Water and Wastewater
Cost Recovery Review
March 24, 2012

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Introduction

The City of London (City), along with the majority of Ontario municipalities continues to face challenges in water and wastewater operations especially with greater than anticipated consumption declines. While the City's 2012 approved operating and capital budgets mitigate the majority of the challenges (e.g. infrastructure, ensuring that funds are set aside for the future replacement of assets), there are additional issues that can be addressed in the short term to ensure that the City is adhering to it's water and wastewater rate structure goals and objectives regarding ***fairness and equity*** and ***revenue stability***. To this end, the City retained BMA Management Consulting Inc. (BMA) to undertake a review of cost recovery methodologies options that could be undertaken in the short term to improve alignment of the City's plan to these principles. In addition to identifying options to address these principles, the study scope included a requirement, to the extent possible, to adhere to other City goals and objectives including ***financial sustainability, affordability, and economic development***.

This study is considered the first step toward undertaking a full rate study review which is being contemplated for 2013. The following table summarizes the goals and objectives and an assessment of the City's existing alignment with these principles. Appendix A provides the definitions of the goals and objectives.

Goal and Objective	*Assessment and Study Comments*
Revenue Stability	**Needs improvement.** Focus of this study. There have been annual water deficits in 7 of 8 last years, driven largely by the City's existing rate structure which only recovers 1% of the total costs of operations from the fixed monthly charge despite the fact that system fixed costs are in the range of 60%-80% for water and wastewater operations.
Fairness & Equity	**Needs improvement.** Focus of this study. With the majority of the costs of operating water and wastewater being fixed and with such a low recovery of the costs from a fixed monthly charge, high volume customers are contributing more than their fair share of the cost of service.
Financial Sustainability	A requirement of this review is to ensure that any recommendations do not negatively impact the City's existing plan to support sustainability.
Affordability	A requirement of this review is to ensure that any recommendations, to the extent possible, do not negatively impact affordability.
Conservation	A requirement of this review is to ensure that any recommendations continue to support conservation of water.
Economic Development	A requirement of this review is to ensure that any recommendations continue to support economic development.

Revenue Stability

Consumption has been declining in all customer classes and is somewhat difficult to predict. The following table reflects the shortfalls that the water operations has experienced over the past eight years.

Summary of Surplus/(Deficit) Positions		
2004	$	(271,094)
2005	$	(839,855)
2006	$	(676,894)
2007	$	(1,278,760)
2008	$	332,283
2009	$	(887,670)
2010	$	(473,464)
2011	$	(810,976)
Total	$	(4,906,429)

- In 7 of the past 8 years, the City experienced revenue shortfalls in the water operations. In fact in the only year where there was surplus, the revenues were less than budgeted but were offset by reductions in expenditures (e.g. labour supply)
- Average annual deficits have been $0.6 million since 2004.
- Losses erode the ability of the City to address capital requirements (***sustainability***) as these losses must be funded from reserves or, alternatively, they result in additional future rate increases to recover past revenue shortfalls (***affordability***).
- While staff annually forecast consumptions, unanticipated events such as weather conditions and economic slowdowns have reduced consumption more than forecast. The majority of the costs are fixed and therefore cannot be adjusted to account for the revenue decrease. The City's rate structure which recovers 99% of the costs through the volumetric rates make it extremely difficult to balance the budget from year to year.
- As identified in the City's budget document, average household consumption declined by 24% since 2001.
- Based on the analysis presented in this report, changes to the City's water/wastewater rate structure are required not only to improve ***revenue stability,*** but also to improve ***fairness and equity*** which will be described in further detail in the next section of the report.

Fairness and Equity

Fairness and equity is based on the principle that customers should be contributing equitably towards revenue requirements and based on their proportionate share of the underlying cost of service. One of the key challenges the City has faced in achieving this objective is the misalignment of the fixed and variable cost of service and the way in which revenues are recovered to support the water and wastewater systems.

An analysis was undertaken of the City's water and wastewater operating budget to determine which costs vary with volumes consumed and which costs are fixed. Variable/volumetric costs are those costs that are related to the amount of water consumed or wastewater flows over a specified period of time, such as day, month or year. As volumes or flows decline, these costs can be reduced. Costs associated with volume consumed typically include the purchase of water and some of the costs associated with the pumping station and reservoirs costs (electrical, chemical and pump maintenance).

