

SUBJECT: 2010 Water, Wastewater, Stormwater and Sewage Pumping Station

Budget and Rates

FROM: Dan Elliott, Director of Corporate & Financial Services - Treasurer

DATE: April 20, 2010

RECOMMENDATIONS

THAT Council approve the 2010 Water, Wastewater, Stormwater and Sewage Pumping Station Budgets as presented with net expenditures totalling \$13,256,000; and

THAT Council approve the 2010 Retail Water rate of \$1.3055 per cubic meter and the Retail Wastewater rate of \$1.0217 per cubic meter of water consumed for all bills issued on and after May 1, 2010; and

THAT Council approve the 2010 Flat Rate Stormwater charge of \$4.11 per unit per month for Residential and Condominium properties and \$57.69 per unit per month for metered Non-residential Commercial/Industrial and Multi-Residential properties for all bills issued on and after May 1, 2010; and

THAT Council approve the 2010 Flat Rate Sewage Pumping Station charge for each of the 165 users of the Ballymore Sewage Pumping Station of \$9.91 per month on all bills issued on and after May 1, 2010; and

THAT Council approve the 2010 Flat Rate Sewage Pumping Station charge for each of the 246 users of the Bayview Vandorf Sewage Pumping Station of \$6.62 per month on all bills issued on and after May 1, 2010; and

THAT Council approve the 2010 Flat Rate Sewage Pumping Station charge for each of the 104 users of the Brentwood Sewage Pumping Station of \$14.44 per month on all bills issued on and after May 1, 2010; and

THAT Council approve the 2010 Bulk Purchase Water Rate of \$2.35 per cubic meter on all bills issued on and after May 1, 2010; and

THAT Council approve fees for installation of a service connection for either water or wastewater services be \$725 per connection effective for works completed on or after May 1, 201; and

THAT the necessary by-law to implement the 2010 Water, Wastewater, Stormwater Sewer and Sewage Pumping Station Rates be enacted to be effective for all bills issued on or after May 1. 2010.

PURPOSE OF THE REPORT

To present the 2010 operational budgets for Water, Wastewater, Stormwater and three local service sewage pumping stations, and the rates necessary to be set to fully recover the costs of delivering these services in Aurora. All rates are to be effective for billings issued on or after May 1, 2010.

BACKGROUND

Water, Wastewater and Storm Systems budgets are not Tax Supported

The full costs of operations of the water distribution system, the wastewater collection system, the stormwater collection and management systems, and the local services sewage pumping stations are to be fully recovered from user charges. No tax levy subsidy is to occur. Further, in the near future, the Town will be required to demonstrate full cost recovery, including the recovery of the necessary capital costs to maintain the system in perpetuity.

The 2010 budgets have been reviewed in detail by staff from the Infrastructure & Environmental Services Department, and the Corporate & Financial Services Department. Costs for the operation of the systems are directly controlled and managed by I&ES, while overhead allocations from the general operating budget have been made to allocate costs of general corporate overhead to the water, wastewater and stormwater operations costs. Some direct costs of administering the customer accounts are directly charged to the operations.

Contributions to capital reserves for future repair and replacement needs of the system have been included in the current budgets. These are estimates only at this time. During 2010 it is expected that staff will be able to complete a reserves adequacy and funding study of all Town capital reserves, including those for user rate funded assets. The finding of this work will be presented during the 2011 budget cycle.

Retail Flows Do Not Equal Wholesale Flows

For 2010, staff have reviewed the approaches used in determining estimated water retail consumption as all recoveries for water and wastewater are based on retail volumes. The estimate is premised on the Region of York's volume estimate for the Town, which is then factored downward by Town staff for the water lost in transmission due to leaks and other reasons prior to reaching the retail water meters in individual properties.

In past years a water loss estimate of 8% has been used, while detailed tracking was undertaken. Based on detailed tracking for the last several years, it appears that actual water loss is between 11 and 12%. Water loss is the difference between wholesale flows and retail metered flows. Water loss occurs for a variety of reasons, each of which needs to be managed with different strategies. Losses occur due to the following factors:

- to actual system pipe leaks seeping water out of the pressurized system

- water main breaks which occur and are repaired
- required system maintenance, such as main swabbing and flushing, and hydrant flushing and testing activities
- fire department use, for training and fire fighting purposes
- own use of unmetered supplies for landscaping, parks and road maintenance activities
- theft of water from hydrants and other sources
- retail water meter slippage which increases with meter age, allowing water to slip through the meter unmeasured, normally less than 0.5% but as the meter ages can increase upwards to 10% in some meters. Meter change out programs manage this loss.

