

**2009 WATER & WASTEWATER OPERATING BUDGETS****Recommendation**

The City Manager, the Deputy City Manager/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; and
  - (a) The City's water rate be increased from 92.4¢ to 98.0¢ per cubic meter effective in June 2009 the day after approval of the Water By-law is adopted; and
  - (b) The City wastewater rate be increased from 91.1¢ to 102.2¢ per cubic meter effective in June 2009 the day after the Wastewater By-law is adopted; and
- 3) That the additional Financial Resource Requests, Attachment 4 & 5 be approved; and
- 4) That the recommendation from the Budget Committee be forwarded to a Special Council meeting on June 23, 2009 at 7:00 pm for public input; and
- 5) That the appropriate notification be provided in accordance with the notice By-Law 394-2002 and Ont. Reg. 244102.

**Economic Impact**

This year 67% of the combined increase in rates is due to Regional increases for the purchase of potable water and sanitary sewer services. The combined rate impact is 9.1% and the annual residential impact on an average household consumption of 300 cubic meters of water per year is \$50.

The proposed water and wastewater operating budgets maintain reserve contribution levels similar to last year. The contributions will generate \$4.3 million to the water reserve and \$2.8 million to the wastewater reserve thereby providing the necessary funds to maintain a financially sustainable water and wastewater systems for the future. This year's consumption rates for water and wastewater are supported by the rate study conducted by Watson and Associates.

**Communications Plan**

The approved Water & Wastewater rates will be advertised per City policy in the local newspapers and the City's web site.

**Purpose**

To adopt the water and wastewater operating budgets and the corresponding consumption rates.

The annual water rate increase is 6.0% and wastewater rate increase is 12.2% both rates incorporating Regional increases, City operating, maintenance and infrastructure increases. The combined rate increase is 9.1% of which 6.1% is attributable to Regional rate increases. The

consumption rates are supported by the current rate study and are now moving in the direction of full cost recovery. However the consumption rates are still very competitive as demonstrated on Attachment No. 2.

**Background Analysis and Options**

**2009 WATER AND WASTEWATER PROPOSED CONSUMPTION RATES**

The major source of revenue for water and wastewater operations is consumption rates, totalling \$71.0 million for 2009. 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 that includes on going infrastructure maintenance, administration, financing, overhead costs and reserve funds for the future rehabilitation of the City's underground infrastructure.

The proposed 2009 water and wastewater budgets are attached including the unaudited 2008 actuals. The water and wastewater operating and capital actual expenditure activity form part of the City's consolidated Financial Statements.

The following attachments are included: 2009 water and wastewater budgets including the unaudited 2008 Actuals Attachment No. 1, the Municipal Rate Comparison Attachment No. 2, the Wastewater & Drainage 2009 Business Plan, Attachment No. 3, the Resource Request - Water Attachment No. 4, the Resource Request - Wastewater Attachment No. 5.

**Annual Residential Impact**

The 2009 budgets include an annual rate increase of 6.0% for water and a 12.2% increase for wastewater for a combined increase of 9.1%.

The year over year rate increases impact is:

- The Regional increase of 10% for the cost of potable water and the increase in wastewater services at 10.0%. This increase is based on Regional water and wastewater reserve adequacy study.
- Increase in the contribution to the wastewater reserve
- Reduction in the contribution to the water reserve
- To offset the impact of inflationary pressures.
- Increases in operational service level activity and administration, financing and other expenditures.
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**2009 COMBINED RATE INCREASE**

Potable Water & Wastewater Purchased Services	6.1%	York Region
Unmetered Water	0.3%	
Maintenance	1.2%	
Administration & Finance & Overheads	1.4%	
Joint Services	0.3%	
Infrastructure Contribution	(0.2)%	
<b>2009 Increase</b>	<b>9.1%</b>	

The residential customer with a consumption of 300 cubic meters of water per annum will see an increase of \$50 or 9.1%. The combined increase for water, wastewater represents a \$4.17 per month increase.

**Rate Components - Increase**

The largest cost component of the consumption rate is the purchase of potable water and wastewater services from the Region as shown below. Wastewater purchased services in particular have gone up over the past number of years by 10%. This year water also increased by 10% both increases due to the need to build reserves for future Regional infrastructure requirements.

The City like the Region needs to build reserves for the future. The most significant component of the proposed consumption rates is "Contribution to Reserves". These are the funds that are transferred to the reserves each year for the future water & wastewater infrastructure replacement. The consumption rates are now supported by the study and are now moving in the direction of full cost recovery.

The 2009 water and wastewater rate components and cost impacts are as follows:

<b>Rate Components</b>	<b>Water</b>	<b>Wastewater</b>	<b>Combined</b>
Regional Purchased Services	57.6 ¢	65.3 ¢	122.9 ¢
Unmetered Water	7.0	0	7.0
Maintenance	11.2	13.5	24.7
Other	9.7	5.4	15.1
Contribution to Reserves	12.5	18.0	30.5
<b>Total</b>	<b>98.0 ¢</b>	<b>102.2 ¢</b>	<b>200.2 ¢</b>

**Cost increase impact**

	<b>Water</b>	<b>Wastewater</b>	<b>Combined</b>
Region	94%	53%	67%
City	6%	47%	33%

**SDWA – Licensing Requirements**

The Safe Drinking Water Act (SDWA) is comprehensive in its legislative requirements and was enacted to place all legislation and regulations relating to the treatment and distribution of drinking water into one Act. The SDWA expands on existing policy and practices and introduces new regulations to protect drinking water. It includes certification of drinking water system operators and analysts and puts in place certain financial reporting requirements and the need for municipalities to develop financially sustainable water treatment and distribution systems. The City embarked on a rate study that will determine full cost recovery rates.

**Rate Study**

The City undertook an RFP process for consulting services and a contract was awarded to Watson and Associates who partnered with an engineering firm AECOM. Watson and AECOM undertook a full review of water, wastewater and storm services that would result in recommendations that would over time move consumption rates to a full cost recovery level. This past year the consultants have collaborated with staff from Engineering, Public Works and Finance to develop data to input into a consumption rate model. This data included asset replacement costs, replacement timelines, growth levels, consumption levels, revenue projections, operational cost projections, etc for the period 2008 to 2033, a 25 year forecast period.

The rate study objectives:

- 1) A full cost review of water, wastewater and storm services
- 2) Identify current and future water, wastewater, storm sewer capital needs over the assets lifecycle
- 3) Identify cost recovery options for both capital and operational needs
- 4) An analysis of lifecycle reserve fund requirements to provide financial sustainability
- 5) Recommend user rates to recover full costs for water, wastewater and storm services
- 6) Provide an Excel based Capital Asset Financial Evaluator ("CAFÉ") model to the City for ongoing long range financial planning

The rate study is ongoing but is near completion at this point.

### **Conservation**

The Water for Tomorrow program undertaken by the Region of York continues to provide programs and initiatives to reduce the consumption and loss of drinking water. The latest initiatives is a water efficient toilet rebate program where single family home owners in York Region purchasing an eligible water efficient toilet on or after May 1<sup>st</sup> can receive a \$75 rebate for a maximum five toilets per location. In addition, the program continues to offer water efficient landscape visits and industrial/commercial water audits to encourage water consumers to conserve water use and assists in reducing energy consumption and their carbon footprint.

Public Works continues to refine its flushing programs to reduce water flushed from the system to ensure water quality. The banding of hydrants has reduced theft and encourages water haulers to source water from one of the City's four water filling stations. The anode protection program initiated in 2005 to reduce corrosion in iron water mains continues to perform very well yielding a 50% decrease in the number of water main breaks in the water distribution system.

### **2009 Proposed Water and Wastewater Budget – Highlights**

#### **Unmetered Water Consumption**

Unmetered water usage takes place through: fire suppression and fire training, irrigating sports fields, main flushing and maintenance, street sweeping, water main breaks and service leaks, testing and flushing water mains in new developments due to Provincial water regulations, water used by builders in the construction of new homes, etc.

Unmetered water is recovered through the City's development agreements and is also billed and recovered internally for City purposes; such as recreation's swimming pools, and consumption in the many building's and facilities throughout the City.

#### **2009 Proposed Budget – Unmetered Water**

The 2009 unmetered water is budgeted at 11% same as last year. The unmetered water loss for 2008 is 14.0% and is the result of continued need to flush water mains in new subdivisions. Flushing maintains the City's ability to provide potable water thereby meeting Ministry of Environment requirements. Some of the cost is recovered from fees in the subdivision agreements. The actual unmetered water over the past number of years ranges from 9.3% to 14.0% reflecting the growth of the City. The National Drinking Water Clearinghouse in the USA has indicated that water unaccounted for in the 10 - 20% range is considered normal, while the National Research Council of Canada reported in 1998, that the range is anywhere from 25 - 30%.

