

2011 WATER & WASTEWATER OPERATING BUDGETS

Recommendation

The City Manager, the Commissioner of Finance/City Treasurer, the Commissioner of Engineering and Public Works, the Director of Public Works and the Director of Financial Services recommend:

- 1) That the following report be received; and
- 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 City capital requirements, Attachment 1; and
 - (a) The City's water rate be increased from 106.29¢ to 116.26¢ per cubic meter effective in July 2011 the day after the Water By-law is adopted; and
 - (b) The City's wastewater rate be increased from 112.79¢ to 124.58¢ per cubic meter effective in July 2011 the day after the Wastewater By-law is adopted; and
- 3) That the additional Resource Requests, Attachment 3 be approved; and
- 4) That the Permit Review Fee charged for the review and approval of additions to the City's water distribution system remain at \$1,200 for 2011; and
- 5) That the City further investigate the use of "smart" metering technology for water meter sales and installations, to allow for increased conservation measures and more efficient reading and billing, and report back at a later date with their findings and recommendations; and
- 6) That the recommendation from the Finance and Administration Committee be forwarded to a Special Council meeting on June 14th, 2011 at 7:00 pm for public input; and
- 7) That the appropriate notification be provided in accordance with the City's public notification by-law.

Contribution to Sustainability

The 2011 recommended consumptive rates will continue to provide sufficient funds to maintain the City's water and wastewater system in the future in accordance with the Safe Drinking Water Act.

Economic Impact

This year 62% of the combined increase in rates is due to Region of York increases for the purchase of potable water and sanitary sewer service. The combined rate increase is 9.94%. The annual residential impact on an average household consumption of 300 cubic meters of water per year is an additional \$65.31 or \$5.44 per month.

The sales of water will generate a net contribution of \$4.0 million to the water reserve and wastewater services will generate \$3.7 million to the wastewater reserve thereby providing the necessary funds to maintain a financially sustainable water and wastewater systems for the future as required by the Safe Drinking Water Act (SDWA).

The proposed consumption rates for water and wastewater are supported by the rate study conducted by Watson and Associates in 2009.

Communications Plan

The approved Water & Wastewater rates will be advertised per City policy in the local newspapers and the City's web site. Staff are also developing with the Corporate Communications department a list of questions and answers to respond to the public and media. The City of Vaughan 2011 Water/Wastewater Budget and proposed 2011 rates were prepared in alignment with mandated provincial legislation for a financial plan for water systems, and guidelines for financially sustainable drinking water and wastewater systems as well as to ensure the highest quality of water in the City of Vaughan.

Purpose

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

The 2011 proposed water rate increase is 9.39% and wastewater rate increase is 10.45%. Both rates incorporate the Region of York increases and the City's operating, maintenance and infrastructure reserve increases. The combined rate increase is 9.94% of which 6.2% (62%) is attributable to Region of York.

The proposed consumption rates are based on the 2009 rate study report that supports the move towards full cost recovery as required by the Safe Drinking Water Act.

The City's consumption rates are still very competitive as demonstrated on Attachment No. 2.

Background Analysis and Options

SUMMARY - 2011 WATER AND WASTEWATER PROPOSED CONSUMPTION RATES

The major source of revenue for water and wastewater operations is consumption rates, totalling \$83.4 million for 2011. The consumption rate revenues net of operating costs and Region of York purchases are transferred to the respective water and wastewater reserves. The net earnings provide for both the delivery of clean potable water, wastewater services and for the future renewal and replacement of the City's underground infrastructure.

The proposed 2011 water and wastewater budgets are attached including the draft 2010 actuals. The 2010 water and wastewater operating and capital activity form part of the City's consolidated Financial Statements.

The following attachments are included: 2011 Water and Wastewater Budgets including the draft 2010 Actuals Attachment No. 1, the Municipal Rate Comparison Attachment No. 2, Additional Resource Requests & New Complements Summary - Water & Wastewater Attachment No. 3, Water, Wastewater & Drainage 2011 Business Plan, Attachment No. 4.

Annual Residential Impact

The average residential customer with a consumption of 300 cubic meters of water per annum will see a combined increase of \$65 (\$41 is the Region of York portion) or 9.94%. The increase in the water and wastewater rates is \$5 per month.

The 2011 budgets include an annual rate increase of 9.39% for water and a 10.45% increase for wastewater for a combined increase of 9.94%.

The net rate increase impact is the result of:

- The Regional increase of 10% for the cost of potable water and the increase of 10% for wastewater services. This increase is based on Regional water and wastewater reserve adequacy study.
- The impact of inflationary pressures.

- The net increases in maintenance, administration, additional staffing resources and other expenditures.
- The required increase in the contribution to the water and wastewater reserves.
- Reduction of the cost of the Joint Services agreement.

Following is a breakdown of the combined water and wastewater increase:

| Potable Water & Wastewater | | | |
|---------------------------------------|--------------|-------------|--|
| Purchased Services | 6.17% | York Region | |
| Unmetered Water | 0.43% | | |
| Maintenance | 0.89% | | |
| Administration, Financing & Overheads | (0.06)% | | |
| Joint Services | (0.42)% | | |
| Infrastructure Contribution | 2.93% | Reserves | |
| 2011 Increase | 9.94% | | |

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. Water purchases and wastewater purchased services in particular have gone up over the past number of years by 10%. Both increases are primarily due to the need to build reserves for future Regional infrastructure requirements.

The City, like the Region, needs to ensure that sufficient reserves will be available for future infrastructure replacement. A 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 City consumption rates are now moving to full cost recovery and are supported by the 2009 Rate Study.

The 2011 water and wastewater rate components and cost impacts are as follows:

| Rate Components | Water | Wastewater | Combined |
|----------------------------------|-----------------|-----------------|-----------------|
| Regional Purchased Services | \$0.6973 | \$0.7900 | \$1.4873 |
| Unmetered Water | 0.1022 | 0.00 | 0.1022 |
| Maintenance | 0.1225 | 0.1486 | 0.2711 |
| Other | 0.1063 | 0.0609 | 0.1672 |
| Lifecycle Contribution - Reserve | 0.1343 | 0.2463 | 0.3806 |
| Total | \$1.1626 | \$1.2458 | \$2.4084 |

| Cost Increase Impact | Water | Wastewater | Combined |
|----------------------|-------|------------|----------|
| Region | 64% | 61% | 62% |
| City | 36% | 39% | 38% |

The Safe Drinking Water Act (SDWA) – Licencing 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.

Drinking Water Quality Management Standard (DWQMS)

Fourteen of the recommendations in the final report of the Walkerton Inquiry relate to the development of the new approvals framework for municipal residential drinking water systems. The new program, the Municipal Drinking Water Licence Program, is based on Recommendation No. 71 of the Walkerton Inquiry Part Two Report, which states:

The Ministry of the Environment should require the owners of municipal water systems to obtain an owner's licence for the operation of their waterworks. In order to obtain a licence, an owner should have⁷:

1. a certificate of approval for the facility;
2. a permit to take water;
3. approved operational plans;
4. an approved financial plan; and
5. an accredited operating authority

Requirements 1 and 2

These two requirements do not apply to the City of Vaughan as these are Regional responsibilities. A certificate of approval for the distribution system, and a permit to take water has not been issued, as the City does not take water, but purchases it from York Region.

Requirements 3 and 5

Requirements three and five (approved operational plan, and an accredited operating authority) were new to the water sector and to the Ministry of the Environment. These two requirements are directly related to the Walkerton Inquiry Report's recommendation that Owners and Operating Authorities move towards the concepts of the quality management approach into their operation and management of the drinking water system.

The Drinking Water Quality Management Standard has 21 elements which relate to quality management and the risk assessment/risk management of critical control points. The Operational Plan documents the processes and procedures that the Owner and Operating Authority have in place to meet the requirements of the DWQMS. The Operating Authority, in consultation with the Owner, prepared an Operational plan, which outlines how the City is meeting the requirements of the standard. The City of Vaughan successfully completed and submitted the Operational Plan to the Ministry, prior to the January 1, 2009 deadline.

On June 11 & 12, 2009, an on-site verification audit was conducted by Canadian General Standards Board to determine whether the drinking water Quality Management System (QMS) conforms to the requirements of the Ontario Ministry of the Environment's (MOE) Drinking Water Quality Management Standard (DWQMS).

The results of the audit showed that no non-conformances were found, and outlined seven opportunities for improvement. A Full Scope – Entire accreditation certificate was formally issued to the Corporation of the City of Vaughan on July 7, 2009. The City of Vaughan received its Drinking Water Works Permits and Municipal Drinking Water Licences on July 27, 2009, which are a modified version of the existing Certificate of Approval framework.

As participants of the full scope accreditation process for the DWQMS, the City of Vaughan was required to submit information for the annual surveillance audit (conducted by the CGSB – the Canadian General Standards Board) by June 7th, 2010 to maintain accreditation. The City of Vaughan submitted the documentation, and remains in compliance with this legislation. The City is still fully accredited for both the Vaughan Distribution System and the Kleinburg Distribution System.

Requirement 4

Requirement four, an approved Financial Plan, has been developed as part of the Sustainable Sewage and Water Systems Act (SWSSA). The approved financial plan must apply for a period of at least six years, and include details of the drinking water system's proposed or projected:

- Financial Position
- Financial Operations
- Gross Cash Receipts & Gross Cash Payments

The City's financial plan was approved by Council on June 11, 2010, submitted to the Ministry of the Environment on June 18, 2010, and submitted to the Ministry of Municipal Affairs and Housing on June 25, 2010.

2009 Water 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.

The rate study determined 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 were:

- 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 "CAFÉ" model to the City for ongoing long range financial planning

The study revealed that the City's underground infrastructure is relatively new therefore significant rehabilitation or replacement will not be required in the near future. In addition based on the water and wastewater reserve levels the City is well positioned to phase in any rate increase over time to reach full cost recovery.

The above rate study now forms the basis for setting the water and wastewater consumption rates so that they move towards full cost recovery as required by the SDWA.

Permit Review Fee

Prior to the issuance of the City's Municipal Drinking Water Permits and Municipal Drinking Water Licences, applications for the approval to construct a new watermain were sent to the Ministry of the Environment for review and approval. With the issuance of the permits and licences, the City is now the approving authority for construction of new watermains. Plans and applications are processed by the Development/Transportation Engineering, Engineering Services Departments, and the Public works Department to ensure such additions and alterations to the City's infrastructure meet all applicable requirements and legislation. Approvals are signed off by the Director of Public Works.

The Ministry of the Environment charged \$1,200 for their review and approval. To capture the cost of City staff reviewing these applications and drawings, and approving such applications, a similar fee of \$1,200 has been initiated for additions to the system. For 2011, it is recommended that his fee remain at \$1,200 per application.

Water Conservation

Water conservation is an important issue for the future growth and development of York Region. As part of the Ministry of the Environment's approval to York Region for the twinning of the South-East Collector Trunk Sewer, and the inter-basin water transfer, the Region, and all of its area municipalities, must implement a water conservation program, along with a sewage inflow/infiltration program. Combined, these two strategies must show a 10% reduction in peak flows to the treatment facility.

Public Works has undertaken a number of initiatives to reduce unmetered water use. Although flushing of watermains is required to ensure water quality is maintained in areas with low consumption, the water sampling protocol in place allows for better identification of when this needs to occur.

The banding of hydrants has reduced unauthorized water taking, and encourages water haulers to source water from one of the City's four water filling stations.

The anode protection program for iron watermains, initiated in 2005 and still underway today, continues to perform very well, yielding a 50% decrease in the number of water main breaks in the water distribution system.

Until sufficient users are in place to ensure a changeover of water takes place in new development watermains, developers are required to implement a flushing program to ensure that water quality is maintained in accordance with all applicable legislation. Measures have been put in place to capture this data and charge developers for the water they use in this process.

