

**THE 2005 WATER & WASTEWATER BUDGETS, ADJUSTING
THE 2005 OPERATING BUDGET LEVY, AND COMPLIANCE
TO BILL 175 – THE SUSTAINABLE WATER AND WASTEWATER ACT**

Recommendation

The City Manager, the Commissioner of Finance & Corporate Services, the Commissioner of Engineering and Public Works, the Director of Public Works, the Director of Budgeting and Financial Planning 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 and the area rate change reflected in the operating budgets, Attachment 1;
 - (a) The City's water rate be increased from 66.5 cents to 76.7 cents per cubic meter effective in July 2005;
 - (b) The City wastewater rate be increased from 53.0 cents to 67.8 cents per cubic meter effective July 2005; and
- 3) That the use of area specific property tax rates (area rates) as a funding mechanism for Water & Wastewater operations be discontinued in 2005;
- 4) That the approved 2005 Operating Budget Levy and the Water and/or Wastewater area levy be combined into one levy and the total levy remain unchanged;
- 5) That the impact of this change on residential properties not currently receiving municipal water and/or wastewater services from the City be phased in equally over three (3) years through the use of a grant;
- 6) That the recommendation from the Budget Committee be forwarded to a Special Council on May 24, 2005 at +/- 7:00 pm for public input and that deputations be permitted;
- 7) That Corporate Communications assist in the development of communication material; and
- 8) That the appropriate notification be provided in accordance with By-law 394-2002.

Economic Impact

The following report recommends that Water and Waste Water Operations be based on full cost recovery and fully funded through user fees. The impact of the combined rate increase for water and wastewater operations to a residential property consuming 360 cubic meters of water annually is \$7.50/month or \$90.00 annually. The impact on commercial / industrial businesses will vary from business to business based on their individual consumption. Consumers have an opportunity to reduce their individual impact through water conservation.

Purpose

To adopt the water and wastewater budgets and the corresponding consumption rates. The budgets reflect a discontinuance of the use of area property tax rates (area rates) with the view to attain full cost recovery (Bill 175) through consumption fees. The water and wastewater area levies will be incorporated with the approved operating budget levy; however the total combined levy will remain unchanged.

Background - Analysis and Options

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 are not currently available but will be in 2005. Therefore it is important and timely that the area tax rates be discontinued and that the Water and Wastewater services be funded through consumption rates so that the City can begin to comply with Bill 175.

2005 WATER AND WASTEWATER OPERATING BUDGETS

Water and wastewater consumption rates and other revenues generate funds, which provide for the City's potable water 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 2005 water and wastewater budgets including the unaudited 2004 Actuals, Attachment No. 1, and the Municipal Rate Comparison, Attachment No. 2.

Annual Residential Impact

The 2005 budget includes a water and wastewater rate increase comprised of a Regional increase effective April 1, 2005, an increase for City operational requirements and the impact due to the elimination of the area property tax rates. More specifics are outlined below:

- 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.
- To reflect the Regional increase in the cost to purchase water and treatment of wastewater.
- Integrated consumption rates due to elimination of area rates.

Currently the two major sources of revenue for water and wastewater operations are consumption rates, \$21 million (based on water consumed) and the water and wastewater area rates through property tax billing, \$6 million. The consumption and area rate revenues are reflected in the respective Water and Wastewater reserves. These funds provide for the operational requirements, maintenance of the water and wastewater infrastructure and its renewal.

It is proposed that the water and wastewater operations be fully funded through user fees. As the City becomes more of an urban municipality there is less need for area charges. The current water and wastewater property tax area rates will be combined with the City's general 2005 levy requirements. The total levy requirements for 2005 will remain unchanged. The recommended 2005 Water and Wastewater Operating Budgets reflect the impact of discontinuing the area rates as a source of revenue for water and wastewater operations.

The benefits of fully funding water and wastewater operations through user fees is as follows:

A. Promotes Water Conservation and Environmental Stewardship

User rates increase awareness of the consumer with respect to the cost of water and wastewater services and as a result will aid in water conservation. Fully funding water and wastewater through user fees versus a combination of user fees and area rates means that a customer's water and wastewater bill will now reflect the full cost of consuming water. Previously, the true cost of water consumption was not apparent since there were two separate billing mechanisms, the property tax bill and the water and wastewater bill. When the rates are combined on a single bill, consumers will be more aware of the cost of their water consumption activities.