### Update 2000 – Unmetered Water

As reported previously to Council, the 2000 actual unmetered water was significantly higher than normal coming in at an adjusted 16.0%. 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.

At the June 5<sup>th</sup>, 2008 meeting of the Finance and Administration Regional Committee a recommendation was put forward that staff negotiate a resolution to the water billing issue between the City of Vaughan and the Region.

Staff are in the process of preparing a report that provides a recommendation to resolve this outstanding issue with the Region.

### **Water- Revenue & Expenditure Highlights**

#### Additional Financial Resource Requests – Water

For 2009, 3 additional Resource requests have been submitted and the funds are included in the Water budget, Attachment #3. These requests are for additional funds to maintain and update the Drinking Water Quality Management Standards relating to the City's drinking water licences. Additional funds to complete a network analysis of the City's water distribution system to determine areas where improvement maybe required; thereby maintaining an efficient distribution system. Additional funds to inspect and service the City's fire hydrants in accordance with the fire code. These additional financial resource requests do not involve additional staff.

#### Rate Study – Water

The recommended water rate of 98.0 cents per cubic meter is based on the proposed operating and capital budgets and represents a move in the direction of full cost recovery as supported by the preliminary rate study.

The above water rate is based on the optional rate provisions in the study that recommends smoothing consumption rates over a period of time. This approach is possible for two reasons, the City's current water reserve is at a reasonable funding level and the water infrastructure is relatively young therefore providing time to build the reserve. Both of these factors provide the opportunity to bring the water rate to full cost recovery over an extended time frame. The water rate has been smoothed over a 10 year period and thereby lessening the year over year fluctuations that would otherwise occur due to the infrastructure replacement timelines. Based on the required estimated capital asset replacement value over the 10 year period the full recovery water rate is 158 cents.

#### 2009 Budget Factors

The budgeted 2009 water billing revenue includes a 2.0 % (3.25% 2008) residential, 1.25 % (2.0% 2008) commercial growth factor and a 6.0% water rate increase. The consumption volume is based on the above growth and an estimated average season in terms of rain fall. Weather in terms of rainfall is difficult to predict therefore the consumption figures are determined based on a conservative basis. Increases in expenditures include the Regional cost of potable water at 10%, inflationary increases related to wages, purchased goods and services, increases in operational service areas and the rate study as it pertains to the appropriate funding contribution level for the reserve.

## Highlights - 2009 Proposed Budget

The budgeted water billings in 2009 include a 6% rate increase and an increase residential and commercial growth. The revenues are expected to be \$35.5 million with water purchases from the Region at \$23.3 million including water loss resulting in a gross margin of \$12.1 million. This year budgeted consumption levels are developed using a more conservative approach in terms of weather. Other revenue for bulk water sales is budgeted lower than last year's level at \$0.2 million. Installation activity is expected to be similar to last years budgeted level at \$1.1 million.

2009 budgeted expenditures total \$9.0 million covering maintenance, administration, financing, overhead and other costs up by 9.8% over last years budget. The largest component is the maintenance and is budgeted at \$5.4 million up by 5.4% due to an increase in maintenance levels related to hydrants. Administration is budgeted at \$1.2 million up by 27.4% due to new complement that was approved in last year's budget. Other costs are up mainly due to an increase in the transfer to the revenue fund as it relates to overhead allocation costs. The balance of the costs is similar to last years budgeted level.

## Highlights - 2008 Actual

Actual 2008 total Water billings of \$31.8 million are under budget significantly by \$3.4 million as a result of significant rainfall through out the spring and summer period. The volume of rain in this period increased by 156% when compared to the same period last year. Residential billings at \$19.2 million were down by 10.5% and Commercial at \$12.4 million down by 9.9% when compared to budget. Bulk sales were also down by \$0.2 million. Installation services at \$1.0 million were also down due to less than expected activity.

Actual maintenance expenditures came in at \$3.8 million under budget by \$1.3 million. Maintenance is under budget each year as a result of extra funds being provided due to possible emergency work. Administration came in at \$0.8 million and is under slightly due to gapping as staff approved last year were hired later than expected, the balance of expenditures came in to close to budget.

## Water Reserve Fund Activity

In 2008 through water operations, the net of all revenues and costs resulted in \$4.6 million (\$4.9M 2007) being transferred to the water reserve. The transfer is down by \$1.1 million as indicated previously due to excessive rain fall in the summer months resulting in a lower water demand.

The 2009 budgeted transfer from water operations to the water reserve is \$4.3 million. These funds will provide for the future requirements of the water infrastructure. The forecasted Capital drawdown of the reserve in 2009 for water related infrastructure needs is expected to be \$3.4 million.

Committed capital costs represent approved capital projects not yet begun or completed and total \$3.2 million, these projects will be completed over the next couple of years.

The budgeted reserve balance at the end of 2009 is projected to be \$18.3 million (2008 actual \$17.3m) after committed capital projects a net increase of \$1.0 million. These funds will provide for the future requirements of the water infrastructure.

## **Wastewater- Revenue & Expenditure Highlights**

### Additional Financial Resource Request – Waste Water

At its meeting of December 8, 2008, Council approved a number of recommendations contained in the "Summer 2008 Rainstorm Update" report. One of these recommendations was, "Staff report

*back to Council by June 30, 2009 regarding a potential backflow valve installation rebate program with proposed details of this program and potential funding sources."*

On May 5, 2009, Council approved the Back-water Valve Installation Subsidy program, subject to a by-law for the program being developed and passed, and the funding being approved through the 2009 Water/Wastewater Budget.

The approved subsidy is based on having an annual maximum funding cap of \$112,500, to be funded from the Wastewater Reserve. Based on a maximum subsidy of \$750 per property, the City can approve 150 applications per year, if all received the maximum subsidy. Once the annual funding amount has been exhausted, those homeowners approved to receive a subsidy would have to wait until the following year to receive their subsidy, based on available funding being approved through the budget process. Depending on the uptake of this program, the program cap amount may have to be adjusted annually through this budget process.

The back-water valve installation subsidy may provide some financial assistance to homeowners who have experienced flooding as a result of a sewer back-up, and have installed back-water valves. It will also assist those residents who wish to install such devices to help prevent future basement flooding issues as a result of a sewer back-up.

While such a device significantly reduces the risk of basement flooding from sanitary sewer back-ups, there is no guarantee that basement flooding will never occur again, even after the installation of such a valve. The funds necessary for this program have been included in the 2009 Wastewater budget.

#### Rate Study-Wastewater

The recommended wastewater rate of 102.2 cents is based on the proposed operating and capital budgets and represents a move in the direction of full cost recovery as supported by the preliminary findings of the rate study.

The above rate is based on provisions in the study that recommends smoothing consumption rates over a period of time. This approach is possible for two reasons, the City's wastewater reserve is currently at a reasonable funding level and the wastewater infrastructure is relatively young therefore providing time to build the reserve. Both of these factors provide the opportunity to bring the wastewater rate to full cost recovery over an extended time frame. The wastewater rate has been smoothed out over a 10 year period thereby lessening the year over year fluctuations that would otherwise occur due to the varying water infrastructure replacement timelines. Based on the required estimated capital asset replacement value over the 10 year period the full cost recovery wastewater rate is 153 cents and sewer services 55 cents.

Staff will be looking at various rate options outlined in the study to more effectively fund storm sewer services.

#### Wastewater Budget Factors

The budgeted 2009 wastewater billing revenue includes a 2.0 % (3.25% 2008) residential, 1.25% (2.0% 2008) commercial growth factor and a 12.2% wastewater rate increase. The volume of wastewater is not metered. The consumption volume is based on water sold to the consumer. Cost increases include the rate increase in the Regional cost of wastewater services at 10%, increases to City's operational, administration, etc costs and the infrastructure contribution to the reserve that is required to fund future capital needs now based on the rate study.

## Discount Eliminated

The discount between the water rate and wastewater rate has been diminishing over the past number of years. This is due to the Regional wastewater services costs increasing over the past six years by 10%, the City can only pass on these costs down to the consumer. As a result there is no longer a discount for wastewater when compared to the water rate.