For 2010, staff have increased the provision for water loss from 8% to 11%

Budget Results Highly Dependant on Weather Patterns

Water flows are affected dramatically by the summer weather. In dry periods, there is much out door water use to maintain yards, gardens and pools, while in wet periods, there is much less outdoor water use. The costs of maintaining Aurora's infrastructure generally are fixed and are not variable based on water flow activity. Only the actual wholesale costs of Region of York services are variable on flows. Accordingly, when flows are less than expected, the fixed costs are not fully recovered, and a deficit in our budgets result, while when flows are higher than expected, such as in a very dry season, the year will conclude with a financial surplus.

The Region of York volume estimate for Aurora is premised on a normal and consistent weather pattern for the whole of the summer. This is seldom realized particularly as the weather patterns are changing and remain quite unpredictable. Budget deficits have occurred regularly in past years due to weather fluctuations, and fluctuations in actual flows verses budgeted flow volumes. Accordingly, staff have now factored a small adjustment to the formula to add a measure of conservativeness to the estimates, expected to result in a lower likelihood of ending the year in a deficit. The factor used for 2010 is only 25% of the estimated factor necessary. If a surplus does result, the surplus is transferred to the user rate capital reserves for use in managing the condition of the infrastructure for the water and sewer services. Staff recommend that this factor be increased in future years to until the full estimate is reached.

COMMENTS

Proposed Water and Wastewater Rates for 2010

The detailed schedules for the water, wastewater budgets are included as Attachments #1 and #2 respectively. In preparing these budgets, staff have utilized a wholesale water flow estimate of 6,178,000 cubic meters, and a retail water flow estimate of 5,410,400 cubic meters.

The breakdown of the proposed 2010 total retail rate, by component, is as follows:

Water Rate

Components	2009	2010	Change %
Wholesale Cost (Region of York)	\$0.5763	\$0.6339	10.0%
Aurora Operations Costs	\$0.4587	\$0.4361	-4.9%
Loss Factor increased for 2010	\$0.1444	\$0.2052	42.1%
Weather Conservatism Factor	n/a	\$0.0303	
TOTAL Retail Water Rate	\$1.1794	\$1.3055	10.7%

Wastewater Rate

2009	2010	Change %
\$0.6529	\$0.7182	10.0%
\$0.0965	\$0.1231	27.6%
\$0.1106	\$0.1572	42.1%
n/a	\$0.0232	
\$ 0.8600	\$1.0217	18.8%
	\$0.6529 \$0.0965 \$0.1106 n/a	\$0.6529 \$0.7182 \$0.0965 \$0.1231 \$0.1106 \$0.1572 n/a \$0.0232

Combined Rate	\$2.0394	\$2.3272	14.11%
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COMBINED RATE

Impact of Proposed 2009 Rate Changes on Average Consumer

Where a residential household is billed an average of 400 cubic meters per year the impact of the proposed combined retail water and wastewater rate increase is as follows:

Proposed Rate-May 1, 2010 \$2.3272 x 400 cubic meters = \$930.88 Current Rate-May 1, 2009 \$2.0394 x 400 cubic meters = \$815.76

The additional cost on the average Water/Wastewater Aurora residential consumer is \$115.12 or 14.11%. \$49.16 of the average increase is attributable to the Region of York where as \$65.96 is attributable to the Town of Aurora, water loss, and the adjustment factor.

As most customers receive both water and wastewater services from the Town of Aurora, staff recommend that a combined charge be implemented on the customer billings, rather than showing the two services separately. This approach will reduce inquiries regarding the separate service charges. Storm service and pumping station charges will remain

separated on the billings.

Charge for Stormwater Services

In 2002, Aurora implemented a flat rate charge on water and wastewater accounts for maintenance and rehabilitation needs of the stormwater collection and management system infrastructure.

