%	\$942,642	3.60%
EXPENDITURES						
Maintenance & Installation Cost	\$4,955,000		\$4,679,000		\$3,720,820	
General Administration	593,000		425,000		412,491	
Joint Service Costs	773,000		750,000		657,300	
Debenture Payments	6,000		0		933	
Administration Overhead	237,000		230,000		230,000	
Insurance Allocation	111,000		101,000		101,000	
Write Offs	35,000		30,000		29,180	
Total	\$6,710,000	23.00%	\$6,215,000	25.82%	\$5,151,724	20.16%
CONTRIBUTION TO RESERVE	\$3,716,000	12.74%	\$1,921,000	7.92%	\$2,755,861	10.79%

Statement Of Continuity of Water Reserve

Description	2006 Annual Budget	2005 Annual Budget	2005 Year End Actual
Reserve Balance - Beginning - Actual	\$15,308,817	\$15,183,580	\$15,183,580
Contribution from Water Operations	3,716,000	1,921,000	2,755,861
Capital Fund Transfer			
- Year End Actual	-	-	(1,234,718)
- Hwy 7/Jane	(1,250,000)	-	-
- Yearly Budget	(4,009,000)	(3,577,000)	-
- Committed	(4,996,012)	(4,309,277)	-
- Prior Years Actual	-	-	(1,395,906)
Reserve Balance - Ending - Committed / Actual	\$8,769,805	\$9,218,303	\$15,308,817

The Corporation of the City of Vaughan
WASTE WATER RESERVE FUND
Statement Of Operations
For The Year Ending December 31, 2005

Description	2006 Annual Budget	% of Sales	2005 Annual Budget	% of Sales	2005 Year End Actual	% of Sales
REVENUE						
Waste Water Billings						
- Residential	\$15,873,000		\$11,983,000		\$12,839,489	
- General Service	10,266,000		8,376,000		8,401,674	
- Other	36,000		35,000		21,263	
Total (Volume based on 2005 actual)	\$26,175,000		\$20,394,000		\$21,262,426	
PURCHASES						
Regional Waste Water Treatment Charges	\$19,184,000	73.3%	\$16,081,000	78.9%	\$16,848,513	79.2%
Total						
GROSS MARGIN	\$6,991,000	26.7%	\$4,313,000	21.1%	\$4,413,913	20.8%
OTHER REVENUES						
Local Improvements	\$45,000		\$23,000		\$7,325	
Waste Water Area Taxes	0		0		0	
Installation and Service Fees	137,000		137,000		244,164	
Total	\$182,000	0.7%	\$160,000	0.8%	\$251,489	1.2%
EXPENDITURES						
Maintenance & Installation Cost	\$2,567,000		\$2,520,000		\$2,332,578	
General Administration	216,000		218,000		249,779	
Storm Sewer Maintenance	1,892,000		1,829,000		1,074,637	
Joint Service Costs	515,000		500,000		417,600	
Debtenture Payments	45,000		0		7,325	
Administration Overhead	155,000		150,000		150,000	
Insurance Allocation	117,000		106,000		106,000	
Write Offs	52,000		50,000		37,397	
Total	\$5,559,000	21.2%	\$5,373,000	26.3%	\$4,375,316	20.6%
CONTRIBUTION TO RESERVE	\$1,614,000	6.2%	(\$900,000)	-4.4%	\$290,085	1.4%

Statement Of Continuity of Waste Water Reserve

Description	2006 Annual Budget	2005 Annual Budget	2005 Year End Actual
Reserve Balance - Beginning - Actual	\$9,444,764	\$10,443,080	\$10,443,080
Contribution from Sewer Operations	1,614,000	(900,000)	290,085
Capital Fund Transfer			
- Year End Actual	-	-	(212,162)
- Yearly Budget	(602,000)	(82,000)	-
- Hwy 7/Jane	(1,250,000)	-	-
- Committed	(1,534,635)	(122,920)	-
- Prior Years Actual	-	-	(226,239)
Revenue Fund Transfer			
- Year End Actual	-	-	(850,000)
- Yearly Budget	(1,120,000)	(850,000)	-
Reserve Balance - Ending - Committed / Actual	\$6,552,129	\$8,488,160	\$9,444,764

**Water and Wastewater Rate Comparison
Based on Average Consumption – 360 cubic meter**

		2006	2005
1.	Region of Peel	\$381	\$364
2	Town of Markham	\$537	\$499
3.	Town of Aurora	\$552	\$506
4.	Town of Richmond Hill	\$565	\$520
5.	City of Vaughan	\$566	\$530
6.	Town of Newmarket	\$587	\$548
7.	Region of Durham	\$642	\$588
8.	City of Barrie	\$645	\$619