## Highlights - 2008 Actual and 2009 Budget

The budgeted wastewater billings in 2009 are expected to reach \$35.7 million with the expected wastewater services from the Region at \$25.9 million leaving a gross margin of \$9.7 million. The increase in revenues is a reflection of growth factors of 2.0 % (3.25% 2008) for residential and 1.25 % (2.0%) for commercial and an estimated average season in terms of rain fall and a rate increase of 12.2%. The above cost of wastewater disposal service from the Region includes a 10.0% increase. The Region's treatment cost for wastewater is based on potable water purchased by the City. Other revenues budgeted at \$0.4 million are similar to last years level. The 2008 local improvement revenue is budgeted at \$213,200 and is offset by the cost of debentures of \$213,200. Installation and service fees are budgeted at \$0.2 million down slightly from last year's budgeted level.

Actual 2008 total wastewater billings of \$30.3 million are under budget significantly by \$3.1 million. Wastewater revenue is based on water consumption therefore is under budget due to an excessive amount of rain fall in the spring and summer timeframe. As a result the demand by Residential users was reduced significantly. Residential actual billing totalled \$18.2 million, down by 11.5% and Commercial and Industrial actual billings totalled \$12.1 million down by 8.2% when compared to budget. Other revenues at \$0.4 million are higher than expected due to installation revenue coming in at \$0.2 million higher due to increased activity.

2009 Budgeted expenditures total \$7.3 million covering maintenance, administration, storm sewer financing, joint services, overhead and other costs are up by 10.5% over last years budget. The largest component is the sanitary sewer maintenance costs budgeted at \$3.1 million up by 7.8%. This increase is due to costs associated with lateral repairs, sanitary lateral installations, flushing/cleaning and other general repairs, maintenance, servicing and joint service costs. Administration is budgeted at \$0.3 million up by 30.0% due to new complement that was approved in last year's budget. Storm sewer maintenance is budgeted at \$2.2 million up over last year by 10.0% reflecting increased maintenance levels. Other costs are up mainly due to an increase in the transfer to the revenue fund as it relates to overhead allocation costs. The balance of the costs is similar to last years budgeted level.

2008 Actual expenditures total \$5.9 million covering maintenance, administration, storm sewer, financing, overhead and other costs are down by 10.1% when compared to budget. Actual maintenance expenditures came in at \$2.5 million under budget by \$0.4 million. Administration came in at \$0.3 million and is over do staff that was approved last year. Storm sewer maintenance came in at \$1.6 million under budget by 22.2% as a result of less then expected activity. The balance of expenditures came in at budgeted levels

## Reserve Contribution

In 2008 through wastewater operations, the net of all revenues and costs resulted in \$3.1 million (\$3.2m 2007) being transferred to the water reserve fund.

The 2009 budgeted transfer of \$2.8 million from wastewater/storm operations to the reserve is higher at \$0.4 million over last year's budget. The capital drawdown of the reserve in 2009 for wastewater related infrastructure needs is expected to be small this year at \$0.4 million.



Committed capital a cost represent projects not yet begun or completed and totals \$0.9 million, these projects will be completed over the next couple of years.

The budgeted reserve balance at the end of 2009 is projected to be \$15.9 million after committed capital projects a net increase of \$2.5 million. These funds will provide for the future requirements of the wastewater infrastructure.

### **Relationship to Vaughan Vision 2020**

Establishes the budget and resources required to maintain service levels and undertake Council priorities in this area.

### **Regional Implications**

No Implications

### **Conclusion**

Based on the current rate study review the City's water, wastewater rates are now moving towards full cost recovery. This approach will maintain a financially sustainable reserve for the future. Based on the proposed rate increase for water and a rate increase for wastewater the impact to the ratepayer that consumes 300 cubic meters per year will be approximately \$50.00 or \$4.17 per month.

It is therefore recommended that the City's water rate be increased to 98.0 cents per cubic meter and that the wastewater rate be increased to 102.2 cents per cubic meter both effective June 2009.

### **Attachments**

- Attachment No. 1: The 2009 Water and Wastewater Budgets including 2008 unaudited Water and Wastewater Actuals
- Attachment No. 2: 2009 Water and Wastewater Municipal Rate Comparison
- Attachment No. 3: Water, Wastewater & Drainage 2009 Business Plan
- Attachment No. 4: Resource Requests - Water
- Attachment No. 5: Resource Request - Wastewater

### **Report prepared by:**

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Respectfully submitted,

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Clayton D. Harris, CA  
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Barry E. Jackson, CGA  
Director of Financial Services

**The Corporation of the City of Vaughan**  
**WASTE WATER RESERVE FUND**  
**Statement Of Operations**  
**For The Year Ending December 31, 2008**

Description	2009 Annual Budget	% of Sales	2008 Annual Budget	% of Sales	2008 Year End Actual	% of Sales
<b>REVENUE</b>						
Waste Water Billings	\$21,555,000		\$20,315,000		\$18,220,315	
- Residential						
- General Service	14,165,000		13,152,000		12,149,660	
- Other	0		39,000		0	
<b>Total</b>	<b>\$35,720,000</b>		<b>\$33,506,000</b>		<b>\$30,369,976</b>	
<b>PURCHASES</b>						
Regional Waste Water Treatment Charges	\$25,953,000	72.66%	\$24,754,000	73.88%	\$21,688,805	71.42%
<b>TOTAL</b>						
<b>GROSS MARGIN</b>	<b>\$9,767,000</b>	<b>27.34%</b>	<b>\$8,752,000</b>	<b>26.12%</b>	<b>\$8,681,170</b>	<b>28.58%</b>
<b>OTHER REVENUES</b>						
Local Improvements	\$213,201		\$213,200		\$213,201	
Installation and Service Fees	200,000		137,000		262,544	
Sundry Waste Water Revenue	0		0		-56,683	
<b>TOTAL</b>	<b>\$413,201</b>	<b>1.16%</b>	<b>\$350,200</b>	<b>1.05%</b>	<b>\$419,062</b>	<b>1.38%</b>
<b>EXPENDITURES</b>						
Maintenance & Installation Cost	\$3,163,500		\$2,932,000		\$2,581,288	
General Administration	364,000		280,000		311,644	
Storm Sewer Maintenance	2,247,000		2,041,000		1,669,392	
Joint Service Costs	594,063		550,460		550,459	
Debt Service Payments	213,201		213,200		213,201	
Overhead	647,480		542,480		542,480	
Insurance Allocation	138,200		129,170		129,170	
<b>TOTAL</b>	<b>\$7,367,444</b>	<b>20.63%</b>	<b>\$6,686,310</b>	<b>19.96%</b>	<b>\$5,997,635</b>	<b>19.75%</b>
<b>CONTRIBUTION TO RESERVE</b>	<b>\$2,812,757</b>	<b>7.87%</b>	<b>\$2,413,890</b>	<b>7.20%</b>	<b>\$3,102,598</b>	<b>10.22%</b>

**Statement Of Continuity of Waste Water Reserve**

Description	2009 Annual Budget	2008 Annual Budget	2008 Year End Actual
Reserve Balance - Beginning - Actual	\$13,470,067	\$7,704,738	\$9,593,717
Contribution from Sewer Operations	2,812,757	2,413,890	3,102,598
Capital Fund Transfer			
- Year End Actual	-	-	-280,966
- Yearly Budget	-440,325	-68,750	-
- Hwy 7/Jane	-	-	-
- Hwy 7/Jane York Reg. Recovery	-	-	-
- Committed	-	-	-936,517
Revenue Fund Transfer			
- Yearly Budget	-	-	1,991,235
Interest	76,000	-	-
<b>Reserve Balance - Ending - Committed / Actual</b>	<b>\$15,918,499</b>	<b>\$10,049,876</b>	<b>\$13,470,067</b>

**The Corporation of the City of Vaughan**  
**WATER RESERVE FUND**  
**Statement Of Operations**  
**For The Year Ending December 31, 2008**