For 2010, the stormwater system budget is includes as Attachment #3, summarized as follows:

	2009 Budget	2010 Budget	Change	<u>%</u>
System Operational Costs	389,056	466,500	77,444	19.9%
Contribution to Capital Reserves	590,194	625,000	34,806	5.9%
Total Amount for Rate Recovery	979,250	1,091,500	112,250	11.5%

A consistent formula is used to allocate the recoverable amount as between residential accounts and non-residential accounts. Each portion is then divided by the number of accounts in the respective category, resulting in an annual charge, which is then calculated and expressed as a monthly fixed charge per account.

Due to the increase in the number of accounts in each category growing at different rates, the rates increase at different percentages. Budget increases for storm systems reflect increasing maintenance needs and costs, together with an increase in contributions for rehabilitation, particularly with respect to Stormwater Management Ponds. The 2010 rates proposed to be effective for May 1, 2010 are as follows:

Stormwater Flat Rate	2009 Rate	2010 Rate	Rate Change	Change %
Residential/Year	\$43.92	\$49.32	\$5.40/year	12.3%
Residential/ Month	\$3.66	\$4.11	\$0.45/month	12.3%
Non-Res per Year	\$596.28	\$692.28	\$96.00	16.1%
Non-Res per Month	\$49.69	\$57.69	\$8.00	16.1%

Sewage Pumping Station Flat Rate Charges

As part of the overall water distribution and wastewater collection system, the Town is responsible for the operation and maintenance of various sewage pumping stations (SPS). The costs to operate and maintain three of these (Ballymore SPS, Bayview Vandorf SPS and Brentwood SPS) are recovered from the benefiting property owners in accordance with arrangements included in past Subdivision and Site Plan Agreements for the various developments that are served by these stations. Currently there are 164 properties serviced by the Ballymore Sewage Pumping Station, 246 properties serviced by the Bayview Vandorf Sewage Pumping Station and 102 properties serviced by the new Brentwood Sewage Pumping Station.

The detailed budgets for each pumping station are included as Attachment #4 to this report. Each budget includes costs for electricity supply, maintenance, monitoring and repairs, and a capital contribution for ultimate replacement of the facility. Variations in rate occur due to the budget changes, as well as the number units being served growing.

The following is a summary of the detailed attachments:

Wastewater Pump	2010 Budget Costs	2010 Monthly Fee	Fee Change %
	_	effective May 1	_
Ballymore	\$18,930	\$9.91	+11.9%
Bayview/Vandorf	\$21,980	\$6.62	-27.3%
Brentwood	\$18,200	\$14.44	-2.9%

Flat Rate Service Charges for Turning Water Off/On

The current flat rate services charges for the turning of Water either on or off is \$40.00 per event during working hours and \$80.00 per event other than normal working hours. This rate has been in effective since May 1, 2008. Staff are not recommending any rate change at this time. This service is seldom used except by contractors and renovators.

Purchased Water from Bulk Station or Hydrant Meters

The current rate for the purchase of Bulk Water is \$2.0394 per cubic meter. This is the same rate charged to retail customers for both water and wastewater services combined. The Town of Aurora incurs wholesale costs for both water and wastewater based on the flow and measure of water only. Therefore; the 2010 rate for the purchase of water from the Bulk Station and/or Hydrant Meters must increase to \$2.35 per cubic meter effective May 1, 2010 to correspond with the new metered services combined rate.

> Connection Charges

When a new infill structures are being constructed, they often require new or larger connections made to the main water lines or sewer lines. Fees for installation of connections for either water service or wastewater services are recommended to increase \$25 to \$725 per connection. These fees reflect increased costs of arranging, conducting and inspecting the connections made. These fees do not include any lateral lines located on the private property of the owner, rather only the fee to install a tee connection on the main, and connect it to the client's lateral lines or to cap the new tee.

<u>ALTERNATIVE(S) TO THE RECOMENDATIONS</u>

Council should be aware that traditionally, the rates proposed are to become effective on May 1, 2010, and any delay in approving the budgets will delay the implementation of the new rates and require that they be recalculated based on a revised implementation date.