"Smart" Water Meters

A key part of water conservation is making the public aware of the amount of water they use. The City meters its residential and Industrial/Commercial/Institutional (ICI), water users, and bills according to usage. As with the latest generation of "smart" hydro meters, there is a new generation of Water meters available that can provide up to the minute water consumption data readings back to the municipality.

These new meters do not require a person to read them, as they report automatically through a wireless system. They can be set to send back data as frequently as required. This feature is

helpful in identifying things such as internal plumbing leaks and other causes of high water consumption that go unnoticed with the current reading and billing cycle. In some U.S. cities, the program is set to identify above average uses, and alerts the homeowner in case there are internal leaks or other causes that would result in abnormally high water uses. Things like a low volume consistent water usage throughout the night may indicate a leaking toilet, whereas peak high volumes in the late night/early morning may show sprinkler system usage. This type of data is invaluable when concerns are raised by a resident or ICI user about their water bill.

Another feature of this type of meter is that it would allow for more up to date reading comparisons between the overall water consumption and the City's water purchases. Currently, there is a lag due to the time needed to physically read all of the water meters. With a wireless automated system, data can be sent in a more timely manner. Combined with a district metering system, these newer meters would be of great assistance in identifying potential leaks and/or unauthorized water usage in a specific area. District metering breaks the City down into much smaller areas to track the flow of water into an area, and compares it to metered consumption in that same area. By comparing the main meter reading against the usage reported by the "smart" meters, unmetered water usage can be better identified.

The additional cost for these new meters is approximately \$125 per unit. Given there would be cost implications if all water meters were to be changed to this new technology, it is recommended that staff further review the possibility of using the new "smart" type meters, and report back at a later date with their findings and recommendations.

York Region's "Water For Tomorrow" Program

The "Water for Tomorrow" program continues to provide programs and initiatives to reduce the consumption and loss of drinking water. The latest initiatives include:

- rebates for purchasing and installing a water efficient toilet;
- rebates for purchasing and installing a water efficient furnace humidifier;
- rebates for purchasing water efficient clothes washers;
- rain barrels sales to York Region residents at a cost that is well below market rates;
- 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; and,
- rebates and incentives for commercial operations aimed at commercial kitchens, laundromats, and large volume industrial users.

The Region of York has released its long term water strategy that outlines the 40 year strategy that will put in place sustainable measures to ensure water conservation is implemented across the Region. The City has recently committed to the strategy, and in the near future, additional programs will be put forward by staff for consideration as part of the budget process. The Region's water conservations strategy can be seen on the Region's web site at: www.york.ca

2011 Water Budget - Revenue & Expenditure Highlights

Additional Resource Requests – Water

For 2011, the additional resource requests (ARR) are outlined on Attachment # 3. The additional funds are included in the attached water and wastewater budgets and have been gapped. The additional staff complements in Public Works are required to meet growing demands and City initiatives.

1 FTE Contract Person - see attached ARR

2011 Water Budget Factors

The budgeted 2011 water billing revenue includes a 3.0% (2.5% 2010) growth factor for residential, 1.75% (1.55% 2010) commercial growth factor and a 9.39% water rate increase. The consumption volume is conservatively estimated based on expected growth and does not reflect any weather predictions.

The Regional cost of potable water will increase by 10% annually over the period 2009 to 2011, 2012 to 2013 by 5% annually and 2% annually thereafter. Other expenditure increases reflect general inflationary pressures, renegotiated draft joint services costs and the funding requirement to provide a sustainable water system for the future. The proposed water rate is supported by the rate study.

2011 Proposed Water Budget Highlights

Revenues:

The recommended water rate of 116.26 cents per cubic meter is based on the proposed operating and capital budgets and represents the next step in achieving full cost recovery as supported by the rate study. The full cost recovery water rate has been smoothed over a 10 year period to 2018.

The budgeted water billings in 2011 include a 9.39% rate increase and an increase in residential and commercial growth. The revenues are expected to be \$40.8 million with water purchases from the Region at \$28.7 million, including unmetered water, resulting in a gross margin of \$12.1 million.

Other revenue for bulk water sales remains constant year over year at \$0.2 million. Installation activity is expected to be similar to last year's budgeted level at \$1.1 million. Interest revenue is expected to exceed 2010 due to higher interest rates.

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. Main flushing maintains the City's ability to provide potable water thereby meeting Ministry of Environment requirements.

Water/wastewater services are recovered internally for City purposes; such as recreation's swimming pools, City building's and facilities.

The 2011 unmetered water is budgeted at 13% the same level as last year. The unmetered water loss for 2010 is 13.2%, lower than the 16% level experienced in previous years. In part this is the result of a reduced need to flush water mains in new subdivisions. The actual unmetered water over the past number of years range from 9.3% to 16.8% reflecting the growth of the City. The National Drinking Water Clearinghouse in the USA has indicated that water unaccounted for in the 10 - 12% range is considered normal, while the National Research Council of Canada reported that the range is anywhere from 20 - 30%.

Expenditures:

2011 budgeted expenditures total \$9.4 million covering maintenance, administration, financing, overhead and other costs which are the same as last year's budget. Maintenance increases of 5.5% due to additional resource requests and increased funding for existing programs are offset by lower overhead allocations down by 10.5% and joint services costs down by 19% based on the draft renegotiated joint services agreement. General administration is up slightly due to two new proposed staff at 6%.

2010 Actual Highlights

Actual 2010 total water billings of \$37.7 million are over budget by \$1.2 million. Residential billings at \$22.6 million were up slightly by 1% and Commercial at \$14.9 million up by 6.3% compared to budget. The increase is attributable to actual growth exceeding the budgeted growth factor of 2.5% combined with warmer summer months that resulted in an increase in consumption.

It should be noted that the average household consumption has continued to decline over the past four years which may be attributed to conservation efforts combined with weather patterns. Over that period the per household annual consumption decrease from 338m³ to 295m³.

Bulk sales came in slightly over budget and installation service fees slightly under budget.

Actual maintenance expenditures came in at \$5.0 million, under budget by \$0.2 million. Maintenance is generally under budget each year due to additional funding for possible emergency work. Administration came in at \$1.2 million and is slightly under budget due to staff vacancy. Administration overhead was favourable by \$0.2 million due to a lower than budgeted fund transfer. The remaining expenditures came in on budget.

Water Lifecycle Contribution - Reserve

In 2010 through water operations, the net of all revenues and costs resulted in \$3.9 million (\$3.9M 2009) being transferred to the water reserve.

The 2011 budgeted transfer from water operations to the water reserve is \$4.0 million. These funds will provide for the future requirements of the water infrastructure. The forecasted Capital drawdown on the reserve in 2011 for water related infrastructure needs is expected to be \$4.0 million.

Committed capital costs represent approved capital projects not yet begun or completed and total \$5.1 million.

The budgeted reserve balance at the end of 2011 is projected to be \$21.2 million (2010 actual 21.2m) after committed capital projects. These funds will provide for the future requirements of the water infrastructure to ensure the City's drinking water systems are financially sustainable as required under the new Municipal Drinking Water Licence Program.

2011 Wastewater Budget - Revenue & Expenditure Highlights

Back-water Valve Installation Subsidy Program Update

On May 5, 2009, Council approved the Back-water Valve Installation Subsidy program. The necessary by-law has been enacted, and the program has been advertised to the public. The 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. In 2010, there were four applicants. Funding for the continuation of this program has been included in the base 2011 Wastewater Budget.

Additional Resource Requests – Wastewater

For 2011, the additional resource requests (ARR) are outlined on Attachment # 3. The funds are included in the attached wastewater budget and have been gapped. These resource requests are for additional complements in Public Works to meet growing demands and due to a Region of York initiative.

2 FTE Serviceperson 2 - see attached ARR

2011 Wastewater Budget Factors

The budgeted 2010 wastewater billing revenue includes a 3.0% (2.5% 2010) residential, 1.75% (1.55% 2010) commercial growth factor and a 10.45% wastewater rate increase. The volume of wastewater is not metered. The wastewater consumption volume is based on water sold to the consumer.

The Regional cost of wastewater services will increase by 10% annually for the period of 2009 to 2013 and by 5% annually thereafter. Other expenditure increases reflect general inflationary pressures, renegotiated draft joint services costs and the funding requirement to provide a sustainable water system for the future. The proposed water rate is supported by the rate study.

2011 Proposed Wastewater Budget Highlights

Revenues:

The recommended wastewater rate of 124.58 cents per cubic meter is based on the proposed operating and capital budgets and represents the next step in achieving full cost recovery as supported by the rate study. The wastewater rate has been smoothed out over a 10 year period.

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

The budgeted wastewater billings in 2011 include a 10.45% rate increase and an increase in residential and commercial growth. The revenues are expected to reach \$42.6 million with the expected wastewater services from the Region at \$31.7 million leaving a gross margin of \$11.0 million. The 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.

Installation and service fees are budgeted at \$0.2 down by \$0.1 million from last year as these are driven by demand. The 2011 local improvement revenue is budgeted at \$213,200 and is offset by the cost of debentures of \$213,200. Interest revenue is expected to be higher in 2011 due to higher interest rates and higher reserve balance.

Expenditures:

2011 budgeted expenditures total \$7.9 million covering maintenance, administration, storm sewer financing, joint services, overhead and other costs which are up by 5.4% over last year's budget. The largest increases year over year are in maintenance and general administration, primarily due to additional funding for existing programs, resource requests and projects previously funded from capital transferred to operating. These increases are offset by renegotiated draft joint service agreement, down by 19%.

2010 Actual Highlights

Actual 2010 total wastewater billings of \$39.0 million are over budget by \$0.8 million. Wastewater revenue is billed based on water consumption. There are no meters since they are impractical in this application. Residential actual billings totalled \$23.4 million, slightly over budget and Commercial and Industrial actual billings totalled \$15.7 million, up by 4.8% compared to budget. Installation revenue came in at \$0.2 million lower than budget. Installation revenues are impacted by demand.

2010 Actual expenditures total \$6.3 million covering maintenance, administration, storm sewer, financing, overhead and other costs, down by 15.8% when compared to budget. Actual maintenance expenditures came in at \$2.8 million, under budget by \$0.5 million. Storm sewer maintenance came in at \$1.5 million under budget by \$0.6 million as a result of less than expected activity. The balance of expenditures came in on budget.

Wastewater Lifecycle Contribution - Reserve

In 2010 through wastewater operations, the net of all revenues and costs resulted in \$3.9 million (\$3.6m 2009) being transferred to the wastewater reserve fund.

The 2011 budgeted transfer of \$3.7 million from wastewater/storm operations to the reserve is higher at \$0.4 million over last year's budget. The capital drawdown on the reserve in 2011 for wastewater related infrastructure needs is expected to be at \$0.3 million.

Committed capital costs represent projects not yet begun or completed and totals \$1.2 million

The budgeted reserve balance at the end of 2011 is projected to be \$23.7 million after committed capital projects, a net increase of \$3.4 million. These funds will provide for the future requirements of the wastewater infrastructure to ensure the City's wastewater system are financially sustainable.

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 rate study review the City's water, wastewater rates are continuing to move towards full cost recovery. The 2011 draft water/wastewater budgets will generate sufficient funds to maintain a financially sustainable reserve for the future thereby meeting the SDWA requirements.

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 \$65.00 or \$5.40 per month.

It is therefore recommended that the City's water rate be increased to 116.26 cents per cubic meter and that the wastewater rate be increased to 124.58 cents per cubic meter both effective July 2011.