B. Consumers Can Reduce Their Costs Through Conservation

With the cost of water and wastewater reflected on one bill and all water and wastewater funds collected through user fees, consumers now have an increased opportunity to reduce their water bill through conservation. Previously a portion of their water bill was fixed, based on property assessment and unrelated to consumption.

C. Compliance with Bill 175 - the Sustainable Water and Wastewater Act

Adopting this approach proceeds along the lines of Bill 175, the Sustainable Water and Wastewater Act, this bill provides the legislative basis for full cost recovery of water and wastewater services. The legislation has been passed and the regulations for Bill 175 will be issued in 2005.

D. Achieves Vaughan Vision 2007 Objective

Combining the current two rate structures into one rate that is based on usage will aid in the conservation of water. This approach is consistent with the Vaughan Vision 2007 objective which states: "*Safeguard Our Environment*" – Preserve, protect and enhance environmental stewardship through responsible leadership and innovative policies, practices and education.

2005 Overall Rate Impact

The user fee rates that are recommended only reflect an increase in rates to recover 90% of the contribution to the water and wastewater funding that is lost as a result of no longer receiving a portion of the funding from area rates. This approach will assist in reducing the impact on individual consumers. The annual impact of incorporating the area rates into the consumption rates on an individual residential property consuming 360 cubic meters of water per year is \$60.49.

Business properties have a much greater range in annual water consumption. As a result, the impact in dollars will vary accordingly with each business based on their individual consumption.

As a result of the recommended consumption rate increases for Region, City and the integrated rate change, an average home's 2005 annual water and wastewater usage will now total \$520.20 based on 360 cubic meters compared to 2004 total of \$430.20. The average annual Water & Wastewater bill in 2005 will increase by \$7.50 per month or \$90 annually.

The proposed water and wastewater budgets are attached including the unaudited 2004 actuals for information purposes. Water and wastewater 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. Corporate Communications will be involved in the development of the communications material.

2005 PROPOSED WATER BUDGET - HIGHLIGHTS

Water Usage Revenue

The budgeted water billings (water sales) in 2005 are expected to be \$24.2 million with expected water purchases from the Region of \$17.5 million resulting in a gross margin of \$6.7 million or 27%.

The estimated 2005 water consumption for residential users will be 19.4 million cubic metres (58%) and 13.6 million cubic meters (42%) for commercial and industrial users. The estimated 2005 water billing revenue includes a 3% residential, 1.5% commercial growth factor. The volumes are based on an average season in terms of weather.

Actual 2004 total Water billings of \$21.4 million are slightly below budget by \$170,000 as a result of a net lower than expected demand by Residential users but was offset by an increase in Commercial / Industrial usage. Commercial and Industrial actual billings totalled \$8.6 million compared to a budget of \$8.3 million up slightly by \$279,000.

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 final stage of the Water for Tomorrow program undertaken by the Region of York has been completed with the 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.

Unmetered Consumption/Loss - 2005 Budget

The 2005 water loss is budgeted at 8.0%, the City's normal water loss experience. The 2004 actual water loss is up from last years 7.6% coming in at 9.3% which is up 1.7% above the City's normal historical level of loss. The unmetered water/loss over the past number of years has been stable, excluding 2000, 2001, ranging from 7.5% to 9.3%. The budgeted unmetered water/loss includes internal use i.e. soccer fields, watermain flushing, Parks water features. Given the increasing amount of infrastructure; 8.0% is reasonable when compared to the industry average range of up to 15%. As indicated above, Vaughan and the Region of York continue to take steps to minimize water loss.

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 final report from the consultant is not available as yet however, it is staff understanding that the report will be available this year. Staff will keep Council apprised of this issue.

Other Revenues

Rent and concession revenues are generated from temporary water usage and hydrant rentals and for 2005 these revenues are budgeted at \$128,000 compared to 2004 actual of \$110,000. In 2004 the number of water meter installations were below budgeted expectations of \$1.2 million vs. budget of \$1.5 million. The number of installations in 2005 is expected to be higher compared to actual and is budgeted to come in at \$1.4 million.

Expenditures

Maintenance and installation costs in 2004 totaling \$3.0 million were under budget by \$1.5 million. This is due in large part to the rebuilding program and leak management efforts of recent years that reduced the material replacement expenditures. For 2005, maintenance and installation costs are budgeted higher at \$4.7 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 2005 the estimated general administration expenditures, and administration overhead is expected to remain at the same level. Joint services costs are budgeted at \$750,000 as a result of a proposed increase in service costs from PowerStream Inc. Insurance costs are budgeted to increase by \$17,000 as a result of premium increases. Bad debt write offs remain at \$30,000 based on experience.