Fixed costs include the customer's water service connection, meter supply and repair, billing, collection and meter reading. In addition, there are a number of other fixed costs that exist in a water and wastewater system such as the cost of debt service, reserve requirements, capital improvements and depreciation of the existing infrastructure.

As shown below, the majority of the water and wastewater costs are fixed in nature. It is estimated to be approximately 61% of the total operating and capital costs in water and 78% of the total wastewater operating and capital costs are fixed. However, the City of London recovers only 2% of the water cost of service from the fixed monthly fee and 0% from wastewater.

Water			
	Operating Budget	Fixed	Volumetric
Administration	$ 4,406,000	$ 3,566,000	$ 840,000
Billing and Customer Service	$ 1,901,000	$ 1,901,000	
Engineering	$ 1,363,000	$ 1,363,000	
Purchase of Water	$ 19,870,000		$ 19,870,000
Water Operations	$ 10,381,000	$ 7,550,649	$ 2,830,351
Meter Shop	$ 1,375,000	$ 1,375,000	
Debt Servicing & Capital Contributions	$ 20,381,000	$ 20,381,000	
Total	$ 59,677,000	$ 36,136,649	$ 23,540,351
% of Total		61%	39%

Wastewater			
	Operating Budget	Fixed	Volumetric
Administration	$ 1,802,424	$ 1,802,424	
Billing and Customer Service	$ 950,463	$ 950,463	
Sanitary Collection	$ 19,224,711	$ 19,224,711	
Sanitary Treatment	$ 6,170,763		$ 6,170,763
Debt Servicing & Capital Contributions	$ 26,442,519	$ 20,625,165	$ 5,817,354
Total	$ 54,590,880	$ 42,602,763	$ 11,988,117
% of Total		78%	22%

As a result of the low fixed charge, high volume customers are paying more than their fair share of the operating costs. The level of recovery from the fixed monthly charge in the City of London is considerably lower than the majority of the other municipalities surveyed. In a survey of 80+ Ontario municipalities (see Appendix B), on average, 25% of the costs are recovered from a fixed monthly fee (with a range of 0% - 88%). The extent of costs that are recovered from the fixed charge varies based on a municipality's goals and objectives (and their relative importance). For example, municipalities where ***conservation*** is a high priority tend to have a lower allocation of costs to fixed. Municipalities that allocate a large percentage of costs to be recovered from the fixed portion of the bill increase ***revenue stability and improve fairness and equity***, however, this increases costs to low volume Residential customers which can compromise ***affordability***. The right balance must be struck between all City goals and objectives.

Based on trends that BMA has tracked across Ontario over the past 10+ years, a number of municipalities have increased their allocation to the fixed charge to increase ***revenue stability*** caused by declining and unpredictable consumptions, similar to the situation in the City of London. Based on BMA's analysis of rate setting practices and the fixed/variable costs of operating water and wastewater systems, the actual fixed operating costs in the vast majority of municipalities surveyed exceeds the amount that is to be recovered from the fixed monthly charge because municipalities try to strike the right balance between competing goals and objectives such as ***revenue stability*** and ***fairness and equity*** versus ***conservation and affordability***. As such, there is no single accepted allocation of costs to be recovered from the fixed portion of the bill, municipalities must attempt to achieve the right balance.

Based on the analysis undertaken by BMA, there is a significant misalignment between the cost of service and the City's existing cost recovery strategy that must be addressed to improve ***fairness and equity*** and ***revenue stability***.

Existing Rate Structure

The City of London has one of the most complex rate structures in Ontario and this structure has been in place for 10+ years. The focus of this study is to maintain the intent of the existing rate structure (e.g. water inclining Residential 3 block rate structure and declining Non-Residential 3 block rate structure and different customer classes for wastewater) but to look for ways to address ***revenue stability*** and ***fairness and equity*** challenges without significantly changing the rate structure (e.g. changes in the thresholds or blocks, premiums/discounts, rationalization of the number of wastewater rates, etc.). A full rate structure review will be undertaken as the next stage in the process, exploring other mitigating measures as presented in prior proposed rate structure models.