Attachments

- Attachment No. 1: The 2011 Water and Wastewater Budgets including 2010 Draft Water and Wastewater Actual Operating Results
Attachment No. 2: 2011 Water and Wastewater Municipal Rate Comparison
Attachment No. 3: Additional Resource Requests & New Complements Summary - Water & Wastewater
Attachment No. 4: Water, Wastewater & Drainage 2011 Business Plan

Report prepared by:

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Respectfully submitted,

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City Manager

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Director of Public Works

Barry E. Jackson, CGA
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**The Corporation of the City of Vaughan
2011 Proposed Operating Budget and
2010 Statement of Operations for the Year Ending December 31, 2010
Water Reserve Fund**

| Description | 2011 Proposed Budget | % of Sales | 2010 Annual Budget | % of Sales | 2010 Year End Actual | % of Sales |
|---|----------------------------|------------------|--------------------------|------------------|----------------------------|------------------|
| Water Revenues ⁽¹⁾ | | | | | | |
| Residential Billings | 25,073,925 | | 22,424,000 | | 22,625,347 | |
| Commercial Billings | 15,496,335 | | 13,922,000 | | 14,857,616 | |
| Other | 223,110 | | 212,000 | | 248,555 | |
| | \$40,793,370 | | \$36,558,000 | | \$37,731,518 | |
| Water Purchases | | | | | | |
| Metered Water Purchases | 24,945,810 | | 21,981,000 | | 22,724,996 | |
| Unmetered Water | 3,727,065 | 13.0% | 3,285,000 | 13.0% | 3,449,199 | 13.2% |
| | \$28,672,895 | | \$25,266,000 | | \$26,174,195 | |
| GROSS MARGIN | \$12,120,475 | 29.7% | \$11,292,000 | 30.9% | \$11,557,323 | 30.6% |
| Other Revenues | | | | | | |
| Installation and Service Fees | 1,075,000 | | 1,175,000 | | 980,619 | |
| Interest | 220,000 | | 58,000 | | 134,396 | |
| Other | - | | - | | 2,874 | |
| | \$1,295,000 | 3.2% | \$1,233,000 | 3.4% | \$1,117,889 | 3.0% |
| Expenses ⁽²⁾ | | | | | | |
| Maintenance and Installation Cost | 5,545,950 | | 5,256,995 | | 5,027,785 | |
| General Administration | 1,435,295 | | 1,354,750 | | 1,196,801 | |
| Joint Service Costs | 731,580 | | 907,130 | | 907,130 | |
| Debenture Payments | 202,790 | | 202,790 | | 210,197 | |
| Administration Overhead | 1,320,000 | | 1,475,245 | | 1,279,000 | |
| Insurance Allocation | 187,990 | | 157,975 | | 157,975 | |
| | \$9,423,605 | 23.1% | \$9,354,885 | 25.6% | \$8,778,888 | 23.3% |
| LIFECYCLE CONTRIBUTION - RESERVE | \$3,991,870 | 9.8% | \$3,170,115 | 8.7% | \$3,896,324 | 10.3% |

(1) Water Rate change effective July 1, 2011

(2) New Complement Additional Resource Requests have been budgeted at 25% of the year.

Statement of Continuity - Water Reserve

| Description | 2011 Proposed Budget | 2010 Annual Budget | 2010 Year End Actual |
|--|----------------------------|--------------------------|----------------------------|
| Reserve Balance - Beginning - Actual | \$21,224,751 | \$17,276,765 | \$23,989,927 |
| Lifecycle contribution from Water Operations | 3,991,870 | 3,170,115 | 3,896,324 |
| Capital Fund Transfer - Year End Actual | - | - | (1,518,824) |
| - Yearly Budget | (4,027,350) | (2,577,875) | - |
| - Committed | - | - | (5,142,676) |
| Reserve Balance - Ending - Committed / Actual | \$21,189,271 | \$17,869,005 | \$21,224,751 |

**The Corporation of the City of Vaughan
2011 Proposed Operating Budget and
2010 Statement of Operations for the Year Ending December 31, 2010
Wastewater Reserve Fund**

| Description | 2011 Proposed Budget | % of Sales | 2010 Annual Budget | % of Sales | 2010 Year End Actual | % of Sales |
|---|----------------------------|------------------|--------------------------|------------------|----------------------------|------------------|
| Wastewater Revenues ⁽¹⁾ | | | | | | |
| Residential Billings | 26,352,520 | | 23,287,000 | | 23,369,216 | |
| Commercial Billings | 16,290,180 | | 14,982,000 | | 15,704,453 | |
| | \$42,642,700 | | \$38,269,000 | | \$39,073,669 | |
| Wastewater Expenses | | | | | | |
| Regional Treatment Charges | \$31,673,225 | 74.3% | \$28,051,500 | 73.3% | \$29,433,987 | 75.3% |
| GROSS MARGIN | \$10,969,475 | 25.7% | \$10,217,500 | 26.7% | \$9,639,682 | 24.7% |
| Other Revenues | | | | | | |
| Local Improvements | 213,200 | | 213,200 | | 208,451 | |
| Installation and Service Fees | 225,000 | | 325,000 | | 114,977 | |
| Interest | 230,000 | | 55,000 | | 103,742 | |
| Other | - | | - | | 139,270 | |
| | \$668,200 | 1.6% | \$593,200 | 1.6% | \$566,440 | 1.4% |
| Expenses ⁽²⁾ | | | | | | |
| Maintenance and Installation Cost | 3,645,670 | | 3,221,325 | | 2,767,799 | |
| General Administration | 394,765 | | 385,500 | | 381,314 | |
| Storm Sewer Maintenance | 2,104,605 | | 2,096,050 | | 1,477,909 | |
| Joint Service Costs | 487,720 | | 604,755 | | 604,753 | |
| Debenture Payments | 213,200 | | 213,200 | | 208,451 | |
| Administration Overhead | 880,000 | | 829,825 | | 721,000 | |
| Insurance Allocation | 198,170 | | 166,530 | | 166,530 | |
| | \$7,924,130 | 18.6% | \$7,517,185 | 19.6% | \$6,327,756 | 16.2% |
| LIFECYCLE CONTRIBUTION - RESERVE | \$3,713,545 | 8.7% | \$3,293,515 | 8.6% | \$3,878,366 | 9.8% |

(1) Wastewater Rate change effective July 1, 2011

(2) New Complement Additional Resource Requests have been budgeted at 25% of the year.

Statement of Continuity - Wastewater Reserve

| Description | 2011 Proposed Budget | 2010 Annual Budget | 2010 Year End Actual |
|--|----------------------------|--------------------------|----------------------------|
| Reserve Balance - Beginning - Actual | \$20,304,939 | \$16,513,936 | \$18,062,926 |
| Lifecycle contribution from Wastewater Operations | 3,713,545 | 3,293,515 | 3,878,366 |
| Capital Fund Transfer | | | |
| - Year End Actual | - | - | (403,250) |
| - Yearly Budget | (303,900) | (280,675) | - |
| - Committed | - | - | (1,233,103) |
| Reserve Balance - Ending - Committed / Actual | \$23,714,584 | \$19,526,776 | \$20,304,939 |

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

| | | YOY CHANGE | | | |
|----|----------------|------------|--------|--------|--------|
| | | 2011 | 2010 | AMOUNT | % |
| 1) | REGION OF PEEL | \$ 426 | \$ 390 | \$ 37 | 9.42% |
| 2) | VAUGHAN | \$ 723 | \$ 657 | \$ 65 | 9.94% |
| 3) | MARKHAM | \$ 725 | \$ 664 | \$ 61 | 9.20% |
| 4) | RICHMOND HILL | \$ 734 | \$ 668 | \$ 67 | 10.01% |
| 5) | DURHAM REGION | \$ 800 | \$ 765 | \$ 35 | 4.52% |
| 6) | AURORA | \$ 817 | \$ 747 | \$ 69 | 9.29% |
| 7) | NEWMARKET | \$ 927 | \$ 843 | \$ 85 | 10.04% |
| 8) | BARRIE | \$ 929 | \$ 786 | \$ 143 | 18.19% |

**CITY OF VAUGHAN
2011 Operating Budget
Maintain Service Level Requests
Associated New Complement Detail**

| Department | Position Description | Status | Full Comp. | ANNUAL | | | | | 2011 Budget Impact | |
|---|---|--------------|------------|----------------|---------------|----------------|-----------------------|----------------|--------------------|-------------|
| | | | | Salary | Benefits | Other | Offsetting Reductions | Budget Impact | \$ | FTE |
| Water & Sewer Divisions | Staff to create new Water & Sewer Use By Laws | F/T Contract | 1.0 | 72,655 | 12,860 | 4,290 | - | 89,805 | 25,670 | 0.25 |
| Wastewater Division | Serviceperson II | Full Time | 2.0 | 115,950 | 29,570 | - | - | 145,520 | 36,380 | 0.50 |
| TOTAL NEW COMPLEMENTS FOR COUNCIL APPROVAL | | | 3.0 | 188,605 | 42,430 | \$4,290 | \$0 | 235,325 | 62,051 | 0.75 |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary Contract Staff to Create New Water & Sewer Use By-laws
(If applicable)
Department Water & Wastewater Division **Business Unit Name** 2340001 & 2350001

Request Title

Annual Budget Change Summary

| Financial Components | 2011 | 2012 | 2011-2012 Sub-total | 2013 (Full-Yr. Adj.) | 2011-2013 Sub-total |
|---------------------------------|-----------|------------|------------------------|-------------------------|------------------------|
| Staffing | | | | | |
| Complements | 1.00 | - | 1.00 | - | 1.00 |
| Net FTE's | 1.00 | - | 1.00 | - | 1.00 |
| Operating Revenue | - | - | - | - | - |
| Operating Costs | | | | | |
| Staffing & Benefits | 85,515 | - | 85,515 | - | 85,515 |
| Other continuous costs | - | - | - | - | - |
| One-time expenses | 4,290 | (4,290) | - | - | - |
| Offsets/reductions | - | - | - | - | - |
| Net Operating Budget | \$ 89,805 | \$ (4,290) | \$ 85,515 | \$ - | \$ 85,515 |
| Associated Capital Costs | \$ - | \$ - | \$ - | \$ - | \$ - |

1A) Request Description (include issues addressed, milestones, deliverables, timeline, etc)

Contract staff is required to create New Water Use and Sewer Use By-laws. The existing by-laws are outdated, and require significant changes in order to reflect current legislation surrounding safe drinking water and the City's and Region's policies. In order to ensure these By-Laws are completed within the 12 month time frame, a contract person is being requested. This person will need to research by-laws used in other jurisdictions, review the existing City and Regional By-laws, and together with Legal and Operations staff, create new Water and Sewer use by-laws.

| Milestones or Deliverables | Timelines | Comments |
|--------------------------------------|-----------|--------------------------------------|
| Create New Water & Sewer Use By-Laws | 1 Year | Create New Water & Sewer Use By-Laws |
| | | |
| | | |

1B)Are other departments involved? if so, what is the requirement for other departments? Explain?

Legal Department may be a resource to critique draft documents and ensure that the final wording provides adequate opportunities for charging offenders.

COMMISSIONER APPROVAL: _____ **Date:** _____



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary Contract Staff to Create New Water & Sewer Use By-laws
(If applicable)
Department Water & Wastewater Division **Business Unit Name** 2340001 & 2350001

Request Title

2) Relationship to Vaughan Vision 2020 - Goals / Objectives / Initiatives

A) Identify the specific initiative on the Vaughan Vision 2020 initiative list this resource request supports (new or implementation of), by completing the following:

| Initiative | Ref# | Status | Date | Priority | * Request/Initiative Relationship | Vaughan Vision 2020 | |
|------------------|------|--------|------|----------|-----------------------------------|---------------------|-----------|
| | | | | | | Goal | Objective |
| Asset Management | 18 | | | High | Mandatory | | |
| | | | | | | | |
| | | | | | | | |

* Select either - General Correlation or Mandatory for Success from drop box

B) Describe and clearly demonstrate how the request links to the Vaughan Vision 2020:

Goal: Service Excellence
Objectives: Pursue Excellence in Service Delivery
 Enhance & Ensure Community Safety, Health & Wellness
 Lead and Promote Environmental Sustainability

Goal: Management Excellence
Objectives: Enhance Productivity, Cost Effectiveness & Innovation
 Maintain Assets & Infrastructure
 Ensure Financial Sustainability

3) Business Plan Link & Related Performance Indicators

Please relate request to Department Business Plan

While this is somewhat of a new objective, it is part of the overall strategy to ensure our policies and by-laws reflect the most current legislation.