Water Reserve Balance

In 2004 through water operations, \$3.9 million (2003 - \$3.9 million) was transferred to the water reserve fund. The 2005-budgeted transfer from water operations to the water reserve is expected to be at \$1.9 million.

Transfers to the Capital Fund in 2005 for water related infrastructure needs are expected to be \$7.9 million of which \$4.3 million has been committed in previous years and \$3.6 million budgeted for 2005. The total committed cost for water reserve fund projects may not be spent at the end of year 2005.

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 2005 is projected to be \$9.2 million after all committed capital projects.

2005 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 12% 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 2005 are expected to reach \$20.3 million. The 2005-budgeted wastewater increase is a reflection of the increase in water consumption as a result of an estimated 3% residential and 1.5% commercial growth factor and a normal weather season. The cost of wastewater disposal service from the Region includes a 6.6% per cubic meter increase and the total 2005 treatment cost is estimated at \$16.0 million. The Region's treatment cost for wastewater is based on potable water purchased by the City from the Region.

Other Revenues

The 2005 local improvement revenue is budgeted at \$23,000. Installation and service fees are budgeted at \$137,000, lower than 2004 actual.

Expenditures

Maintenance and installation costs for 2005 are budgeted to increase significantly by \$708,000 from 2004 actual of \$1.8 million. 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 to increase over last years actual by \$815,000 reflecting increased maintenance. Joint service costs are estimated to be \$500,000 based on the revised service agreement with PowerStream Inc. Administration costs have increased \$94,000 due to an increase in previously approved complement due to Bill 175.

Sanitary Wastewater Reserves

In 2004, through the operation of the sanitary wastewater operations, \$2.2 million was contributed to the reserve. However, for 2005 a forecasted loss of \$900,000 to the reserve is expected.

Transfers to Capital Fund for wastewater infrastructure needs are forecasted to be \$205,000, of which \$123,000 has been committed in previous years and \$82,000 budgeted for 2005. The total committed cost for wastewater reserve fund capital projects may not be spent at the end of year 2005.

The sanitary wastewater reserve ending balance for 2005 is forecasted to be \$8.4 million, and reflects all current and previous committed projects.

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.

Full cost recovery through user fees will assist in moving the City in the direction of Bill 175 attaining the Sustainable Water and Wastewater Act; it will also provide property owners with a single water and wastewater bill thereby aiding the promotion of water conservation and supports the environmental objectives of Vaughan Vision 2007.

It is therefore recommended that the City's water rate be increased to 76.7 cents per cubic meter and that the wastewater rate be increased to 67.8 cents per cubic meter both effective July 2005 as outlined below:

Attachments

- Attachment No. 1: The 2005 Water and Wastewater Budgets including 2004 Water and Wastewater Actuals
- Attachment No. 2: 2005 Water and Wastewater Municipal Rate Comparison

Respectfully submitted,

Michael DeAngelis, City Manager

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The Corporation of the City of Vaughan

WATER RESERVE FUND

Statement Of Operations

For The Year Ending December 31, 2004

Description	2005 Annual Budget	% of Sales	2004 Annual Budget	% of Sales	2004 Year End Actual	% of Sales
REVENUE						
Water Revenue						
- Residential	\$14,321,000		\$13,144,000		\$12,711,386	
- General Service	9,813,000		8,331,000		8,609,952	
- Other	128,000		127,000		109,611	
Total (VOLUME Based on 2004 Actual)	\$24,262,000		\$21,602,000		\$21,430,950	
PURCHASES						
Water Purchases	\$16,141,260		\$15,528,040		\$15,006,399	
Unmetered Consumption/Loss	1,403,740	8.00%	1,442,960	8.50%	1,553,881	9.38%
Total (VOLUME Based on 2004 Actual)	\$17,545,000		\$16,971,000		\$16,560,081	
GROSS MARGIN	\$6,717,000	27.69%	\$4,631,000	21.44%	\$4,870,869	22.73%
OTHER REVENUES						
Water Area Taxes	0		2,210,000		2,276,628	
Installation and Service Fees	1,419,000		1,490,000		1,247,806	
Total	\$1,419,000	5.85%	\$3,700,000	17.13%	\$3,524,433	16.45%
EXPENDITURES						
Maintenance & Installation Cost	\$4,679,000		\$4,598,000		\$3,089,927	
General Administration	425,000		335,000		194,246	
Joint Service Costs	750,000		597,000		831,416	
Administration Overhead	230,000		230,000		230,000	
Insurance Allocation	101,000		84,000		84,000	
Write Offs	30,000		30,000		29,934	
Total	\$6,215,000	25.62%	\$5,874,000	27.19%	\$4,459,523	20.81%
CONTRIBUTION TO RESERVE	\$1,921,000	7.92%	\$2,457,000	11.37%	\$3,935,780	18.36%