The following summarizes the City's current rate structure as well as observations with respect to the above noted goals/objectives:

Water

- An **increasing water block** rate structure for residential users (3 blocks) - premiums are not significant and therefore do not appear to fully support conservation.
- A **declining block rate** water structure for commercial, industrial, institutional and multi-residential users (3 blocks) - discounts are significant.
- A small allocation of costs to be recovered from the fixed monthly fee—in 2012 this was equivalent to approximately 2% of the water budget being recovered from the fixed monthly charge
- Minimum $5 monthly fee

Wastewater

- 7 different wastewater rates for different users—these differential rates require rationalization in the future.
- No cost recovery from the fixed expenditures

Recommended Rate Structure Strategies

Amount to be Recovered from the Fixed/Variable Rates

The following approach was undertaken to determine the most appropriate allocation to fixed charges for the City of London:

- Consider practices employed in other jurisdictions and recommended through CWWA/AWWA;
- Identify all costs that could be allocated to fixed based on whether the cost varies by volumes consumed or is fixed;
- Consider current practices, rate history and the impact on various classes of customers; and
- Balance the goals and objectives that will be impacted from a change in the allocation of costs to be recovered from fixed including conservation, affordability, fairness and equity and revenue stability.

The focus of the analysis was to improve ***revenue stability*** and ***fairness and equity*** and, at the same time maintain customer ***affordability***. To achieve these objectives, it is recommended that the City reallocate the operating budget revenue recovery methodology to more closely reflect the underlying cost drivers (whether they are fixed or variable in nature). It is recommended that the City increase the amount to be recovered from fixed in water and establish a fixed monthly charge in wastewater.

While an allocation of costs to be recovered from fixed could be equal to the underlying costs drivers, consideration was given to ***affordability*** for low volume customers as well as ***conservation***. A move to the full allocation of costs to be recovered from the fixed fee without other significant structural changes, would result in a significant increase to the cost of service for low volume customers and as such is not recommended. Further, given the City's desire to support ***conservation***, a move to the full allocation of costs to be recovered from the fixed fee would compromise this objective.

The analysis focused on developing a smooth transition to the new allocation of costs to be recovered from the fixed monthly fee. It is recommended that in year one **30% of the total cost for both water and wastewater be recovered from the fixed monthly cost**. This represents less than half the actual fixed costs. This allocation should be further reviewed in phase two as part of a larger full rate structure review process. Analysis of numerous other options and alternatives were reviewed with an overall agreement that in the mid to long term the allocation should be increased further. However, to avoid significant shifts onto the residential small volume customer, 30% represented the maximum that should be recovered in the first year.

The next section of the report provides an overview of additional recommended strategies to be undertaken to mitigate shifts and address additional inequities in the existing rate structure. The additional strategies recommended include:

- Adjust the level of water premiums for Residential customers and discounts for Non-Residential customers to promote conservation and fairness and equity
- Incorporate the minimum charge into the new rates and introduce a Residential low volume customer strategy to support conservation
- Gradually converge wastewater rate classes in the Non-Residential customers to promote fairness and equity (this convergence is beneficial as it moves towards more comprehensive structural changes required in phase two)
- Update the meter equivalencies to improve fairness and equity

Water Premiums and Discounts

The City currently has an inclining rate structure for Residential properties to encourage ***conservation***. However, the existing premiums are very low; only a 5% premium for consumption in the second block and 10% in the third block of consumption (in relation to block one rates). This becomes even less effective when more costs are recovered from the fixed monthly fee. As such, in conjunction with the recommendation to increase the recovery of costs from the fixed monthly fee, it is recommended that the premiums be increased to support ***conservation.*** This will also mitigate the increase in costs to small volume Residential customers (***affordability***).

The increase in allocation of costs to be recovered from the fixed monthly fee reduces the cost of service to large volume Non-Residential customers who are currently receiving significant benefit from the large discounts afforded through the declining rate structure. As such, without an adjustment to the discounts, the small to mid-sized Non-Residential customers will increase significantly. The existing discounts are significant and not based on the underlying cost of service, therefore, they should be adjusted for Non-Residential customers. This will mitigate, in part, some of the shifts caused by increasing the fixed allocation to small and mid size Residential customers. The following tables reflect the existing and recommended discounts and premiums. Appendix D includes the 2012 existing and recommended volumetric rates. Note that the recommended rates are lower all Non-Residential customers. The Residential recommended rate for block one is also lower than the existing rate.