4) Benefits - Efficiencies & Effectiveness

Please detail the benefit of the requests and if the request will provide cost savings, increase efficiency, etc.

The existing by-laws are dated from the 1970's. Since then, issues surrounding safe drinking water have emerged, and new legislation has been created. In order to ensure that the City can adequately deal with these changes, as well ensure that all water related by-laws are consolidated wherever possible, an additional contract staff is required to do this work. Similarly, new by-laws are required to deal with current legislation and realities surrounding sewer use. As more and more focus is being put on inflow, infiltration, and sewer use in general, new by-laws are required.



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary Contract Staff to Create New Water & Sewer Use By-laws
(if applicable)
Department Water & Wastewater Division **Business Unit Name** 2340001 & 2350001

Request Title

5) Alternatives

Are there alternatives or options? Please explain what they are and why they are not the primary approach.

There are no effective alternatives or options as staff do not have the ability to perform this work in addition to their regular duties. In addition, researching, consolidating and creating By-laws requires someone with specific background knowledge in this field.

6) Implications/Consequences (if request not approved)

A) Briefly illustrate the impacts/consequences and those who will be affected, if the request was not approved. (staff, residents, community, , etc.)

There is currently a loss of revenue from inappropriate use of water and risk of discharge of unapproved effluents to the sewer system. This can be a risk to public health and the environment.

B) Please check off how the request relates to the following:

Legislative/Regulatory Requirement

- None
- Little consequence of non compliance
- Significant external repercussion/penalty

Please specify:

Specific Legislation (i.e.... Act/Regulation/etc.)

Safe Drinking Water Act 2002 and Ontario Water Resources Act

What are the compliance requirements?

Comments

Current status of compliance:

Compliant with risk

Probability of Litigation and/or Health & Safety Issues

- None
- Unlikely or likely with minor outcomes/consequences and/or minor health and safety issues that require monitoring
- Uncertain - potential for significant outcomes/consequences and/or more serious health and safety issues/risk uncertainty
- Definitely significant outcomes/consequences and/or unavoidable severe health and safety issues, immediate attention required to address

Comments

Please describe the type and nature of risk

Probability of Risk

- Low Medium High



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary

Contract Staff to Create New Water & Sewer Use By-laws

Department

Water & Wastewater Division

Business Unit Name

(If applicable)
2340001 & 2350001

Request Title

Core City Service Disruption

- None
- Service provided with minor internal issues - slight inconvenience
- Intermittent service level impact - some public/client complaints/frustration
- Service failure - constant public/client complaints/aggression

BRIEFLY DESCRIBE IMPACT:

Issues, Objectives, etc.

Compliance with Water and Sewer Use By-laws

Current service level vs. target

Currently, the By-Law does not provide for many of the changes that have been brought about by the SDWA and other legislation. Without new By-laws, there is a risk to the City.

7) Financial/Resource Detail

| Component | | BU Acct. # | 2011 Budget Change | 2012 | 2013 Full-Yr. Adj. |
|--|---|-----------------|-----------------------|------|-----------------------|
| REVENUE - continuous operating detail | | | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| Subtotal | | | - | - | - |
| REVENUE - one-time operating detail | | | | | |
| 1 | | | | | |
| 2 | | | | | |
| Subtotal | | | - | - | - |
| EXPENSES - continuous operating detail (For staffing costs please fill out section 8 & 9) | | | | | |
| 1 | * Staffing costs (calculated field) | (See sect. 8&9) | 72,655 | - | |
| 2 | * Benefits | (See sect. 8&9) | 12,860 | - | |
| 3 | * Complement sch. Expenses (calculated field) | (See sect. 8&9) | - | - | |
| 4 | <blank> | | | | |
| 5 | <blank> | | | | |
| 6 | <blank> | | | | |
| 7 | <blank> | | | | |
| Subtotal | | | 85,515 | - | - |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary

Contract Staff to Create New Water & Sewer Use By-laws

Department

Water & Wastewater Division

Business Unit Name

(if applicable)
2340001 & 2350001

Request Title

EXPENSES - one-time operating detail (For staffing costs please fill out section 8 & 9)

| | | | | | |
|-----------------|---|----------------|-------|---------|---|
| 1 | Complement sch. expenses (calculated field) | See sect. 8&9. | 4,290 | (4,290) | - |
| 2 | <blank> | | | | |
| 3 | <blank> | | | | |
| Subtotal | | | 4,290 | (4,290) | - |

OFFSETS - cost savings, reductions, etc

| | | | | | |
|-----------------|---------|--|---|---|---|
| 1 | <blank> | | | | |
| 2 | <blank> | | | | |
| 3 | <blank> | | | | |
| Subtotal | | | - | - | - |

TOTAL OPERATING BUDGET CHANGE

89,805

(4,290)

-

ASSOCIATED CAPITAL FUNDING

Proj. #

| | | | | | |
|--|---------|--|---|---|---|
| 1 | <blank> | | | | |
| 2 | <blank> | | | | |
| 3 | <blank> | | | | |
| <u>TOTAL ASSOCIATED CAPITAL FUNDING</u> | | | - | - | - |

COMPLEMENTS & FTE's

| | | | |
|--------------------------|--------------------------------|------|---|
| # of positions requested | (calculated field - sect. 8&9) | 1.00 | - |
| FTE's | (calculated field - sect. 8&9) | 1.00 | - |
| FTE reductions/offsets | (Manual Field) | - | - |
| Net FTE's | (calculated field - sect. 8&9) | 1.00 | - |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary Contract Staff to Create New Water & Sewer Use By-laws
(If applicable)
Department Water & Wastewater Division **Business Unit Name** 2340001 & 2350001

Request Title

8) 2011 Complement Details

Do not gap positions - If required, please contact the Budget Dept. for instructions
 Future year progressions & eco. adj. will be calculated corporately by the Budget Dept.

| <u>2011 Complement Information</u> | Position #1 | Position #2 | Position #3 | Sub-total |
|--|--------------------|--------------------|--------------------|------------------|
| Position title | Contract Staff | | | |
| Estimated start date <small>(dd-mm-yy to dd-mm-yy)</small> | 1/6/2011 | | | |
| # of positions requested | 1.00 | | | 1.00 |
| Full-time equivalents (FTEs) | 1.00 | | | 1.00 |
| Position type | Full-time | | | |
| Position agreement classification | Contract | Contract | | |
| If contract, specify term <small>(dd-mm-yy to dd-mm-yy)</small> | 06-11 to 06-12 | | | |
| Business unit # and object code | 2340001 & 2350001 | | | |
| Grade level | M | | | |
| Est. starting step | Start | | | |

2011 Complement Annual Cost Detail

| | | | | |
|--|-----------|------|------|-----------|
| Annual full-time \$ | 72,655 | | | 72,655 |
| Annual part-time \$ | | | | - |
| Annual shift premiums, etc | | | | - |
| Annual overtime \$ | | | | - |
| * PT vacation pay <i>(calculated field)</i> | | | | - |
| * Annual benefits <i>(calculated field)</i> | | | | - |
| * FT contract benefits in lieu <i>(calculated field)</i> | 12,860 | | | 12,860 |
| Subtotal | \$ 85,515 | \$ - | \$ - | \$ 85,515 |

| Continuous costs | <i>(BU & Acct #.)</i> | | | | |
|------------------|---------------------------|------|------|------|------|
| 1) <blank> | | | | | - |
| 2) <blank> | | | | | - |
| 3) <blank> | | | | | - |
| 4) <blank> | | | | | - |
| Subtotal | | \$ - | \$ - | \$ - | \$ - |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary Contract Staff to Create New Water & Sewer Use By-laws
 Department Water & Wastewater Division Business Unit Name 2340001 & 2350001
(if applicable)

Request Title

| One-time costs | (BU & Acct #.) | | | | |
|---|-------------------|------------------|-------------|-------------|------------------|
| 1) Computer equip. | | 1,290 | | | 1,290 |
| 2) Office equip. | Phone & Furniture | 3,000 | | | 3,000 |
| 3) Other | Vehicle & Tools | | | | - |
| Subtotal | | 4,290 | - | - | 4,290 |
| Total 2011 Complement Annual Costs | | \$ 89,805 | \$ - | \$ - | \$ 86,805 |

Additional Comments:

9) 2012 Complement Details

Do not gap positions - If required, please contact the Budget Dept. for instructions
 Future year progressions & eco. adj. will be calculated corporately by the Budget Dept.

| <u>2012 Complement Information</u> | Position #1 | Position #2 | Position #3 | Sub-total |
|---|-------------|-------------|-------------|-----------|
| Position title | | | | |
| Estimated start date | | | | |
| # of positions requested | | | | - |
| Full-time equivalents (FTEs) | | | | - |
| Position type | | | | |
| Position agreement classification | | | | |
| If contract, specify term (dd-mm-yyyy to dd-mm-yyyy) | | | | |
| Business unit # | | | | |
| Grade level | | | | |
| Est. starting step | | | | |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary

Contract Staff to Create New Water & Sewer Use By-laws

Department

Water & Wastewater Division

Business Unit Name

(If applicable)
2340001 & 2350001

Request Title

2012 Complement Annual Cost Detail

| | | | | | |
|--|---------------------------|------|------|------|------|
| Annual full-time \$ | | | | | - |
| Annual part-time \$ | | | | | - |
| Annual shift premiums, etc | | | | | - |
| Annual overtime \$ | | | | | - |
| * PT vacation pay <i>(calculated field)</i> | - | - | - | - | - |
| * Annual benefits <i>(calculated field)</i> | - | - | - | - | - |
| * FT contract benefits in lieu <i>(calculated field)</i> | - | - | - | - | - |
| Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - |
| Continuous costs | <i>(BU & Acct #.)</i> | | | | |
| 1) <blank> | | | | | - |
| 2) <blank> | | | | | - |
| 3) <blank> | | | | | - |
| 4) <blank> | | | | | - |
| Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - |
| One-time costs | <i>(BU & Acct #.)</i> | | | | |
| 1) Computer equip. | | | | | - |
| 2) Office equip. | | | | | - |
| 3) Other | | | | | - |
| Subtotal | - | - | - | - | - |
| Total 2012 Complement Annual Costs | \$ - | \$ - | \$ - | \$ - | \$ - |

Additional Comments:

ADDITIONAL RESOURCE REQUEST
Request Summary

Inflow & Infiltration Reduction Program

Department

Wastewater Division

Business Unit Name

 (If applicable)
NEW BU REQ'D.