Description	2009 Annual Budget	% of Sales	2008 Annual Budget	% of Sales	2008 Year End Actual	% of Sales
<b>REVENUE</b>						
Water Revenue	\$21,365,000		\$21,242,000		\$19,209,397	
- Residential					12,448,126	
- General Service	13,976,000		13,687,000			
- Other	200,000		342,000		205,728	
<b>Total</b>	<b>\$35,541,000</b>		<b>\$35,271,000</b>		<b>\$31,863,251</b>	
<b>PURCHASES</b>						
Metered Water Purchases	\$20,804,640		\$20,123,798		\$18,372,190	
Unmetered Water	2,571,360	11.00%	2,488,202	11.00%	2,995,897	14.02%
<b>TOTAL WATER PURCHASES</b>	<b>\$23,376,000</b>		<b>\$22,612,000</b>		<b>\$21,368,087</b>	
<b>GROSS MARGIN</b>	<b>\$12,165,000</b>	<b>34.23%</b>	<b>\$12,659,000</b>	<b>35.89%</b>	<b>\$10,495,164</b>	<b>32.94%</b>
<b>OTHER REVENUES</b>						
Local Improvements	\$0		\$0		\$0	
Installation and Service Fees	1,150,000		1,200,000		1,022,174	
<b>TOTAL</b>	<b>\$1,150,000</b>	<b>3.24%</b>	<b>\$1,200,000</b>	<b>3.40%</b>	<b>\$1,022,174</b>	<b>3.21%</b>
<b>EXPENDITURES</b>						
Maintenance & Installation Cost	\$5,445,000		\$5,166,000		\$3,826,359	
General Administration	1,186,000		931,000		874,386	
Joint Service Costs	891,094		825,690		895,191	
Debtenture Payments	202,789		202,790		202,789	
Overhead	1,152,520		957,520		958,682	
Insurance Allocation	131,100		122,550		122,550	
<b>TOTAL</b>	<b>\$9,008,503</b>	<b>25.35%</b>	<b>\$8,205,550</b>	<b>23.26%</b>	<b>\$6,879,957</b>	<b>21.59%</b>
<b>CONTRIBUTION TO RESERVE</b>	<b>\$4,306,497</b>	<b>12.12%</b>	<b>\$5,653,450</b>	<b>16.03%</b>	<b>\$4,637,381</b>	<b>14.55%</b>

**Statement Of Continuity of Water Reserve**

Description	2009 Annual Budget	2008 Annual Budget	2008 Year End Actual
Reserve Balance - Beginning - Actual	\$17,323,928	\$10,983,554	\$17,427,495
Contribution from Water Operations	4,306,497	5,653,450	4,637,381
Capital Fund Transfer	-	-	-1,539,855
- Year End Actual	-	-	-
- Hwy 7/Jane	-	-	-
- Hwy 7/Jane York Reg. Recovery	-	-	-
- Yearly Budget	(3,405,150)	-315,850	-
- Committed	-	-	-3,201,093
Interest	88,000	-	-
<b>Reserve Balance - Ending - Committed / Actual</b>	<b>\$18,313,275</b>	<b>\$16,331,154</b>	<b>\$17,323,928</b>

**WATER AND WASTEWATER RATE COMPARISON  
BASED ON AVERAGE CONSUMPTION - 300 CUBIC METRES**

		YOY CHANGE			
		2009	2008	AMOUNT	%
1)	REGION OF PEEL	\$ 400	\$ 377	\$ 23	6.1%
2)	MARKHAM	\$ 601	\$ 530	\$ 71	13.4%
3)	VAUGHAN	\$ 601	\$ 551	\$ 50	9.1%
4)	RICHMOND HILL	\$ - *	\$ 556	\$ -	0.0%
5)	AURORA	\$ - *	\$ 601	\$ -	0.0%
6)	BARRIE	\$ 682	\$ 604	\$ 78	13.0%
7)	DURHAM REGION	\$ 713	\$ 662	\$ 51	7.7%
8)	NEWMARKET	\$ 779	\$ 722	\$ 57	7.9%

**NOTES:**

\* 2008 rates

ADDITIONAL RESOURCE REQUEST

Request Summary

Title

Request Components: Staffing  (check box) # of FTE  # of complements   
Other  (check box)

2009 Operating Budget Impact

2009 IMPACT BREAKDOWN:

Continuous Funding

2009 One-Time Expenses

Associated 2009 Capital Impact

FUTURE IMPACT BREAKDOWN:

	2010	2011	2012
Operating	\$ 50,000	\$ 50,000.00	\$ -

	2010	2011	2012
Capital	\$ -	\$ -	\$ -

OFFSETS: 

FTE	0	dollars	\$ -
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1) Description of Request

The Public Works Department, Water section requests an additional \$ 50,000 to fund a network analysis on the water system City wide. This is a theoretical study based on known pressure values conducted by an Engineering Consultant. The results may initiate changes in the system to compensate for deficient areas and improve operating pressures and volumes for citizens and fire protection.

Business Unit #:  Business Unit Name:

COMMISSIONER APPROVAL: W.E. Robinson, Commissioner of Engineering & Public Works

ADDITIONAL RESOURCE REQUEST

Request Summary

Title

Request Components: Staffing  (check box) # of FTE  # of complements   
Other  (check box)

2009 Operating Budget Impact

2009 IMPACT BREAKDOWN:

Continuous Funding

2009 One-Time Expenses

Associated 2009 Capital Impact

OFFSETS: FTE  dollars

FUTURE IMPACT BREAKDOWN:

	2010	2011	2012
Operating	\$ 165,000	\$ 165,000.00	\$ 165,000.00

	2010	2011	2012
Capital	\$ -	\$ -	\$ -

1) Description of Request

The Public Works Department, Water section requests an additional \$ 165,000 to provide repairs and maintenance to each hydrant in the City annually. Annual maintenance for each hydrant on the municipal water system is recommended by the American Water Works Associate (AWWA) which is considered the operating standard used by the Ministry of the Environment (MOE) and is also a requirement under the National Fire Code.

Business Unit #:

Business Unit Name:

COMMISSIONER APPROVAL:

W.E.Robinson, Commissioner of Engineering & Public Works



CITY OF VAUGHAN  
2009 OPERATING BUDGET

ADDITIONAL RESOURCE REQUEST

Request Summary

Title

Request Components: Staffing  (check box) # of FTE  # of complements   
Other  (check box)

2009 Operating Budget Impact

2009 IMPACT BREAKDOWN:

Continuous Funding   
2009 One-Time Expenses   
Associated 2009 Capital Impact

FUTURE IMPACT BREAKDOWN:

	2010	2011	2012
Operating	\$ 50,000	\$ 50,000.00	\$ 50,000.00
Capital	\$ -	\$ -	\$ -

OFFSETS: FTE  dollars

1) Description of Request

The Public Works Department, Water section requests an additional \$50,000 for consulting services for the maintenance of the 'Drinking Water Quality Management System'. In order to maintain the City's Drinking Water Licences it is necessary to conduct yearly surveillance audits, revise the Operational Plan to reflect current regulatory requirements and practices and assist with demonstrating continual improvement to the Operational Plan as required by the Ministry of the Environment (MOE).

Business Unit #:

Business Unit Name:

COMMISSIONER APPROVAL:

W.E.Robinson, Commissioner of Engineering & Public Works



ADDITIONAL RESOURCE REQUEST

Request Summary

Title

Request Components: Staffing  (check box) # of FTE  # of complements   
Other  (check box)

2009 Operating Budget Impact

2009 IMPACT BREAKDOWN:

Continuous Funding

2009 One-Time Expenses

Associated 2009 Capital Impact

FUTURE IMPACT BREAKDOWN:

	2010	2011	2012
Operating	\$ 112,500	\$ 112,500.00	\$ 112,500.00

	2010	2011	2012
Capital	\$ -	\$ -	\$ -

OFFSETS: FTE  dollars

1) Description of Request

The Public Works Department, Wastewater section requests an additional \$112,500 for the 'Back-water Valve Installation Subsidy Program'. This is a subsidy program to homeowners to protect against a backflow of sewage into their basement from their sanitary sewer connection. At its meeting of December 8, 2008, Council approved a number of recommendations contained in the "Summer 2008 Rainstorm Update" report. One of these recommendations was, "Staff report back to Council by June 30, 2009 regarding a potential backflow valve installation rebate program with proposed details of this program and potential funding sources." As was noted in the November report, there are numerous things a homeowner can do to reduce the potential of property damage during a severe rainfall event. However, one of the most significant and cost effective things that can be done to prevent a sewer back-up is the installation of a back-water prevention device on the sanitary house connection. Such a device significantly reduces the risk of basement flooding from sanitary sewer back-ups; however, there is no guarantee that basement flooding will never occur again. On April 20, 2009 the program was presented to the Committee of the Whole.

Business Unit #:  Business Unit Name:

COMMISSIONER APPROVAL: W.E.Robinson, Commissioner of Engineering & Public Works

# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Service Statement:

The Water Division is committed to the distribution of safe, potable drinking water to all City of Vaughan residents through compliance with Provincial legislation and regulations as well as the continuous improvement of effective and efficient service in response to growth.