- 1. Option 1 Approve the 2010 Water, Wastewater, Stormwater and Sewage Pumping Station Budgets with the revised appropriate rates to be effective for all bills issue on or after May 1, 2009.
- Option 2 Refer the 2010 Water, Wastewater, Stormwater and Sewage Pumping Station Budgets back to staff for more information and direction and thus delay the adoption of the new user rates for 2010.

FINANCIAL IMPLICATIONS

Total Expenditure Budgets (net of miscellaneous revenues) to be approved for user rate recovery are as follows:

	2009	2010	Change	Change %
Water	6,122,845	6,869,200	746,355	12.2%
Wastewater	4,769,701	5,236,200	466,499	9.8%
Storm	979,250	1,091,500	112,250	11.5%
Pump Stations (3)	61,103	59,100	(2,003)	(3.3%)
Total for Rate Recoveries	\$11,932,899	13,256,000	1,323,101	11.1%

Approval of this budget will result in a rate increase to an average annual residential consumer as follows:

	Current Bill	Increase Amt	New Billing	Increase %
Water Charge	471.76	50.44	522.20	10.7%
Wastewater	344.00	64.68	408.68	18.8%
Storm Flat	43.92	5.40	49.32	12.3%
	859.68	120.52	980.20	14.0%

One of the main influences on this increase is the 10% rate increases for wholesale water and wastewater services purchased by Aurora from the Region of York. There are no full-time staff positions being added to the staff complement through the approval of the water, wastewater or storm budgets.

As noted throughout the report, the water, wastewater, stormwater and sewage pumping station rate structures are consistent with that of previous years whereby establishing and maintaining a sustainable funding model for underground municipal infrastructure has been a key priority. During 2010, the restructured Financial Planning Branch will be undertaking a review of the sufficiency of the capital replacement reserves for all assets.

CONCLUSIONS

The Town's proposed water, wastewater, stormwater and sewage pumping station rate structure for 2010 have been detailed in this report, along with summarized budgets of operations and administration. All rate increases are to be effective for billings issued on or after May 1, 2010, as is the normal practice.

Staff undertake to review the adequacy of user rate supported capital reserves for infrastructure repairs and replacements during the 2010 year, and report to Council during the 2011 budget process.

ATTACHMENTS

Attachment #1 – 2010 Proposed Budget for Water Services

Attachment #2 – 2010 Proposed Budget for Wastewater Services

Attachment #3 – 2010 Proposed Budget for Stormwater Systems Services

Attachment #4 – 2010 Proposed Budgets for Sewage Pumping Stations

Attachment #5 – Draft By-law No. 5236-10 being a By-law to amend Municipal Waterworks

Distribution By-law No. 3305-91, as amended

Attachment #6 – Historical Review of Town's Retail Water, Wastewater, Stormwater and Sewage Pumping Station rates – 1993 to 2010.

PRE-SUBMISSION REVIEW

Director of Infrastructure & Environmental Services, Director of Corporate & Financial Services – Treasurer, CAO, Finance Department staff

Prepared by: Dan Elliott, Director of Corporate & Financial Services - Treasurer

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Director of Infrastructure &
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Dan Elliott
Director of Corporate &
Financial Services - Treasurer

Neil Garbe Chief Administrative Officer

Town of Aurora Water Services Budget 2010

	Actuals 2009	Budget 2009	Budget 2010	Budget % Change
Net Revenues				•
Retail Metered Revenue	(5,515,679)	(6,122,845)	(6,869,200)	12.2%
Wholesale Cost (Region of York)	3,157,900	3,453,383	3,827,300	10.8%
Late Payment Charges	(70,641)	(77,000)	(77,000)	0.0%
Contribution to Fixed Costs	(2,428,420)	(2,746,462)	(3,118,900)	13.6%
Cost of Operations				
Maintenance and Operations	1,439,732	1,442,950	1,844,300	27.8%
Corporate Overhead & Administration Allocation	589,975	589,975	582,100	-1.3%
Contribution to Rehabilitation Reserve	1,059,537	1,059,537	1,059,500	0.0%
Misc.Revenues/recoveries(connnections)	(255,651)	(346,000)	(367,000)	6.1%
Prior year Deficit(Surplus) requiring funding		553,136	405,173	
Draw from (Contrib. to) reserves re prior year		(553,136)	(405,173)	
Total Fixed Costs	2,833,593	2,746,462	3,118,900	13.6%
Net Budget (Surplus)/ Deficit	405,173	-		
Existing Approved Rate to April 30, 2010		1.0047	1.1794	
Proposed New Rate effective May 1, 2010		1.1794	1.3055	
Rate Change Percent		17.39%	10.69%	