Residential Water		
	Existing Premium Compared With Block 1	Recommended Premium Compared With Block 1
Block 1		
Block 2	5%	60%
Block 3	10%	75%

Non-Residential Water		
	Existing Discount Compared With Block 1	Recommended Discount Compared With Block 1
Block 1		
Block 2	-83%	-40%
Block 3	-86%	-45%

Incorporating Minimum Charge into Residential Rates

The City's existing rate structure includes a minimum monthly charge of $5 in an effort to recover revenues to offset some of the fixed system costs from customers with very low consumption levels (less than 3 m^3 monthly). By moving to a 30% fixed monthly charge, the $5 minimum charge is no longer required as all Residential customers will be required to contribute to the fixed monthly fee at a level above the $5 per month level. However, to improve ***affordability*** for low volume Residential customers***,*** it is recommended that the first 5 m^3 per month, which is representative of a minimum level to support basic water usage for human hygiene be established. This serves to reduce the cost to low volume customers.

Convergence of Non-Residential Wastewater Classes

Currently there are seven different wastewater rates whereby Residential customers pay the highest rate and large Industrial customers pay the lowest rate. In fact, a large Industrial customer pays 29% of the Residential rate. Further, an Institutional customer that generates the same flows as an Industrial customer pays higher rates. These differences are based on past recommendations and have not been rationalized in a number of years. This may not adhere to principles of ***fairness and equity*** and should be fully assessed in stage two of the study. An interim approach to the seven wastewater classes of rates is to charge Industrial and Institutional customers that create the same flows the same rates. Further convergence of rates should be a focus of stage two of the analysis. The stage one recommended strategy is also to gradually reduce the differential between Non-Residential customers.

The following table summarizes the existing relative rates in relation to the Residential rate and the recommended rate differences. By making the noted adjustments below to the rate differentials, there is the ability to mitigate some of the shifts that are caused by increasing the fixed monthly allocation. As shown below, the recommended strategy is to reduce the differential in the Non-Residential wastewater rates across the six classes and to bring consistency for customers with the same wastewater flows. For example, currently Institutional and Institutional customers at rate one pay 45% and 41% respectively of the Residential rate, compared with the recommended rate for both customer types of 43%. This approach moves from seven different rates to five rates. This also moves rates for each class closer to actual flows (and associated costs) while continuing to support ***economic development***.

	Ratio to Residential						
	Residential	Commercial	Institutional Rate 1	Institutional Rate 2	Industrial Rate 1	Industrial Rate 2	Industrial Rate 3
Existing Rates	100%	61%	45%	37%	41%	34%	29%
Recommended	100%	57%	43%	40%	43%	40%	32%

Meter Equivalencies

Similar to the majority of municipalities surveyed and, in conjunction with the Association of Water Works Association (AWWA) practices, the City currently charges customers different fixed rates based on the size of the water meter service which is referred to a meter equivalency (ME) factor. Equivalent meter ratios for the meters and services are based on representative metering costs. The costs for installing, maintaining and replacing customer meters and services increase with the size of the service and the corresponding equivalent meter ratio increases for this reason. Equivalent meter ratios for the meters and services are based on representative metering costs using 5/8" meter as a base.

A key consideration in reviewing ***fairness and equity*** principles is to ensure that the differentials by meter size used to recover fixed costs are appropriate. This is particularly important given that the recommended strategy is to move from approximately 2% fixed in water to 30% and 0% in wastewater to 30%. It is intended to use meter equivalency as the surrogate for determining the fixed charge in the initial phase of implementing the change.

While the City is using weighting factors to define the monthly service charges by service size, these factors have not been updated in over 10 years. Many municipalities rely on industry standard meter equivalent ratios set out by AWWA to establish the appropriate meter service cost differentials. These are applied to the costs that are recovered from the fixed monthly charge. The following table reflects a comparison of the City's existing ME ratios in relation to 13 other municipalities surveyed (see appendix C for details). As shown below, the City's ratios far exceed the other municipalities surveyed for all customer types. Further, the ratios used in other municipalities are much more closely aligned with AWWA than the ratios in the City of London.