Request Title

Annual Budget Change Summary

| Financial Components | 2011 | 2012 | 2011-2012 Sub-total | 2013 (Full-Yr. Adj.) | 2011-2013 Sub-total |
|---------------------------------|-------------------|-------------------|------------------------|-------------------------|------------------------|
| Staffing | | | | | |
| Complements | 2.00 | - | 2.00 | - | 2.00 |
| Net FTE's | 2.00 | - | 2.00 | - | 2.00 |
| Operating Revenue | - | - | - | - | - |
| Operating Costs | | | | | |
| Staffing & Benefits | 145,520 | - | 145,520 | - | 145,520 |
| Other continuous costs | 250,000 | 250,000 | 500,000 | 250,000 | 750,000 |
| One-time expenses | - | - | - | - | - |
| Offsets/reductions | - | - | - | - | - |
| Net Operating Budget | \$ 395,520 | \$ 250,000 | \$ 645,520 | \$ 250,000 | \$ 895,520 |
| Associated Capital Costs | \$ - | \$ - | \$ - | \$ - | \$ - |

1A) Request Description (include issues addressed, milestones, deliverables, timeline, etc)

The Inflow & Infiltration reduction program is an initiative of The Region of York that was mandated by the Ministry of the Environment. An assessment of the critical areas was completed in 2009 which identified deficiencies in the system that need to be repaired and/or replaced. The Public Works Department is required to remedy the deficiencies identified in all the affected areas to reduce/eliminate inflow and infiltration in the sanitary sewer system.

| Milestones or Deliverables | Timelines | Comments |
|---|-----------|---|
| Reduce/eliminate 20% of the known inflow/infiltration | 1 Year | Inflow & Infiltration Reduction Program |
| Reduce/eliminate 20% of the known inflow/infiltration | 1 Year | Inflow & Infiltration Reduction Program |
| Reduce/eliminate 20% of the known inflow/infiltration | 1 Year | Inflow & Infiltration Reduction Program |
| Reduce/eliminate 20% of the known inflow/infiltration | 1 Year | Inflow & Infiltration Reduction Program |

1B)Are other departments involved? If so, what is the requirement for other departments? Explain?

Development Engineering Department has an interest in the program as the reduction in inflow/infiltration will permit lands to develop.

COMMISSIONER APPROVAL: _____

Date: _____



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary

Department **Business Unit Name** (if applicable)

Request Title

2) Relationship to Vaughan Vision 2020 - Goals / Objectives / Initiatives

A) Identify the specific Initiative on the Vaughan Vision 2020 initiative list this resource request supports (new or implementation of), by completing the following:

| Initiative | Ref# | Status | Date | Priority | * Request/Initiative Relationship | Vaughan Vision 2020 | |
|------------------|------|--------|------|----------|-----------------------------------|---------------------|-----------|
| | | | | | | Goal | Objective |
| Asset Management | 18 | | | High | Mandatory | | |
| | | | | | | | |
| | | | | | | | |

* Select either - General Correlation or Mandatory for Success from drop box

B) Describe and clearly demonstrate how the request links to the Vaughan Vision 2020:

- Goal:** Service Excellence
- Objectives:** Pursue Excellence in Service Delivery
Lead and Promote Environmental Sustainability
- Goal:** Management Excellence
- Objectives:** Enhance Productivity, Cost Effectiveness & Innovation
Maintain Assets & Infrastructure
Ensure Financial Sustainability

3) Business Plan Link & Related Performance Indicators

Please relate request to Department Business Plan

Mandated requirement from the Ministry of the Environment through the Region of York.

4) Benefits - Efficiencies & Effectiveness

Please detail the benefit of the requests and if the request will provide cost savings, increase efficiency, etc.

The reduction of inflow and infiltration into the sanitary sewers will free up additional capacity in the existing Regional sewer systems sufficiently to permit development to continue without having to construct new trunk sewers. The additional staff will be assigned to perform inspections and oversee repairs of I & I related issues. The additional funds not related to staff will be directed to repair activities identified through the inspections.

5) Alternatives

Are there alternatives or options? Please explain what they are and why they are not the primary approach.

There are no other effective alternatives or options as currently staff levels and funding are not sufficient to handle this work.

ADDITIONAL RESOURCE REQUEST
Request Summary

Inflow & Infiltration Reduction Program

Department

Wastewater Division

Business Unit Name

 (If applicable)
NEW BU REQ'D.

Request Title
6) Implications/Consequences (if request not approved)
A) Briefly illustrate the impacts/consequences and those who will be affected, if the request was not approved. (staff, residents, community, , etc.)

Council has committed to the I & I Program and therefore if action is not taken the Region may withhold sewer allocation.

B) Please check off how the request relates to the following:
Legislative/Regulatory Requirement

- None
 Little consequence of non compliance
 Significant external repercussion/penalty

Please specify:

Specific Legislation (i.e.... Act/Regulation/etc.)

The Ministry of the Environment has mandated the Region of York to reduce I & I in sewer systems including Vaughan's.

What are the compliance requirements?

Comments

Ministry of the Environment mandated the reduction of I & I in the sewer systems of the Region and municipalities within the Region.

Current status of compliance:

Non compliant

Probability of Litigation and/or Health & Safety Issues

- None
 Unlikely or likely with minor outcomes/consequences and/or minor health and safety issues that require monitoring
 Uncertain - potential for significant outcomes/consequences and/or more serious health and safety issues/risk uncertainty
 Definitely significant outcomes/consequences and/or unavoidable severe health and safety issues, immediate attention required to address

Comments

Please describe the type and nature of risk

Probability of Risk

 Low

 Medium

 High



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary

Inflow & Infiltration Reduction Program

Department

Wastewater Division

Business Unit Name

(If applicable)
NEW BU REQ'D.

Request Title

Core City Service Disruption

- None
- Service provided with minor internal issues - slight inconvenience
- Intermittent service level impact - some public/client complaints/frustration
- Service failure - constant public/client complaints/aggression

BRIEFLY DESCRIBE IMPACT:

Issues, Objectives, etc.

Sewer capacity realized from the program will permit development to continue.

Current service level vs. target

This is the launch of this initiative.

7) Financial/Resource Detail

| Component | | BU Acct. # | 2011 Budget Change | 2012 | 2013 Full-Yr. Adj. |
|--|---|-----------------|-----------------------|---------|-----------------------|
| REVENUE - continuous operating detail | | | | | |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| Subtotal | | | - | - | - |
| REVENUE - one-time operating detail | | | | | |
| 1 | | | | | |
| 2 | | | | | |
| Subtotal | | | - | - | - |
| EXPENSES - continuous operating detail (For staffing costs please fill out section 8 & 9) | | | | | |
| 1 | * Staffing costs (calculated field) | (See sect. 8&9) | 115,950 | - | |
| 2 | * Benefits | (See sect. 8&9) | 29,570 | - | |
| 3 | * Complement sch. Expenses (calculated field) | (See sect. 8&9) | - | - | |
| 4 | Inflow & Infiltration Reduction Program | NEW BU REQ'D. | 250,000 | 250,000 | 250,000 |
| 5 | <blank> | | | | |
| 6 | <blank> | | | | |
| 7 | <blank> | | | | |
| Subtotal | | | 395,520 | 250,000 | 250,000 |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary (If applicable)
Department **Business Unit Name**

Request Title

EXPENSES - one-time operating detail (For staffing costs please fill out section 8 & 9)

| | | | | | |
|-----------------|---|----------------|---|---|---|
| 1 | Complement sch. expenses (calculated field) | See sect. 8&9. | - | - | - |
| 2 | <blank> | | | | |
| 3 | <blank> | | | | |
| Subtotal | | | - | - | - |

OFFSETS - cost savings, reductions, etc

| | | | | | |
|-----------------|---------|--|---|---|---|
| 1 | <blank> | | | | |
| 2 | <blank> | | | | |
| 3 | <blank> | | | | |
| Subtotal | | | - | - | - |

TOTAL OPERATING BUDGET CHANGE

395,520 250,000 250,000

ASSOCIATED CAPITAL FUNDING

Proj. #

| | | | | | |
|---|---------|--|--|--|--|
| 1 | <blank> | | | | |
| 2 | <blank> | | | | |
| 3 | <blank> | | | | |

TOTAL ASSOCIATED CAPITAL FUNDING

- - -

COMPLEMENTS & FTE's

| | | | |
|--------------------------|--------------------------------|------|---|
| # of positions requested | (calculated field - sect. 8&9) | 2.00 | - |
| FTE's | (calculated field - sect. 8&9) | 2.00 | - |
| FTE reductions/offsets | (Manual Field) | - | - |
| Net FTE's | (calculated field - sect. 8&9) | 2.00 | - |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

| | | | |
|------------------------|---|---------------------------|---------------|
| Request Summary | Inflow & Infiltration Reduction Program | | |
| Department | Wastewater Division | Business Unit Name | NEW BU REQ'D. |
| Request Title | | | |

8) 2011 Complement Details

Do not gap positions - If required, please contact the Budget Dept. for instructions
Future year progressions & eco. adj. will be calculated corporately by the Budget Dept.

| 2011 Complement Information | Position #1 | Position #2 | Position #3 | Sub-total |
|---|------------------|-------------|-------------|-----------|
| Position title | Serviceperson II | | | |
| Estimated start date (dd-mm-yy to dd-mm-yy) | 1/6/2011 | | | |
| # of positions requested | 2.00 | | | 2.00 |
| Full-time equivalents (FTEs) | 2.00 | | | 2.00 |
| Position type | Full-time | | | |
| Position agreement classification | Cupe Hourly | | | |
| If contract, specify term (dd-mm-yy to dd-mm-yy) | | | | |
| Business unit # and object code | 2350001 | | | |
| Grade level | G | | | |
| Est. starting step | Start | | | |

2011 Complement Annual Cost Detail

| | | | | |
|---|-------------------|-------------|-------------|-------------------|
| Annual full-time \$ | 115,950 | | | 115,950 |
| Annual part-time \$ | | | | - |
| Annual shift premiums, etc | | | | - |
| Annual overtime \$ | - | | | - |
| * PT vacation pay (calculated field) | - | - | - | - |
| * Annual benefits (calculated field) | 29,570 | - | - | 29,570 |
| * FT contract benefits in lieu (calculated field) | - | - | - | - |
| Subtotal | \$ 145,520 | \$ - | \$ - | \$ 145,520 |

| Continuous costs | (BU & Acct #.) | | | | |
|------------------|----------------|-------------|-------------|-------------|-------------|
| 1) <blank> | | | | | - |
| 2) <blank> | | | | | - |
| 3) <blank> | | | | | - |
| 4) <blank> | | | | | - |
| Subtotal | | \$ - | \$ - | \$ - | \$ - |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

Request Summary

Inflow & Infiltration Reduction Program

Department

Wastewater Division

Business Unit Name

(If applicable)
NEW BU REQ'D.

Request Title

| One-time costs | (BU & Acct #.) | | | | |
|---|----------------|------------|------|------|------------|
| 1) Computer equip. | | | | | - |
| 2) Office equip. | | | | | - |
| 3) Other | | | | | - |
| Subtotal | | - | - | - | - |
| Total 2011 Complement Annual Costs | | \$ 145,520 | \$ - | \$ - | \$ 291,041 |

Additional Comments:

9) 2012 Complement Details

Do not gap positions - If required, please contact the Budget Dept. for instructions
Future year progressions & eco. adj. will be calculated corporately by the Budget Dept.

| <u>2012 Complement Information</u> | Position #1 | Position #2 | Position #3 | Sub-total |
|---|-------------|-------------|-------------|-----------|
| Position title | | | | |
| Estimated start date | | | | |
| # of positions requested | | | | - |
| Full-time equivalents (FTEs) | | | | - |
| Position type | | | | |
| Position agreement classification | | | | |
| If contract, specify term (dd-mm-yyyy to dd-mm-yyyy) | | | | |
| Business unit # | | | | |
| Grade level | | | | |
| Est. starting step | | | | |



**CITY OF VAUGHAN
2011/2012 OPERATING BUDGET**

ADDITIONAL RESOURCE REQUEST

| | | | |
|------------------------|---|---------------------------|--|
| Request Summary | Inflow & Infiltration Reduction Program | | |
| Department | Wastewater Division | Business Unit Name | NEW BU REQ'D. <small>(If applicable)</small> |

| | |
|----------------------|--|
| Request Title | |
|----------------------|--|