Town of Aurora Wastewater Services Budget 2010

	Actuals <u>2009</u>	Budget <u>2009</u>	Budget <u>2010</u>	Budget <u>% Change</u>
Net Revenues				
Retail Revenue	-3,998,762	-4,769,701	(5,236,200)	9.8%
Wholesale Cost	3,635,027	3,865,591	4,344,000	12.4%
Contribution to Fixed Costs	(363,735)	(904,110)	(892,200)	-1.3%
Cost of Operations				
Maintenance and Operations	398,419	552,402	507,200	-8.2%
Contribution to Rehabilitation Reserve	391,708	391,708	425,000	8.5%
Misc.Revenues/recoveries(connnections)	-130,449	-40,000	(40,000)	0.0%
Prior year Deficit(Surplus) requiring funding		-22,142	295,943	
Draw from (Contrib. to) reserves re prior year		22,142	(295,943)	
Total Fixed Costs	659,678	904,110	892,200	-1.3%
Net Budget (Surplus)/ Deficit	295,943	-		
Existing Approved Rate to April 30, 2010		0.8479	0.8600	
Proposed New Rate effective May 1, 2010		0.8600	1.0217	
Rate Change Percent		1.43%	18.80%	

Town of Aurora Stormwater Systems Services Budget 2010

	Actuals <u>2009</u>	Budget <u>2009</u>	Budget <u>2010</u>	Budget <u>% Change</u>
Net Revenues				
Retail Revenues	(945,130)	(979,250)	(1,091,500)	11.5%
Contribution to Fixed Costs	(945,130)	(979,250)	(1,091,500)	11.5%
Cost of Operations				
Maintenance and Operations	253,534	389,056	466,500	19.9%
Contribution to Rehabilitation Reserve	725,716	590,194	625,000	5.9%
Prior year Deficit(Surplus) requiring funding		23,412	34,120	
Draw from (Contrib. to) reserves re prior year		(23,412)	(34,120)	
Total Fixed Costs	979,250	979,250	1,091,500	11.5%
Net Budget (Surplus)/ Deficit	34,120	-		
Residential Fixed Flat Rate per month				
Existing Approved Rate to April 30, 2010		3.7600	3.6600	
Proposed New Rate effective May 1, 2010		3.6600	4.1100	
Rate Change Percent		-2.66%	12.30%	
Non-Residential Fixed Flat Rate per month				
Existing Approved Rate to April 30, 2010		33.3067	49.6900	
Proposed New Rate effective May 1, 2010		49.6900	57.6900	
Rate Change Percent		49.19%	16.10%	

Town of Aurora Sewage Pumping Station Budgets for Rate Recovery 2010

	Budget	Budget	Budget
	2009	2010	% Change
Ballymore Sewage Pumping Station			
Net Revenues			
Flat Rate Charge Recoveries from benefitting properties	(18,200)	(18,930)	4.0%
Contribution to Fixed Costs	(18,200)	(18,930)	4.0%
Cost of Operations			
Utilities	2,000	2,200	10.0%
Materials & Supplies	1,000	1,030	3.0%
Telephone Service	700	700	0.0%
Contracts	12,000	12,500	4.2%
Contribution to Reserves	2,500	2,500	0.0%
Total Fixed Costs	18,200	18,930	4.0%
Net Budget (Surplus)/ Deficit	-	-	

Bayview/Vandorf Sewage Pumping Sta	<u>ation</u>		
Net Revenues			
Flat Rate Charge Recoveries from benefitting properties	(24,703)	(21,980)	-11.0%
Contribution to Fixed Costs	(24,703)	(21,980)	-11.0%
Cost of Operations			
Utilities	2,500	2,750	10.0%
Materials & Supplies	1,000	1,030	3.0%
Telephone Service	700	700	0.0%
Contracts	15,000	15,000	0.0%
Contribution to Reserves	5,503	2,500	-54.6%
Total Fixed Costs	24,703	21,980	-11.0%
Net Budget (Surplus)/ Deficit	_	_	
The Dauget (Outplue), Denoit			