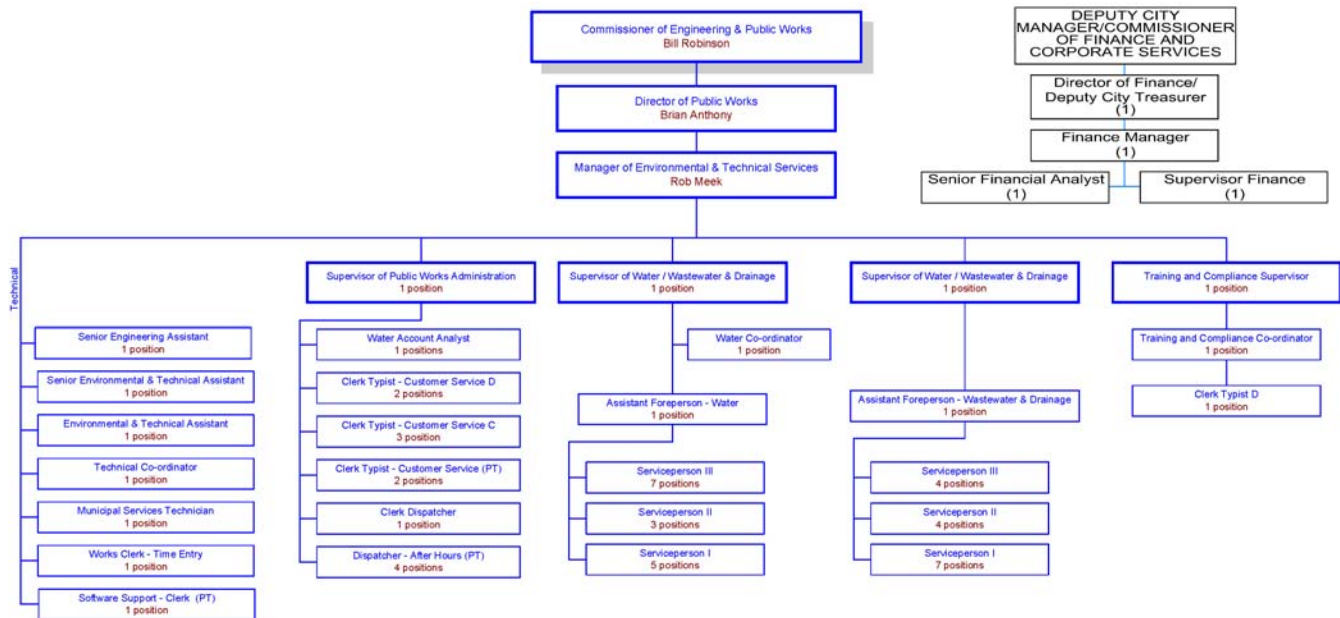
The Waste Water and Drainage Division is responsible for the maintenance of waste water and drainage collection infrastructure and the control of environmental hazards through compliance with Provincial legislation and regulations as well as the continuous improvement of effective and efficient services in response to growth.

The Finance Department coordinates with Public Works in providing revenue and cost projections for water and wastewater activities, user rates and financial reporting. As well, the Finance department coordinates with Powerstream regarding billing and collection of water and wastewater accounts.

### Service Profile:

Organizational structure

WATER, WASTE WATER & DRAINAGE ORGANIZATION CHART



### FTE Count:

	2004	2005	2006	2007	2008
Full Time	24	27	30	30	36
Part Time/Contract	0.93	1.63	1.63	1.72	2.03
Overtime	\$ 101,902.00	\$ 101,902.00	\$ 134,790.00	\$ 138,389.00	\$ 138,389.00

**Note:** In the 2006 Budget, the staff compliment increased by 3 existing FTE's transferred from taxation to reserve.

### Key Stakeholders:

- Citizens and Businesses of Vaughan
- York Region
- Conservation Authority

- Mayor and Council
- Ministry of the Environment
- Powerstream

# Water, Waste Water & Drainage

## Work Plan:

### Link To Vaughan Vision:

Pursue Excellence in Service Delivery  
 Enhance and Ensure Community Safety, Health & Wellness  
 Lead and Promote Environmental Sustainability  
 Support the Professional Development of Staff  
 Maintain Assets & Infrastructure  
 Ensure Financial Sustainability

### 2008 Business Plan Objectives/Accomplishments:

	Status	Measurement
1. PSAB process in partnership with Public Works, Engineering, and Capital Finance	Q1'10	In compliance with legislation
2. Implement the Drinking Water Quality Management System	Q4'09	System implemented
3. Complete lead testing - annually	Q4'08	Ongoing
4. Develop a six year financial forecast-licensing-SWDA	Q2'09	Forecast completed

### Key Performance Indicators

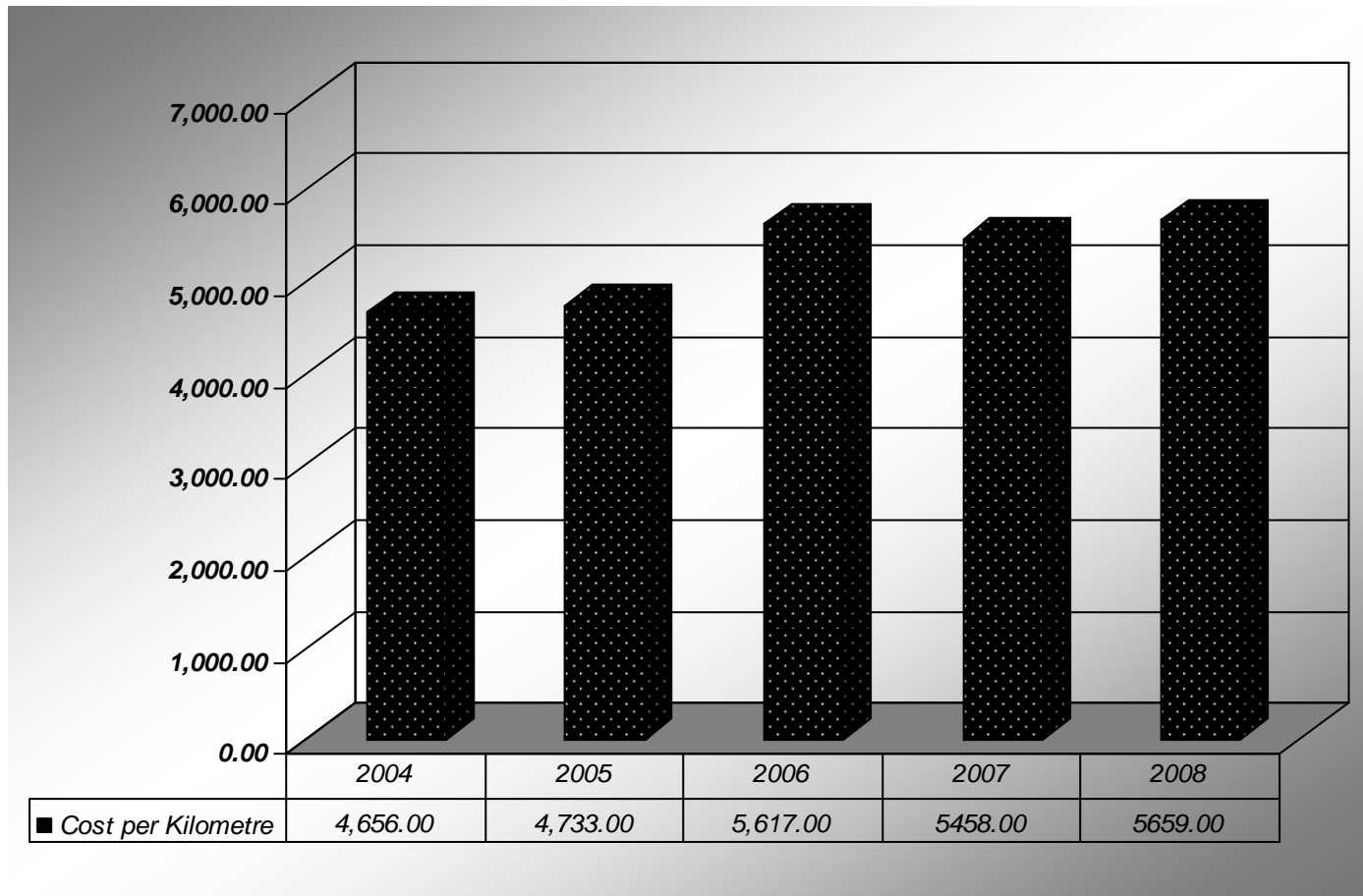
1. Operating cost per kilometre of water distribution system
2. Operating cost per kilometre of wastewater collection system
3. Operating cost per kilometre of storm collection system
4. Operating cost per kilometre of rural storm collection system
5. Number of watermain breaks per 100 kilometres of distribution pipe
6. Number of adverse samples vs total number of samples
7. Number of kilometres of sewermain flushed per year

# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Measure: Operating Cost per Kilometre of Water Distribution System

Definition:



### Key Conclusion:

For 2006 to 2008 the cost per kilometer of water distribution system has remained stable.

