

## For Information Only

### Water/Wastewater Variable Operating Costs

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Type:	Follow Up Reports to Parking Lot Items

## Recommendation

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## Background

At the March 3, 2011 Finance Committee meeting, staff was requested to prepare a report detailing variable costs in the water and wastewater operating budget.

An analysis of the 2011 operating budget indicates that:

- Fixed operating costs are approximately 73%; that is they will have to be paid regardless of the level of treatment of water and wastewater or repairs to water and wastewater infrastructure.
- Variable operating costs are approximately 27%; that is these costs change with the level of treatment of water and wastewater or the number of occurrences of repairs to water and wastewater infrastructure.

## Definitions

**Fixed Costs** – fixed costs incurred each period remain unchanged even when the production volume ( i.e. amount of water or wastewater treated) varies from period to period. The primary fixed costs for WWW services include:

- water and wastewater administration and supervision labour costs
- insurance and property taxes
- capital contribution and debt repayments

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- internal support costs (infrastructure allocations and program support)
- billing and collection costs
- building maintenance costs including labour
- and a portion of fleet rental charges, roads and property restoration as well as water and wastewater repairs and maintenance.

The budgeted total of these expenses is approximately \$41.4 M for 2011.

**Variable Costs** – the total amount of a variable cost changes in proportion to changes in production volume.

Although there are definitions for fixed and variable costs, the actual identification of exactly what is variable and what is fixed is not a black and white exercise. Many costs are neither completely fixed nor completely variable. For example, utilities will fluctuate with the amount of production that occurs in a plant but as long as there is a plant, even if it is not producing, there will be a minimum utility expense. Another characteristic of variable costs is that there is not necessarily a direct correlation between the changes in production volume with the change in the variable costs of production. For example, production may be declining but staffing costs will decline more slowly than the production.

The primary variable costs for the WWW services include:

- production labour costs
- energy
- direct materials such as chemicals
- purchase of water and waste water services
- sludge haulage
- a portion of fleet rental costs, water and wastewater operations repairs and maintenance, roads and property restoration as well as water and wastewater repairs and maintenance.

The following chart illustrates the split between fixed and variable costs for water/wastewater services:

<b>Cost Centres</b>	<b>Fixed Costs</b>	<b>Variable Costs</b>	<b>Total</b>
WWW Admin and Super	4,015	0	4,015
Fleet	561	561	1,122
Debt & Capital Contribution	21,804	26	21,830
Water Maintenance	3,490	4,377	7,867

Water System Repair & Maintenance	3,852	2,299	6,151
Wastewater Maintenance	2,951	5,667	8,618
Wastewater System Repair & Maintenance	2,346	1,206	3,552
WWW Miscellaneous	2,379	923	3,302
Total	41,398	15,059	56,457
	73%	27%	100%

## Summary

The analysis of the 2011 budget indicates that fixed costs are 73% of WWW costs and 27% of costs are variable. This finding is consistent with the work that was done by KPMG in 2009 wherein they identified that the fixed costs were 67% and variable costs were 33%. The higher number in this analysis is due to a greater degree of due diligence on individual line items.

Fixed Operating Costs	\$41.4 M	73%
Variable Costs	<u>\$15.1 M</u>	<u>27%</u>
Total Costs	<u>\$56.5M</u>	<u>100%</u>

By comparison, it is interesting to note that two-thirds of the water wastewater revenue is variable based on consumption and one-third is from fixed service charges. This is directly opposite from the ratio of fixed to variable costs. This dichotomy shows why there should be reluctance to reduce the water wastewater fixed charge.