Brentwood Sewage Pumping Station (2	010 is first full	<u>year)</u>	
Net Revenues			
Flat Rate Charge Recoveries from benefitting properties	(18,200)	(18,200)	0.0%
Contribution to Fixed Costs	(18,200)	(18,200)	0.0%
Cost of Operations			
Utilities	2,000	2,000	0.0%
Materials & Supplies	1,000	1,000	0.0%
Telephone Service	700	700	0.0%
Contracts	12,000	12,000	0.0%
Contribution to Reserves	2,500	2,500	0.0%
Total Fixed Costs	18,200	18,200	0.0%
Net Budget (Surplus)/ Deficit	_	_	
The Dauget (Durphus), Denoit			

TOWN OF AURORA

HISTORY OF WATER AND SEWER RATES 1993 TO 2010

ATTACHMENT #6 - GENERAL COMMITTEE REPORT NO. CFS10-013 DATED APRIL 20, 2010

EFFECTIVE	RESIDENTIAL AND COMMERCIAL				STORM SEWER RATES				S.P.S. RATES								
DATE		WATER RATES		WASTEWATER		COMBINED		ESIDENTIAL		OMMERCIAL		LYMORE		AYVIEW		NTWO	
				RATES	WA	ATER/WASTEWATER		LAT RATE		FLAT RATE		AT RATE		AT RATE		AT RAT	
		per cubic meter		per cubic meter		RATE		per annum		per annum	pe	r annum	pe	er annum	ре	r annun	<u>n</u>
1993	\$	0.3500	\$	0.5700	\$	0.9200	\$	-	\$	-							
1994	\$	0.3500	\$	0.5700	\$	0.9200	\$	-	\$	-							
1995	\$	0.4000	\$	0.5700	\$	0.9700	\$	-	\$	-							
1996	\$	0.4930	\$	0.5700	\$	1.0630	\$	-	\$	-	\$	90.00					
1997	\$	0.5400	\$	0.5700	\$	1.1100	\$	-	\$	-	\$	90.00					
1998	\$	0.5940	\$	0.4630	\$	1.0570	\$	17.44	\$	102.36	\$	90.00	\$	90.00			
1999	\$	0.6440	\$	0.4630	\$	1.1070	\$	26.16	\$	153.48	\$	90.00	\$	90.00			
2000	\$	0.6440	\$	0.4630	\$	1.1070	\$	26.16	\$	153.48	\$	90.00	\$	90.00			
2001	\$	0.6440	\$	0.4630	\$	1.1070	\$	34.20	\$	204.72	\$	90.00	\$	90.00			
01-Jan-02							\$	43.00	\$	276.00	\$	90.00	\$	90.00			
01-Apr-02	\$	0.6960	\$	0.4740	\$	1.1700											
01-Jan-03							\$	43.00	\$	276.00	\$	90.00	\$	90.00			
01-Apr-03	\$	0.7510	\$	0.5010	\$	1.2520											
01-Jan-04							\$	43.00	\$	276.00	\$	90.00	\$	90.00			
01-Apr-04	\$	0.7880	\$	0.5430	\$	1.3310											
01-Apr-05	\$	0.7940	\$	0.5910	\$	1.3850	\$	54.00	\$	657.00	\$	103.00	\$	66.00			
01-Apr-06	\$	0.8708	\$	0.6596	\$	1.5304	\$	55.40	\$	673.80	\$	103.00	\$	66.00			
01-May-07	\$	0.9447	\$	0.7679	\$	1.7126	\$	46.48	\$	607.44	\$	104.58	\$	69.12			
01-May-08	\$	1.0388	\$	0.8523	\$	1.8911	\$	45.12	\$	599.52	\$	120.44	\$	82.72	\$	-	
01-May-09	\$	1.1794	\$	0.8600	\$	2.0394	\$	43.92	\$	596.28	\$	106.32	\$	109.32		178	.44
01-May-10	\$	1.3055	\$	1.0217	\$	2.3272	\$	43.92	\$	609.72	\$	118.92	\$	79.44		173	.28