### Notes about the Measure:

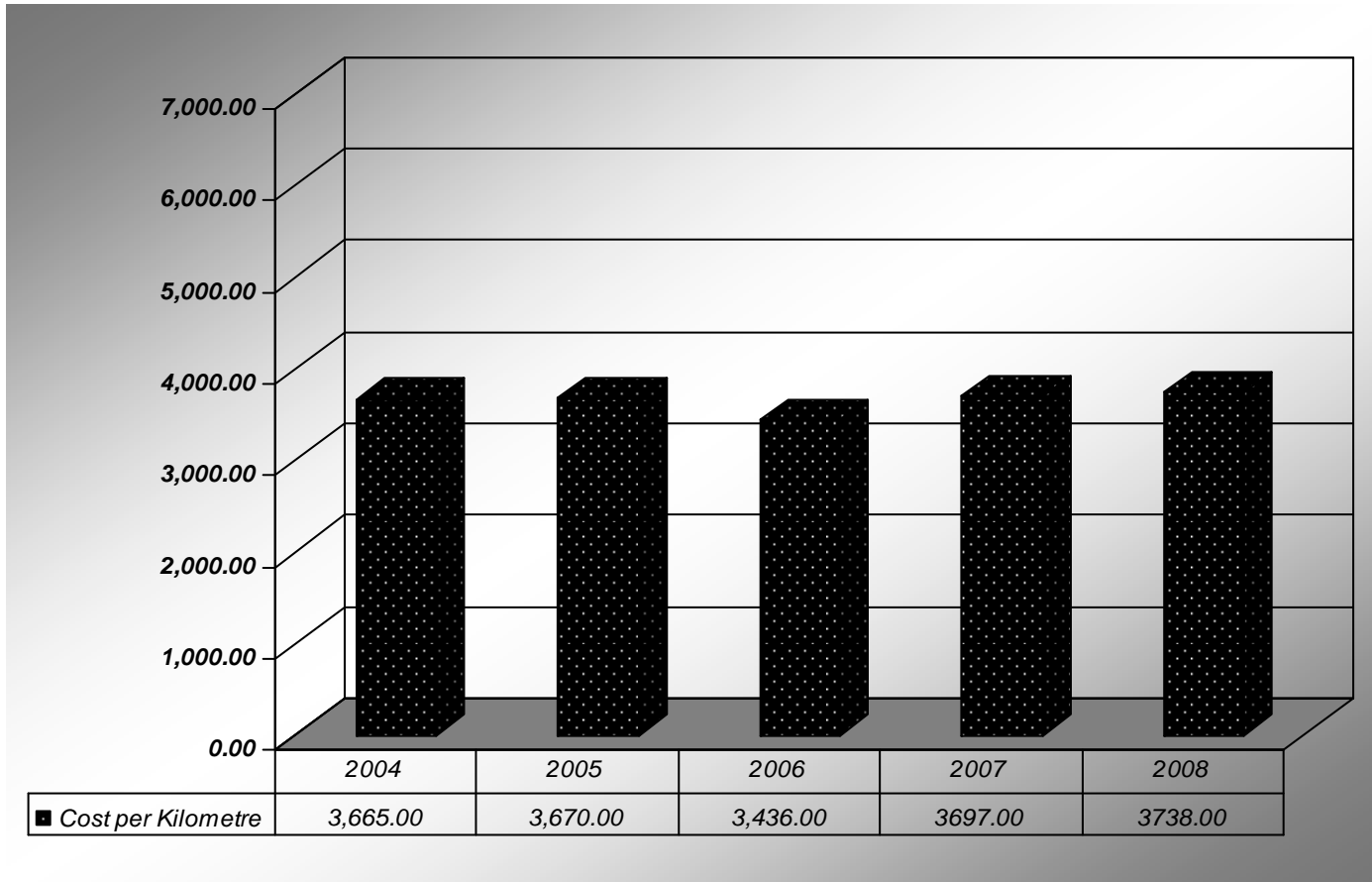
The Province changed the costing methodology in 2006 and thus the year to year comparison is impacted.

# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Measure: Operating Cost per Kilometre of Wastewater Collection System

Definition:



### Key Conclusion:

For 2007 vs 2008 the cost per kilometer is consistent with the growth of the infrastructure.

### Notes about the Measure:

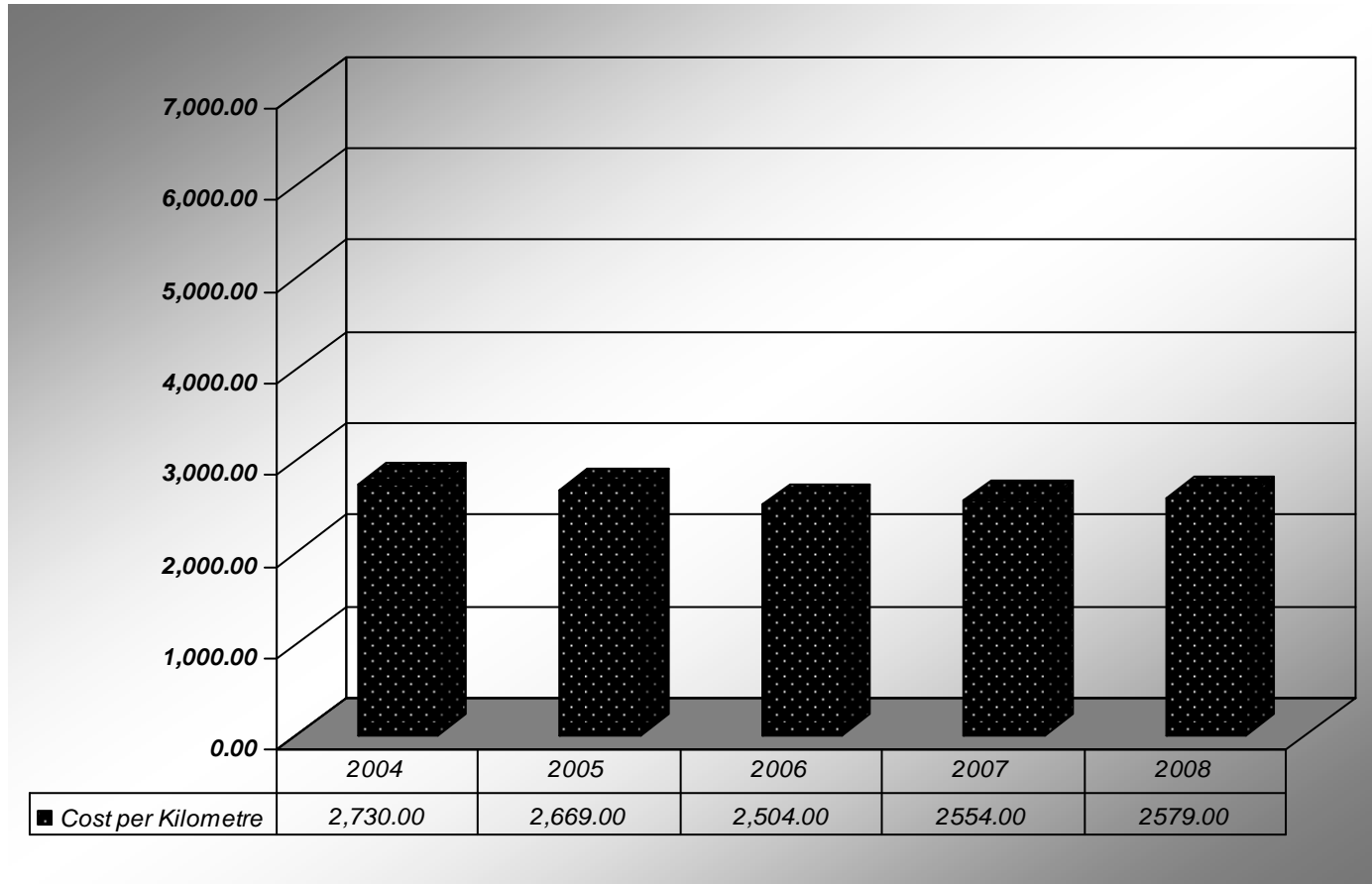
The Province changed the costing methodology in 2006 and thus the year to year comparison is impacted. The cost per kilometer of wastewater collection system has increased by 1%.

# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Measure: Operating Cost per Kilometre of Storm Collection System

Definition:



### Key Conclusion:

For 2007 vs 2008 there has been a 1% increase in cost per kilometer of storm collection system.