2012 Complement Annual Cost Detail

| | | | | | |
|--|---------------------------|------|------|------|------|
| Annual full-time \$ | | | | | - |
| Annual part-time \$ | | | | | - |
| Annual shift premiums, etc | | | | | - |
| Annual overtime \$ | | | | | - |
| * PT vacation pay <i>(calculated field)</i> | - | - | - | - | - |
| * Annual benefits <i>(calculated field)</i> | - | - | - | - | - |
| * FT contract benefits in lieu <i>(calculated field)</i> | - | - | - | - | - |
| Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - |
| Continuous costs | <i>(BU & Acct #.)</i> | | | | |
| 1) <blank> | | | | | - |
| 2) <blank> | | | | | - |
| 3) <blank> | | | | | - |
| 4) <blank> | | | | | - |
| Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - |
| One-time costs | <i>(BU & Acct #.)</i> | | | | |
| 1) Computer equip. | | | | | - |
| 2) Office equip. | | | | | - |
| 3) Other | | | | | - |
| Subtotal | - | - | - | - | - |
| Total 2012 Complement Annual Costs | \$ - | \$ - | \$ - | \$ - | \$ - |

Additional Comments:



Water, Wastewater & Drainage

2011 Business Plan

BUSINESS OVERVIEW

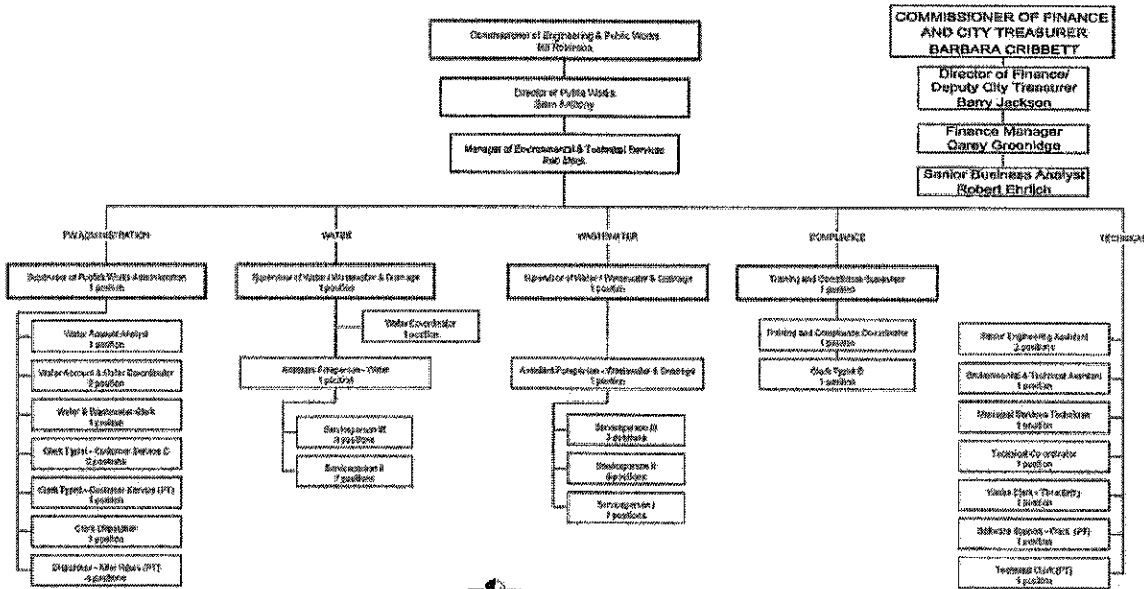
Service Statement:

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 Power Stream regarding billing and collection of water and wastewater accounts.

Service Profile:



Full Time, Part Time and Overtime – Budgeted Amounts

| | 2008 | 2009 | 2010 | 2011 Base | ADDITIONAL RESOURCE REQUEST |
|-----------|---------------|---------------|---------------|--------------|-----------------------------|
| | | | | | 2011 |
| Full Time | 36 | 45.5 | 47.5 | 47.5 | 3 |
| Part Time | 2.03 | 0.93 | 0.93 | 0.93 | 0 |
| Overtime | \$ 138,389.00 | \$ 143,282.00 | \$ 171,955.00 | \$192,838.00 | 0 |

Key Stakeholders:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Citizens and Businesses of Vaughan • York Region • Conservation Authority | <ul style="list-style-type: none"> • Mayor and Council • Ministry of the Environment • Power stream |
|---|--|



Water, Wastewater & Drainage

2011 Business Plan

Work Plan:

Link to Vaughan Vision 2020:

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

Future Pressures and Opportunities:

Pressures:

- Introduction of a backflow protection program in water
- Reduce the quantity of unaccounted water loss
- Provide training opportunities for staff to maintain operating licenses

Opportunities:

- Reduce water loss through the calibration of Industrial/commercial water meters
- Reduce inflow & infiltration into sanitary sewers through repairs to the system

Business Plan Objectives

| <u>Prior Year Business Plan Objectives / Accomplishments:</u> | <u>Year</u> | <u>Status</u> | <u>Outcome/Results</u> |
|---|-------------|--------------------------------|---|
| 1. PSAB process in partnership with Public Works, Engineering, and Capital Finance | Q1'10 | In compliance with legislation | |
| 2. Continual improvement of the Drinking Water Quality Management System | Q4'11 | System implemented | Annual audits have identified improvement opportunities |
| 3. Continue the lead testing program in Water | Q4'11 | Ongoing | No adverse lead results |
| 4. Develop a six year financial forecast-licensing-SWDA | Q8'10 | Forecast completed | |
| 5. Continue to develop a rehabilitation plan to reduce inflow & infiltration (I & I) in sanitary sewers | Q4'11 | Program in development | Reduce I&I in sanitary sewers |



Water, Wastewater & Drainage

2011 Business Plan

2011-12 Business Plan Objectives: (Note the anticipated Timeline, Outcome and Resources (Additional Resource Request) for each objective)

| Business Plan Objectives: | Timeline | Outcome | Resources |
|---|-----------------|------------------------|---|
| 2011 (Top 3 Objectives) | | | |
| 1. Continual improvement of the Drinking Water Quality Management System | Q4'11 | System implemented | Annual audits have identified improvement opportunities |
| 2. Continue the lead testing program in Water | Q4'11 | Ongoing | No adverse lead results |
| 3. Continue to develop a rehabilitation plan to reduce inflow & infiltration (I & I) in sanitary sewers | Q4'11 | Program in development | Reduce I&I in sanitary sewers |
| 2012 (Top 3 Objectives) | | | |
| 1. Continual improvement of the Drinking Water Quality Management System | Q4'12 | System implemented | Annual audits have identified improvement opportunities |
| 2. Continue the lead testing program in Water | Q4'12 | Ongoing | No adverse lead results |
| 3. Continue to develop a rehabilitation plan to reduce inflow & infiltration (I & I) in sanitary sewers | Q4'12 | Program in development | Reduce I&I in sanitary sewers |

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 |

BUSINESS OVERVIEW:

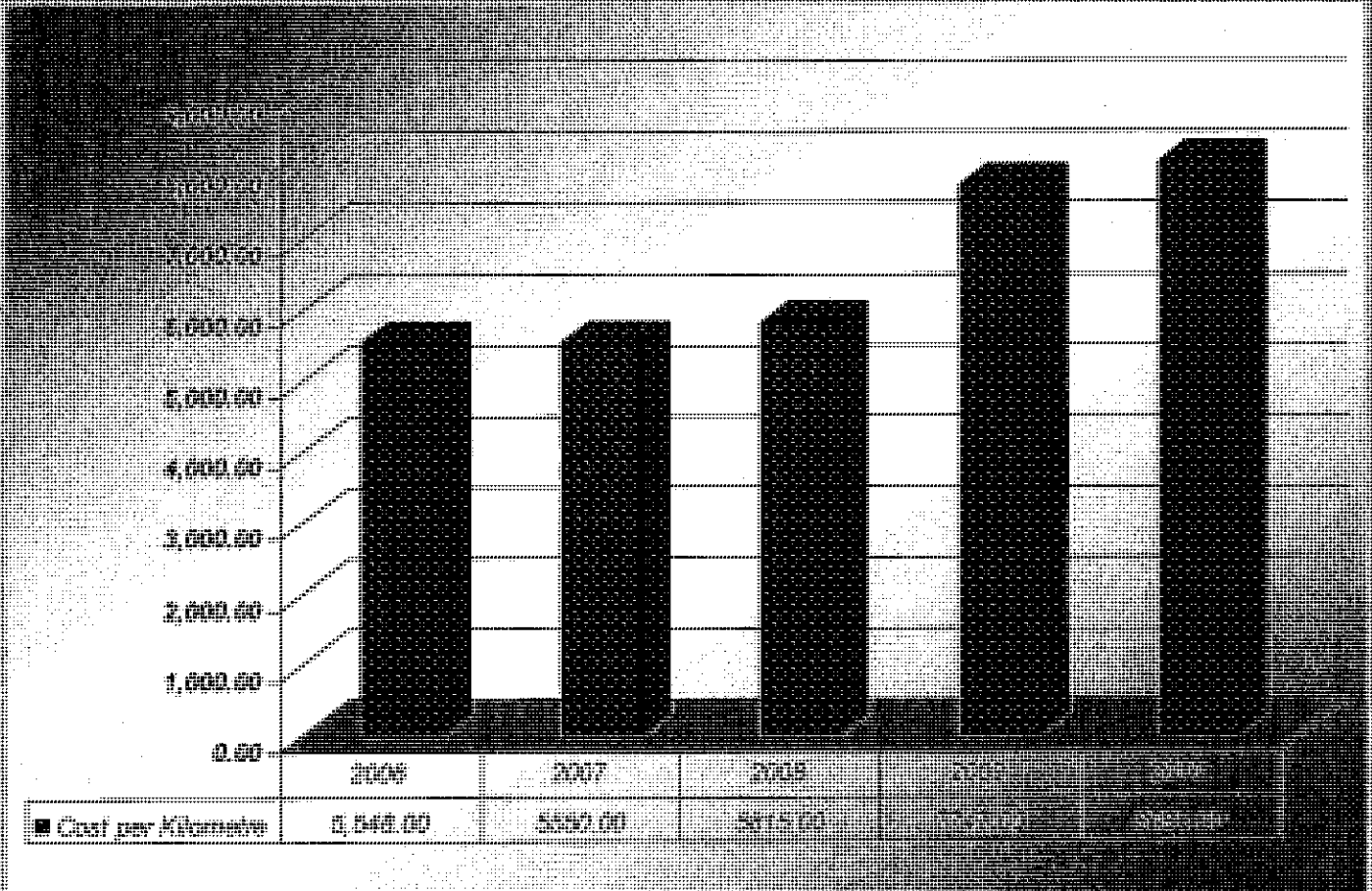


Water, Wastewater & Drainage

2011 Business Plan

BUSINESS OVERVIEW:

Measure: Operating Cost per Kilometre of Water Distribution System



Key Conclusion

The cost per kilometre of the water distribution system increased 2.4% from 2009 to 2010 (\$1,300), almost entirely due to increased maintenance activity from growth of the asset.

2008 to 2009 increase primarily due to operating and transfer representing \$1,000 per km.