While a full rate study will be undertaken in stage two to calculate in detail the MEs, this is an area that must be modified in the interim, if a 30% fixed monthly allocation is implemented to support ***fairness and equity*** principles. As such, it is recommended that in the interim, AWWA standards be adopted. This is particularly important for customers with meter sizes 2" or greater where there are significant disparities.

	Survey Median	London	AWWA ME
5/8"	1.0	1.0	1.0
3/4"	1.0	1.1	1.5
1"	2.0	8.7	2.5
1 1/2"	3.7	17.0	5.0
2"	7.2	22.8	8.0
3"	13.1	56.8	17.5
4"	22.7	83.7	30.0
6"	54.4	141.3	70.0
8"	94.0	218.0	120.0

The following table provides the current meter equivalency factors being employed by the City and the recommended factors, using AWWA standards.

	Existing ME	ME AWWA
5/8"	1.0	1.0
3/4"	1.1	1.5
1"	8.7	2.5
1 1/2"	17.0	5.0
2"	22.8	8.0
3"	56.8	17.5
4"	83.7	30.0
6"	141.3	70.0
8"	218.0	120.0

As shown above, the recommended AWWA meter equivalencies are lower than the existing ratios used by the City for every meter size. By implementing AWWA standards, the cost to small, mid and large Non-Residential volume customers will decline which will help to offset increases in the small to mid size Non-Residential customer caused by an increase in the allocation of costs to the fixed monthly fee.

Residential Impact Analysis—Recommended Strategies

The following table summarizes the impact analysis of the recommended strategies compared to the existing 2012 rates for various Residential customers.

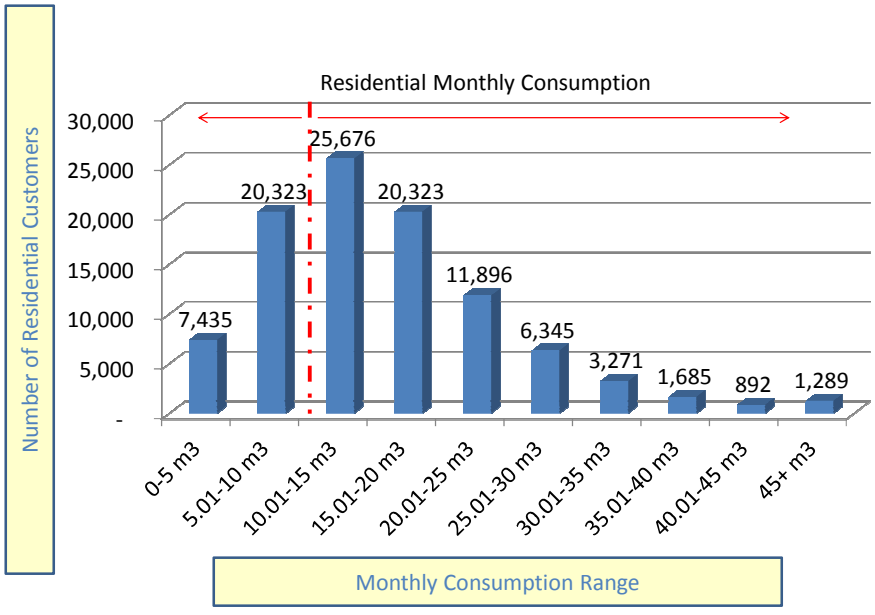
Annual m3 Monthly	Res. 80 7 5/8"	Res. 120 10 5/8"	Res. 150 13 5/8"	Res. 200 17 5/8"	Res. 360 30 5/8"
2012 Existing Rate Model					
Water	$ 137	$ 201	$ 250	$ 331	$ 602
WW	$ 132	$ 199	$ 248	$ 331	$ 596
Total	$ 269	$ 400	$ 498	$ 662	$ 1,198
Recommended Model - 2012					
Water Recommended	$ 158	$ 204	$ 237	$ 294	$ 582
WW Recommended	$ 149	$ 206	$ 249	$ 320	$ 548
Total	$ 307	$ 410	$ 486	$ 614	$ 1,129
Recommended Model - Difference to Existing 2012 Rates					
Difference Water	$ 21	$ 2	$ (12)	$ (36)	$ (20)
Difference WW	$ 17	$ 8	$ 1	$ (11)	$ (48)
Difference	$ 38	$ 10	$ (12)	$ (48)	$ (69)
% Difference	14.2%	2.4%	-2.4%	-7.2%	-5.7%