### Notes about the Measure:

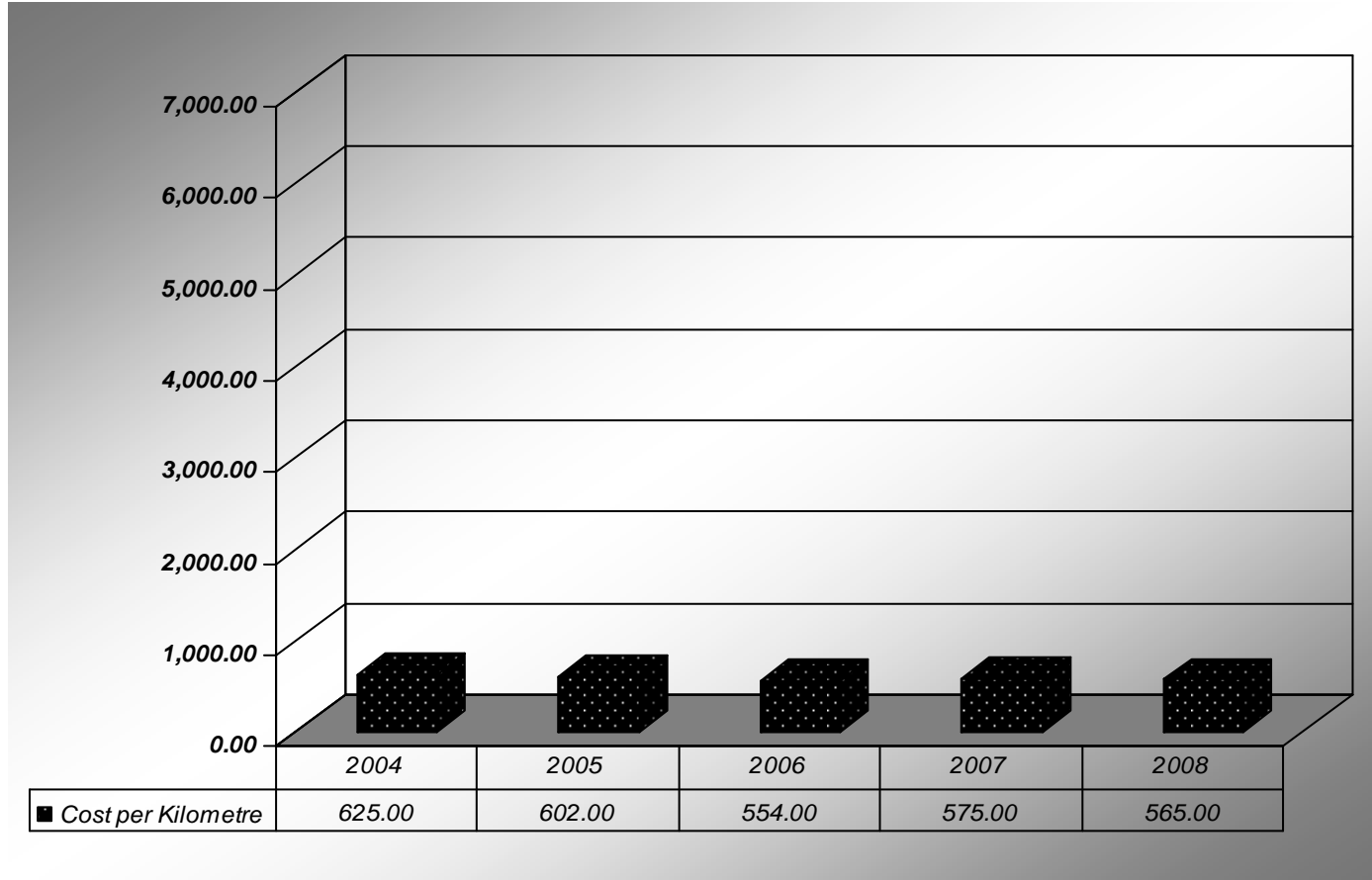
The Province changed the costing methodology in 2006 and thus the year to year comparison is impacted.

# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Measure: Operating Cost per Kilometre of Rural Storm Collection System

Definition:



### Key Conclusion:

Since 2004 there has been a 10% decrease in cost per kilometer of rural storm collection system.

### Notes about the Measure:

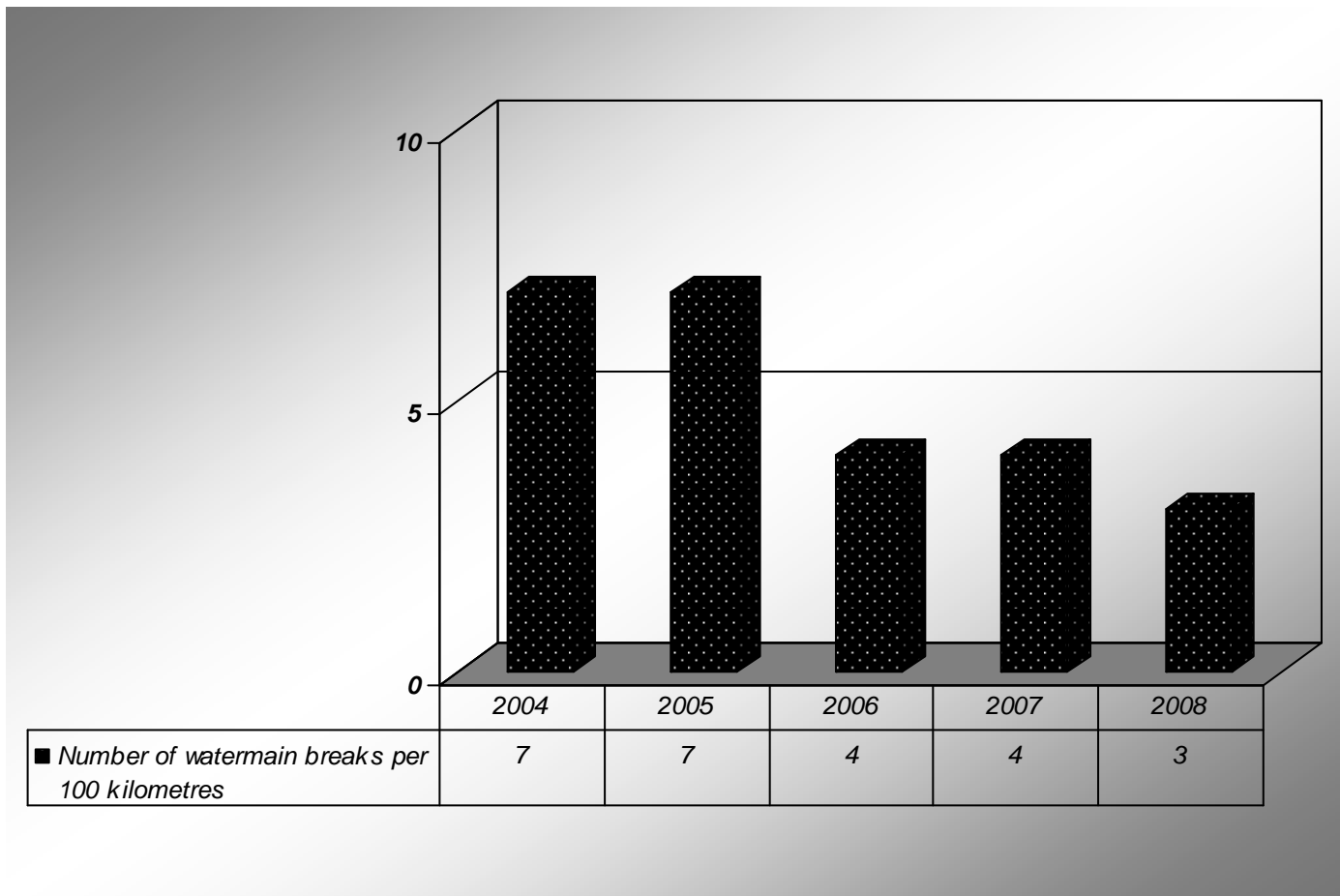
The amount of maintenance activity on the rural storm collection system is relative to the demand which has slightly decreased since 2004.

# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Measure: Number of Watermain Breaks per 100 Kilometres of Distribution Pipe

Definition:



### Key Conclusion:

Since 2004 there has been a 57% decrease in the number of watermain breaks per 100 kilometers of water distribution pipe.

### Notes about the Measure:

The decrease is due to the success of the anoda protection program which has been applied to the watermain thus slowing down the corrosion process. Further, weather patterns impact the number of watermain breaks and plastic piping has been used for replacement infrastructure.