Note about the Measure

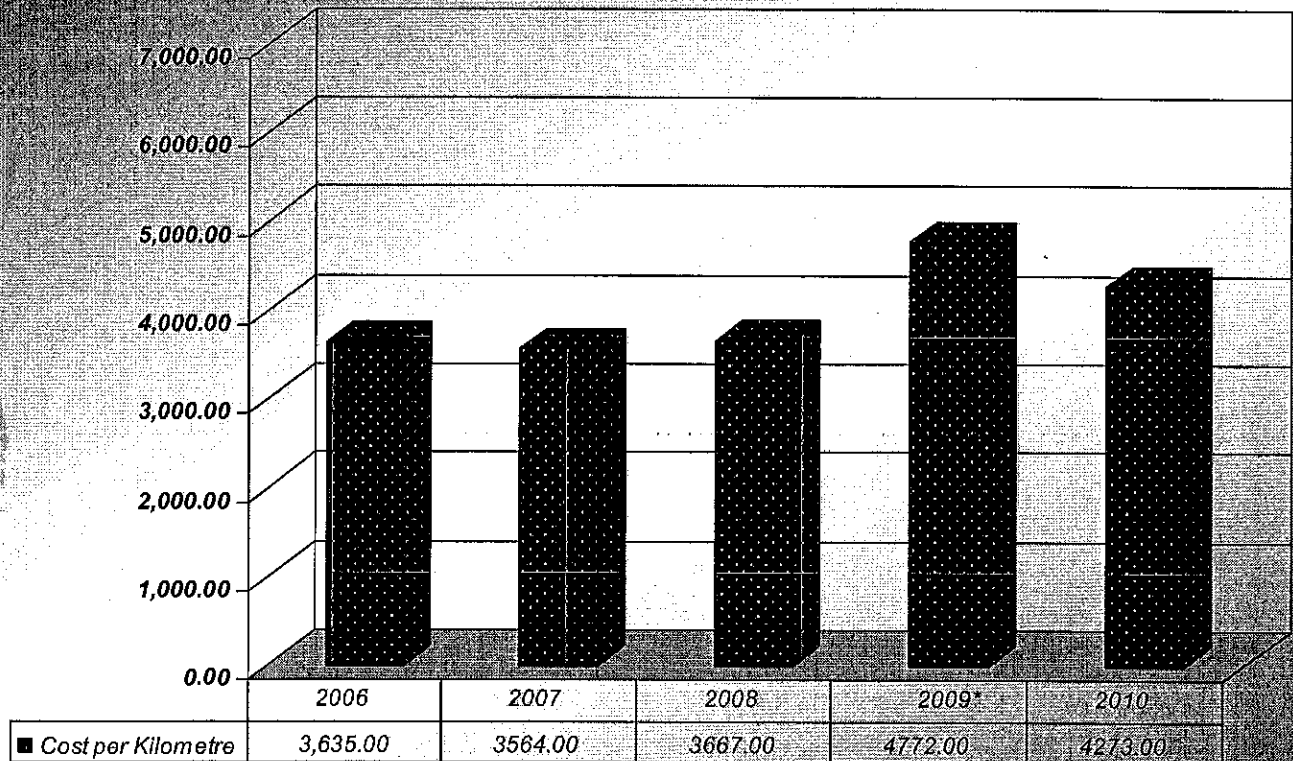
The Province changed the costing methodology in 2009 and thus the year-to-year comparison is impacted.



Water, Wastewater & Drainage

2011 Business Plan

Definition:



Key Conclusion:

The cost per kilometer of the wastewater collection system decreased 10.5% from 2009 to 2010 as the growth in the system outpaced the budget and some funds were shifted to the storm collection system maintenance.

2008 to 2009 increase primarily due to operating fund transfer representing \$600 per km.

Notes about the Measure:

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

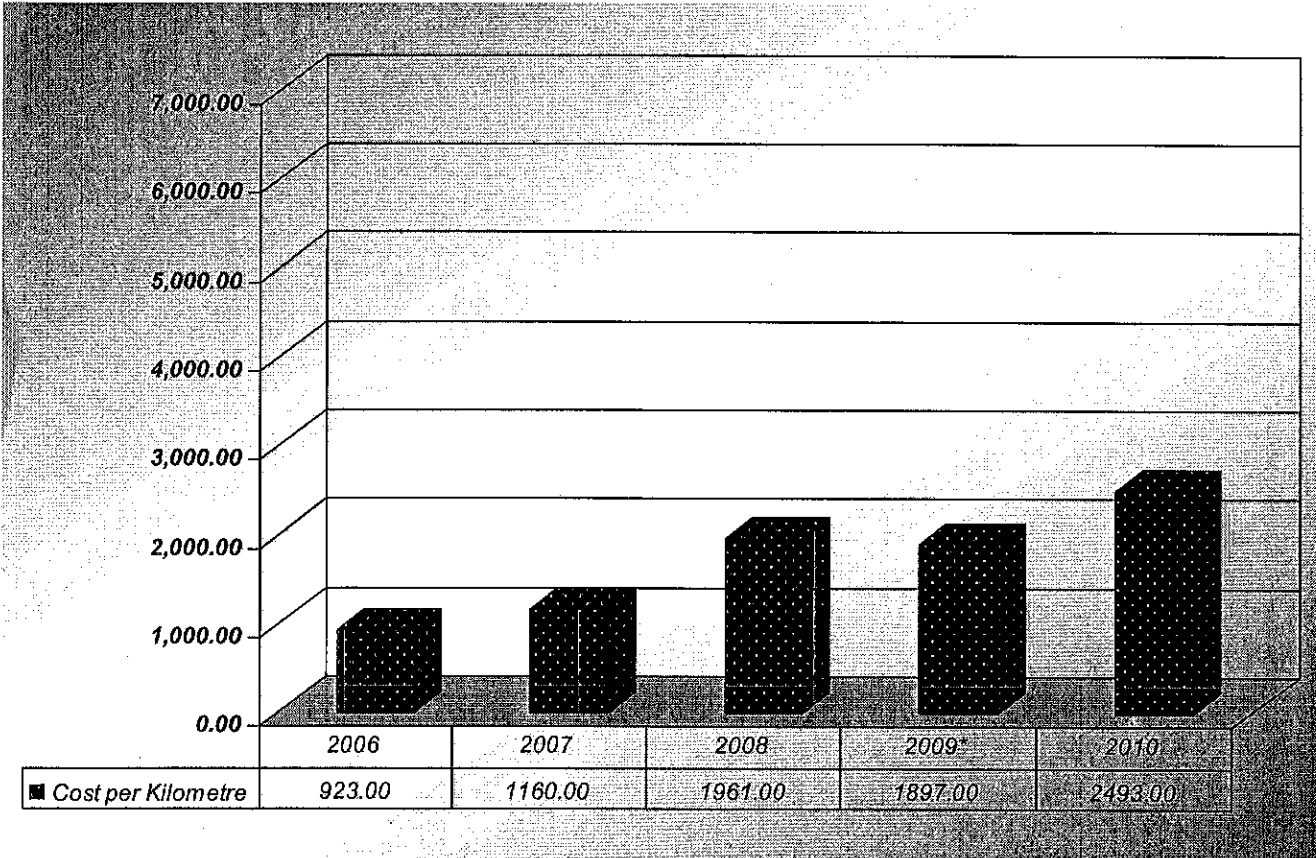


Water, Wastewater & Drainage

2011 Business Plan

Measure: Operating Cost per Kilometre of Storm Collection System

Definition:



Key Conclusion:

The cost per kilometer of the storm collection system increased 24% from 2009 vs. 2010 due to increased flushing, grate cleaning and pond maintenance activities. As the City grows and additional storm water management ponds are assumed, funding for maintenance will need to increase accordingly.

Notes about the Measure:

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

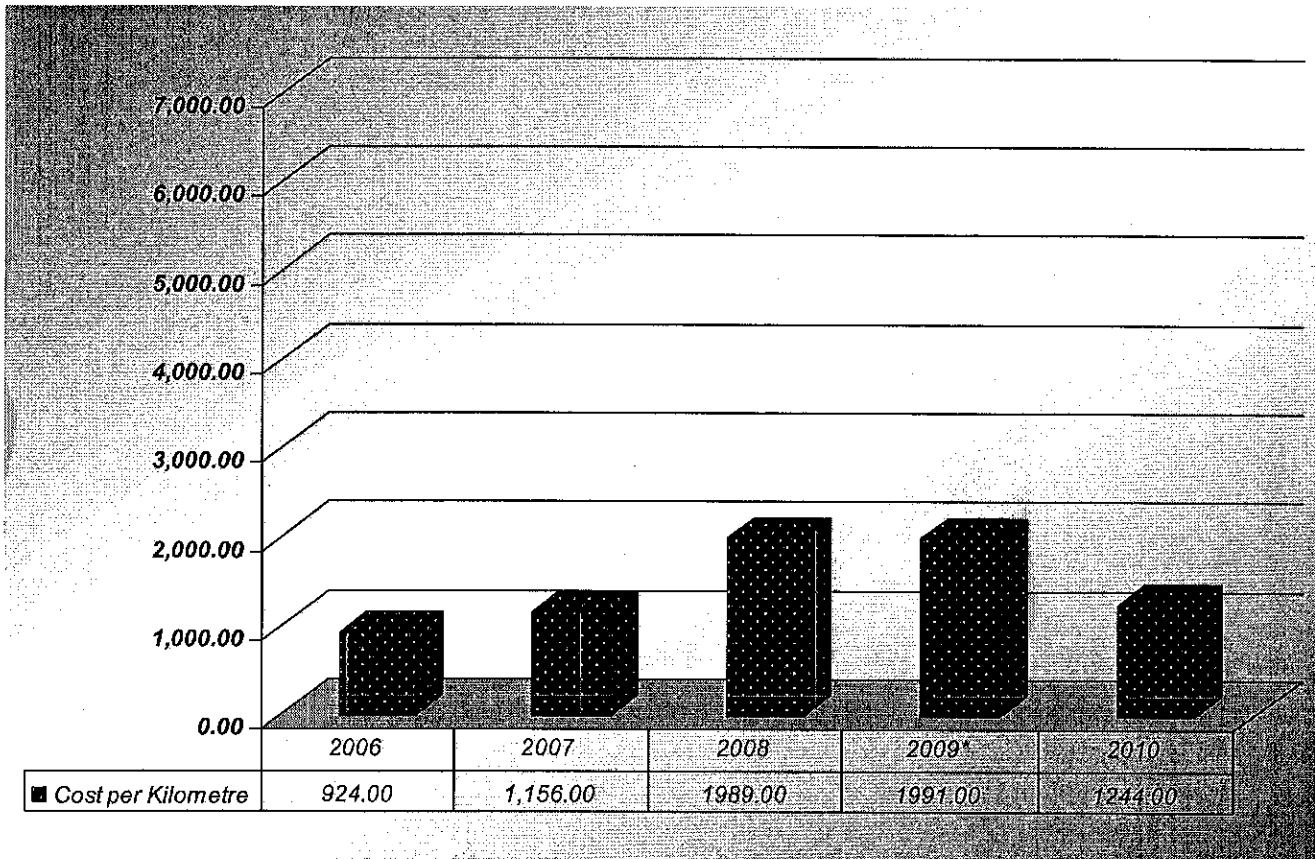


Water, Wastewater & Drainage

2011 Business Plan

Measure: Operating Cost per Kilometre of Rural Storm Collection System

Definition:



Key Conclusion:

The cost per kilometer of the rural storm collection system decreased 37.5% from 2009 to 2010 due to a reduction in maintenance activity allowing the funds to be shifted to the urban storm collection system maintenance.

Notes about the Measure:

The amount of maintenance activity on the rural storm collection system is relative to the demand.