As shown above, customers consuming 150 m^3 or greater will experience a reduction in the cost of service as a result of the recommended strategies. Every effort was made to mitigate shifts, but due to the under contribution of low volume customers to the cost of the system, customers that consume 80 m^3 per year, which is an extremely low level of consumption, would experience an increase of $38 per year (approximately $3 per month). As will be shown on the next page, approximately 10% of Residential customers are at this level. As will also be shown on the next page, the Residential cost of service in comparison to a survey of municipalities reflects significantly lower costs in London in the existing rate model and also the recommended rates for all consumption levels except large volume Residential customers where the existing cost is 9.5% higher than the median and the recommended model is only 2.8% higher than the median.

	Res.	Res.	Res.	Res.	Res.
Annual m3	80	120	150	200	360
Meter Size	5/8"	5/8"	5/8"	5/8"	5/8"
Brantford	$ 352	$ 477	$ 570	$ 726	$ 1,225
Cambridge	$ 397	$ 523	$ 617	$ 774	$ 1,277
Chatham-Kent	$ 532	$ 602	$ 656	$ 744	$ 1,027
Durham	$ 389	$ 473	$ 536	$ 641	$ 976
Guelph	$ 407	$ 515	$ 596	$ 732	$ 1,165
Halton	$ 419	$ 493	$ 549	$ 641	$ 946
Hamilton	$ 249	$ 343	$ 414	$ 531	$ 907
Kingston	$ 684	$ 748	$ 797	$ 877	$ 1,146
Kitchener	$ 274	$ 411	$ 514	$ 685	$ 1,233
Ottawa	$ 243	$ 365	$ 456	$ 608	$ 1,094
Sarnia	$ 847	$ 864	$ 877	$ 898	$ 966
Toronto	$ 199	$ 299	$ 373	$ 498	$ 896
Waterloo	$ 294	$ 425	$ 523	$ 687	$ 1,210
Average	$ 407	$ 503	$ 575	$ 695	$ 1,082
Median	$ 389	$ 477	$ 549	$ 687	$ 1,094
London - 2012 Existing	$ 269	$ 400	$ 498	$ 662	$ 1,198
London - 2012 Recommended	$ 307	$ 410	$ 486	$ 614	$ 1,129
% Difference to Median - Existing	-30.8%	-16.1%	-9.2%	-3.6%	9.5%
% Difference to Median - Recommended	-21.0%	-14.1%	-11.4%	-10.6%	3.3%

The table to the left reflects the 2012 Residential cost of service in a number of area municipalities including London for various consumption levels. As shown in the table, the existing cost of water and wastewater service for a Residential customer consuming 80 m^3 per year is $269 in London compared with a survey average of $407 or a median of $389. London customers at this level pay 31% lower than the survey median. The recommended rate structure would result in an increase for these customers but customers in London would continue to be well below the survey average and median (21% lower).

Approximately 28% of the customers in the Residential class will experience an increase (those customers consuming less than approximately 10 m^3 per month), with the remaining 72% experiencing a decrease. As shown above, the cost of service in London will remain lower than the majority of municipalities surveyed for all consumption levels.



Non-Residential Impact Analysis—Recommended Strategies

The following table summarizes the impact analysis of the recommended strategies compared to the existing 2012 rates for various Non-Residential customers.