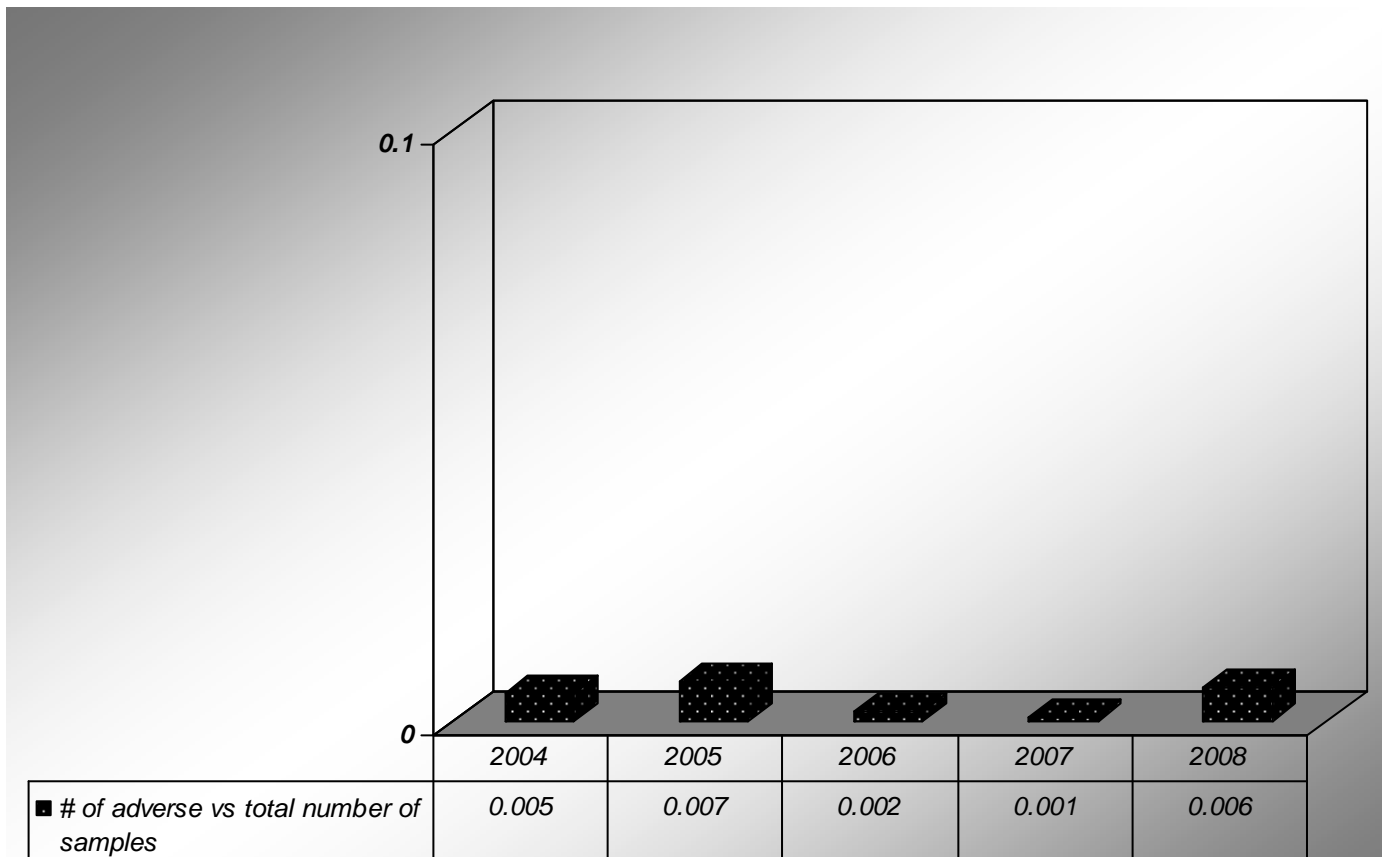


# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Measure: Number of Adverse Water Samples vs Total Number of Water Samples Taken

Definition:



### Key Conclusion:

The number of adverse vs total water samples in 2008 reflects the levels seen in 2005. The number of occurrences is up due to a increase in the number of testing and flushing points in the system. These occurrences however are less than the Provincial average for municipalities of equivalent size.

### Notes about the Measure

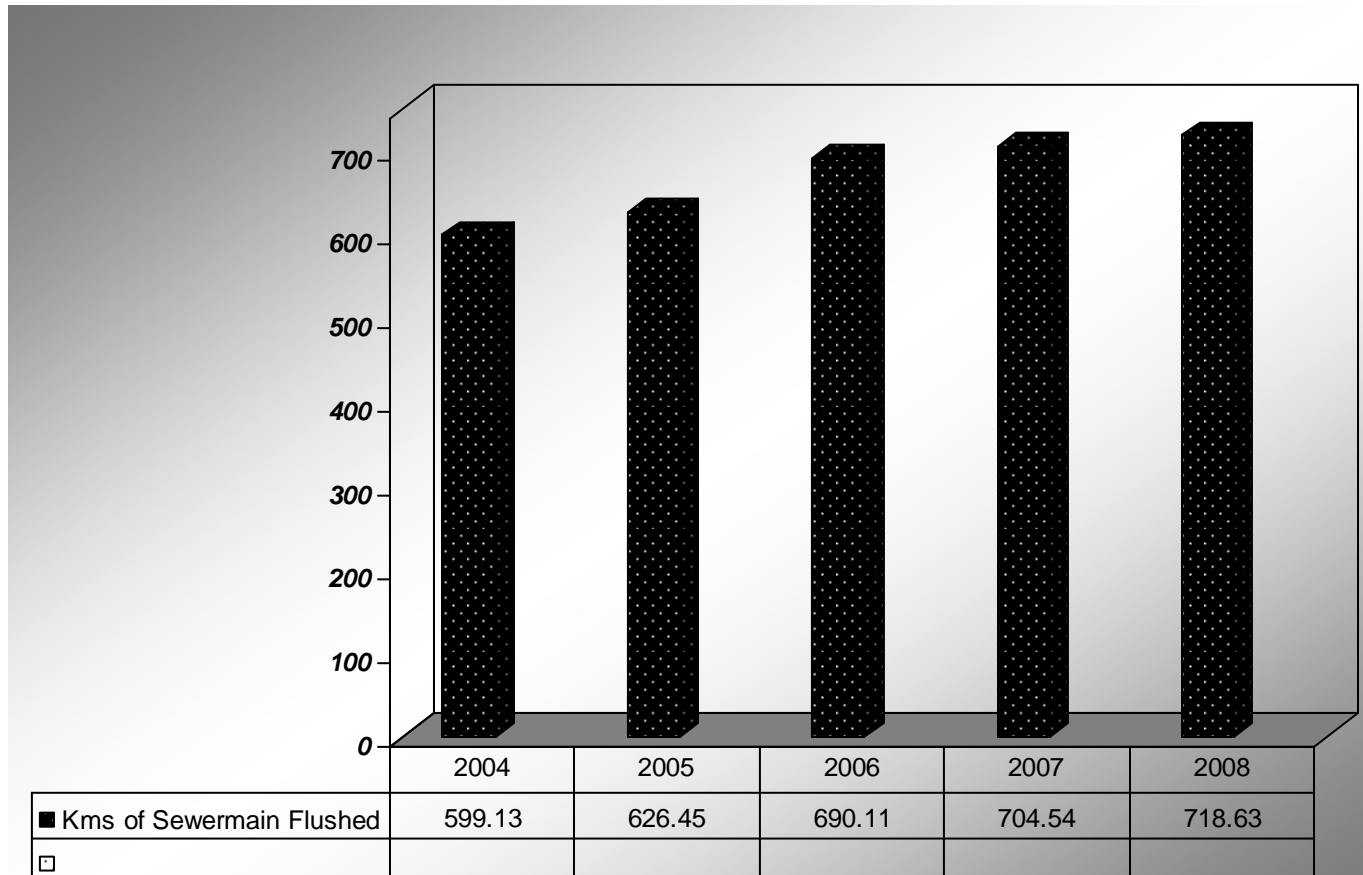
In June 2005 the City mandated a flushing and testing program for all new developments within the City. As well, new locations were added to the existing flushing program for dead end watermain the result of assumed subdivisions. These changes were in response to O. Reg. 170/03 of the Safe Drinking Water Act.

# Water, Waste Water & Drainage

## BUSINESS OVERVIEW

### Measure: Number of Kilometres of Sewermain Flushed per Year

Definition:



**Key Conclusion:**

There has been a 2% increase in the number of kilometers of sewermain flushed from 2007 to 2008.

**Notes about the Measure:**

The increase is due to the growth of the system from development activities.