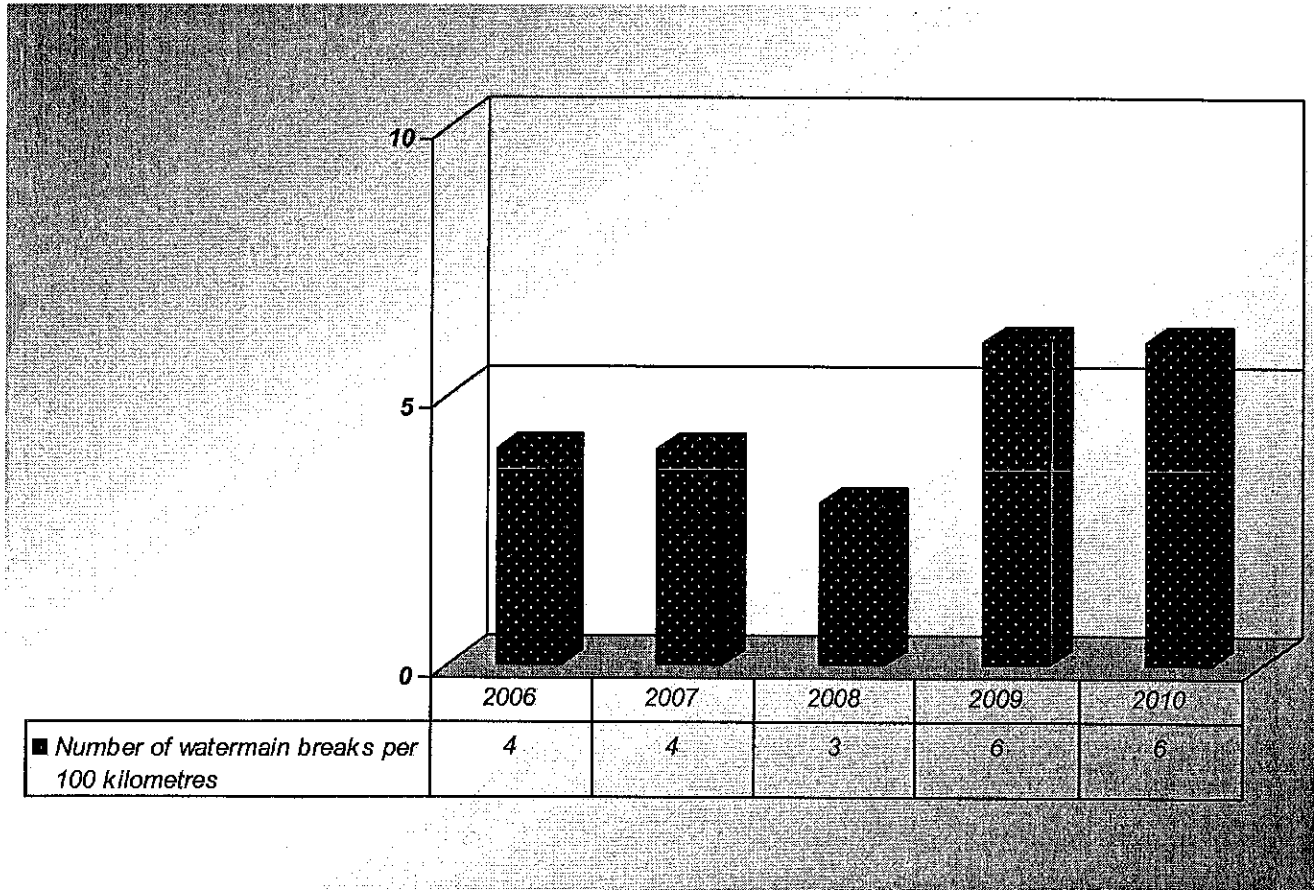


Water, Wastewater & Drainage

2011 Business Plan

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

Definition:



Key Conclusion:

Watermain breaks remained unchanged from 2009 to 2010. This number is expected to gradually decrease or flat line as a number of these watermains are at the end of their life and are being replaced.

Notes about the Measure:

There has been no increase of break activity in areas where the anode protection program has been implemented.

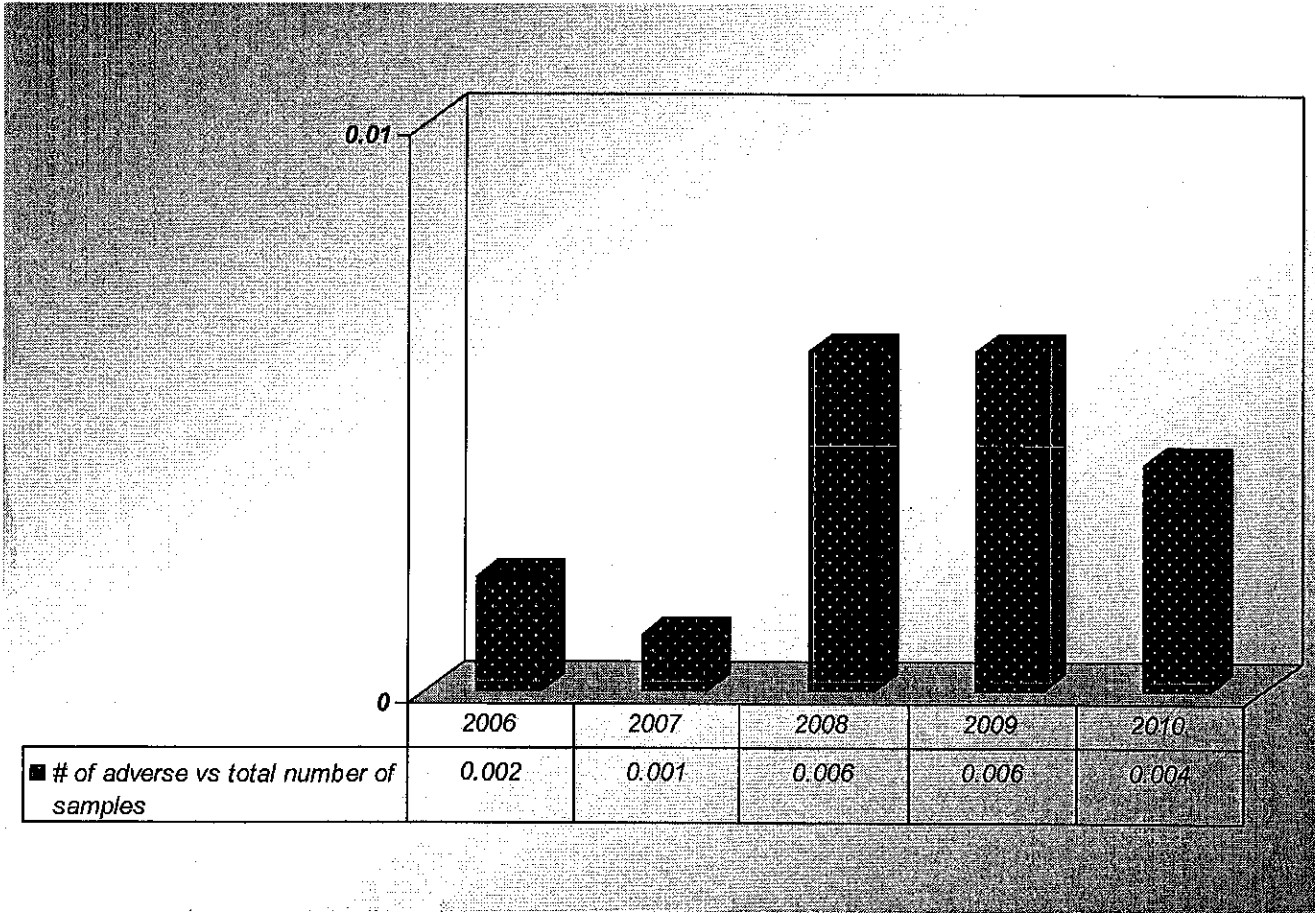


Water, Wastewater & Drainage

2011 Business Plan

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 2010 is slightly fewer than levels seen in 2009. These occurrences are less than the Provincial average for municipalities of equivalent size. The standard response to an adverse water quality sample is to flush and resample to confirm that the water quality meets the regulatory requirements.

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 watermains the result of assumed subdivisions. These changes were in response to O. Reg. 170/03 of the Safe Drinking Water Act.

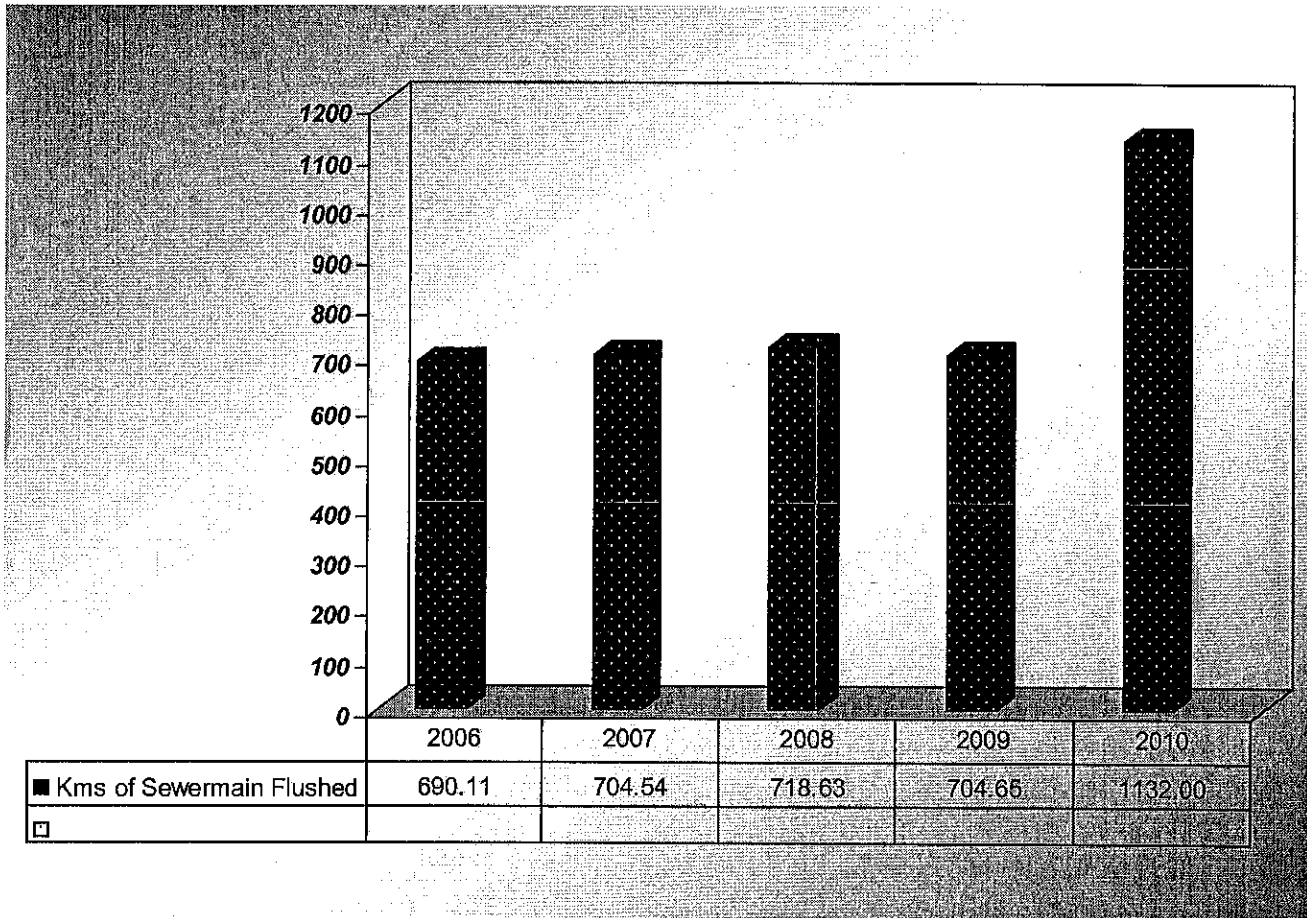


Water, Wastewater & Drainage

2011 Business Plan

Measure: Number of Kilometres of Sewer Main Flushed per Year

Definition:



Key Conclusion:

The number of kilometers of sewers flushed increased in 2010. Additional lengths of storm sewer that had not been flushed for several years were added to the 2010 program. Sanitary sewers are flushed annually while storm sewers are flushed on an as needed and less frequent basis.

Notes about the Measure:

This activity will continue to grow due to continuing development activity.



Water, Wastewater & Drainage

2011 Business Plan

Overall Conclusion: (An executive summary providing a clear and concise overview of the performance measures and the general departmental situation)

The growth of the systems combined with the regulatory requirements adds additional workload on the existing staff. In order to maintain the systems, additional funding and staff resources will be required in the future.