Annual m3 Monthly	Commercial 1,500 125 1"	Commercial 5,000 417 2"	Industrial 20,000 1,667 3"	Industrial 40,000 3,333 4"	Industrial 120,000 10,000 6"	Industrial 700,000 58,333 6"	Industrial > 40 1,500,000 125,000 6"	Instit. 120,000 10,000 6"	Instit >20 700,000 58,333 6"
2012 Existing Rate Model									
Water	$ 1,829	$ 5,643	$19,672	$36,716	$107,765	$ 614,942	$1,314,497	$107,765	$ 614,942
WW	$ 1,507	$ 5,023	$13,524	$27,047	$ 81,141	$ 397,517	$ 719,570	$ 88,453	$ 423,642
Total	$ 3,336	$ 10,666	$33,195	$63,763	$188,906	$1,012,459	$2,034,066	$196,218	$1,038,584
Recommended Model - 2012									
Water Recommended	$ 1,713	$ 5,616	$19,574	$37,542	$109,390	$ 589,064	$1,250,683	$109,390	$ 589,064
WW Recommended	$ 1,525	$ 5,043	$14,392	$28,180	$ 82,125	$ 411,117	$ 696,259	$ 82,122	$ 411,041
Total	$ 3,238	$ 10,659	$33,966	$65,723	$191,515	$1,000,180	$1,946,942	$191,512	$1,000,105
Recommended Model - Difference to Existing 2012 Rates									
Difference Water	$ (117)	$ (28)	$ (98)	$ 826	$ 1,625	$ (25,878)	$ (63,814)	$ 1,625	$ (25,878)
Difference WW	$ 18	$ 20	$ 869	$ 1,133	$ 984	$ 13,600	$ (23,311)	$ (6,332)	$ (12,601)
Difference	$ (99)	$ (7)	$ 770	$ 1,960	$ 2,609	$ (12,278)	$ (87,125)	$ (4,706)	$ (38,479)
% Difference	-3.0%	-0.1%	2.3%	3.1%	1.4%	-1.2%	-4.3%	-2.4%	-3.7%

As shown above, the majority of Non-Residential customers will experience a decrease under the recommended rate structure changes. As will be shown on the next page, the cost of service in London in comparison to a survey of 13 municipalities reflects significantly lower costs in the existing rate model and the recommended rate model.

Non-Residential Comparative Analysis

	Comm.	Comm.	Ind.	Ind.	Ind.	Ind.	Ind. > 40	Instit.	Instit. > 20
Annual m3	1,500	5,000	20,000	40,000	120,000	700,000	1,500,000	120,000	700,000
Meter Size	1"	2"	3"	4"	6"	6"	6"	6"	6"
Brantford	$ 4,787	$ 15,725	$ 64,059	$ 128,533	$ 380,532	$2,190,132	$4,686,132	$ 380,532	$2,190,132
Cambridge	$ 5,071	$ 16,856	$ 65,364	$ 129,937	$ 385,850	$2,209,196	$4,724,156	$ 385,850	$2,209,196
Chatham-Kent	$ 3,126	$ 9,918	$ 37,026	$ 58,401	$ 128,197	$ 626,994	$1,314,997	$ 128,197	$ 626,994
Durham	$ 3,267	$ 10,818	$ 39,268	$ 78,273	$ 212,743	$1,130,877	$2,397,283	$ 212,743	$1,130,877
Guelph	$ 4,353	$ 15,222	$ 55,488	$ 114,485	$ 336,621	$1,908,421	$4,076,421	$ 336,621	$1,908,421
Halton	$ 3,892	$ 13,346	$ 43,710	$ 84,742	$ 247,790	$1,322,754	$2,805,482	$ 247,790	$1,322,754
Hamilton	$ 4,168	$ 12,730	$ 48,994	$ 96,622	$ 286,883	$1,648,713	$3,527,123	$ 286,883	$1,648,713
Kingston	$ 3,452	$ 9,481	$ 32,140	$ 62,152	$ 179,159	$ 987,676	$2,102,879	$ 179,159	$ 987,676
Kitchener	$ 5,138	$ 17,126	$ 56,502	$ 137,004	$ 411,012	$2,397,570	$5,137,650	$ 411,012	$2,397,570
Ottawa	$ 4,909	$ 15,542	$ 60,760	$ 121,520	$ 364,560	$2,126,600	$4,557,000	$ 364,560	$2,126,600
Sarnia	$ 2,649	$ 9,562	$ 22,810	$ 39,360	$ 97,473	$ 343,875	$ 683,739	$ 97,473	$ 343,875
Toronto	$ 3,735	$ 12,449	$ 34,856	$ 69,712	$ 209,136	$1,219,960	$2,614,200	$ 209,136	$1,219,960
Waterloo	$ 4,971	$ 16,501	$ 65,716	$ 131,262	$ 393,185	$2,289,785	$4,905,785	$ 393,185	$2,289,785
Average	$ 4,117	$ 13,483	$ 48,207	$ 96,308	$ 279,472	$1,569,427	$3,348,680	$ 279,472	$1,569,427
Median	$ 4,168	$ 13,346	$ 48,994	$ 96,622	$ 286,883	$1,648,713	$3,527,123	$ 286,883	$1,648,713
London - 2012 Existing	$ 3,336	$ 10,666	$ 33,195	$ 63,763	$ 188,903	$1,012,459	$2,034,066	$ 196,215	$1,038,584
London - 2012 Recommended	$ 3,238	$ 10,659	$ 33,966	$ 65,723	$ 191,515	$1,000,180	$1,946,942	$ 191,512	$1,000,105
% Difference to Median - Existing	-20.0%	-20.1%	-32.2%	-34.0%	-34.2%	-38.6%	-42.3%	-31.6%	-37.0%
% Difference to Median - Recommended	-22.3%	-20.1%	-30.7%	-32.0%	-33.2%	-39.3%	-44.8%	-33.2%	-39.3%