Statement Of Continuity of Water Reserve

Description	2005 Annual Budget	2004 Annual Budget	2004 Year End Actual
Reserve Balance - Beginning - Actual	\$15,183,580	\$14,501,995	\$14,501,995
Contribution from Water Operations	1,921,000	2,457,000	3,935,779
Capital Fund Transfer			
- 2004 Actual	-	-	(2,150,748)
- Yearly Budget	(4,309,277)	(4,083,470)	-
- Committed	(3,577,000)	(3,480,000)	-
- Prior Years Actual	-	-	(1,103,445)
Reserve Balance - Ending - Committed / Actual	\$9,218,303	\$9,395,525	\$15,183,580

The Corporation of the City of Vaughan

WASTE WATER RESERVE FUND

Statement Of Operations

For The Year Ending December 31, 2004

Description	2005 Annual Budget	% of Sales	2004 Annual Budget	% of Sales	2004 Year End Actual	% of Sales
REVENUE						
Waste Water Billings						
- Residential	\$11,983,000		\$10,226,000		\$9,953,993	
- General Service	8,376,000		6,625,000		6,826,952	
- Other	35,000		34,000		15,701	
Total (VOLUME Based on 2004 Actual)	<u>\$20,394,000</u>		<u>\$16,885,000</u>		<u>\$16,796,646</u>	
PURCHASES						
Regional Waste Water Treatment Charges	16,081,000	78.9%	15,556,000	92.1%	15,027,664	89.5%
Total (VOLUME Based on 2004 Actual)						
GROSS MARGIN	\$4,313,000	21.1%	\$1,329,000	7.9%	\$1,768,982	10.5%
OTHER REVENUES						
Local Improvements	23,000		23,000		22,465	
Waste Water Area Taxes	0		4,102,000		3,992,752	
Installation and Service Fees	137,000		170,000		231,530	
Total	<u>\$160,000</u>	<u>0.8%</u>	<u>\$4,295,000</u>	<u>25.4%</u>	<u>\$4,246,746</u>	<u>25.3%</u>
EXPENDITURES						
Maintenance & Installation Cost	\$2,520,000		\$2,415,000		\$1,811,893	
General Administration	218,000		253,000		123,819	
Storm Sewer Maintenance	1,829,000		1,823,000		1,012,843	
Joint Service Costs	500,000		597,000		554,277	
Administration Overhead	150,000		150,000		150,000	
Insurance Allocation	106,000		88,000		88,000	
Write Offs	50,000		50,000		46,985	
Total	<u>\$5,373,000</u>	<u>26.3%</u>	<u>\$5,376,000</u>	<u>31.8%</u>	<u>\$3,787,818</u>	<u>22.6%</u>
CONTRIBUTION TO RESERVE	(\$900,000)	-4.4%	\$248,000	1.5%	\$2,227,911	13.3%

Statement Of Continuity of Waste Water Reserve

Description	2005 Annual Budget	2004 Annual Budget	2004 Year End Actual
Reserve Balance - Beginning - Actual	\$10,443,080	\$10,866,953	\$10,866,953
Contribution from Sewer Operations	(900,000)	248,000	2,227,911
Capital Fund Transfer			
- 2004 Actual	-	-	(1,565,267)
- Yearly Budget	(122,920)	(1,052,704)	-
- Committed	(82,000)	(872,000)	-
- Prior Years Actual	-	-	(236,517)
Revenue Fund Transfer			
- 2004 Actual	-	-	(850,000)
- Yearly Budget	(850,000)	(850,000)	-
Reserve Balance - Ending - Committed / Actual	\$8,488,160	\$8,340,249	\$10,443,080

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

		2005	2004
1.	Region of Peel	\$364	\$319
2.	Town of Aurora	\$499	\$479
3.	Town of Markham	\$506	\$461
4.	City of Vaughan	\$520	\$430
5.	Town of Richmond Hill	\$530	\$502
6.	Town of Newmarket	\$548	\$521