As shown in the table above, the existing cost of water and wastewater service for all Non-Residential customers is well below the survey median. This continues to be the case for all Non-Residential customers in London under the recommended rate structure.

Summary

The following table summarizes the recommended changes and how these changes align with the goals and objectives.

Goal and Objective	*Assessment and Study Comments*
Revenue Stability	Increased revenue stability by approximately 30% for water and wastewater through the recommended reallocation of how costs would be recovered from the fixed and volumetric fees and rates.
Fairness & Equity	Improved fairness and equity by ensuring that all customers are contributing towards revenue requirements and the fixed costs of the system more commensurate with the cost of service. By updating the meter equivalencies, fairness and equity is supported.
Sustainability	Improved sustainability by increasing the guaranteed recovery of costs from the fixed portion of the bill.
Affordability	72% of the Residential customers will experience a reduction in the cost of service. Extremely low volume customers will experience an increase of $3 per month but will continue to pay significant lower costs than the majority of the municipalities surveyed.
Conservation	Continued support of conservation of water by increasing the premiums charged to high volume Residential customers.
Economic Development	Continued support of economic development by reducing the cost of service to the majority of Non-Residential customers. Further, Non-Residential customers in the City of London pay less for water/wastewater services than the majority of the municipalities surveyed.

Appendix D provides the recommended rates for 2012 should the City wish to implement the recommendations contained in this report.

Appendices

Appendix A—Goals and Objectives

Goal and Objective	Description
Sustainability	Life-cycle planning will be employed to ensure that sustainable levels of revenue are available to provide sufficient resources for future rehabilitation and replacement needs.
Revenue Stability	The rate structure should provide for a steady and predictable stream of revenues such that the City is capable of meeting its current financial requirements. To the extent possible, cash flows should be matched with expenditures. Any rate setting practice employed will consider the impact on revenue stability and take the appropriate actions to maintain/improve revenue stability.
Fairness and Equity	The rate structure and financial plan will ensure that customers are contributing equitably towards revenue requirements.
Affordability	The rate structure and financial plan will incorporate policies that support affordable water and wastewater services for all customers while, at the same time, ensuring that the full cost of service is being recovered.
Conservation	The rate structure will encourage the efficient and justifiable uses of water as well as assist in managing system demand. Programs that promote efficient water usage may reduce operating costs and capital investment needs over time.
Economic Development	The rate structure will align with other economic development initiatives and will consider the competitive positioning of commercial and industrial properties in London and the City's ability to attract new business to the community.

Appendix B - Benchmarking—Fixed versus Variable Costs (2011 Rates)

Municpality	Fixed Annual 5/8	Fixed as % of Total Residential 250 m^3
Aurora		0%
Brampton		0%
Caledon		0%
Cornwall		0%
East Gwillimbury		0%
Fort Frances		0%
Georgina		0%
Grimsby		0%
Kitchener		0%
Markham		0%
Meaford		0%
Middlesex Centre		0%
Mississauga		0%
North Bay		0%
Ottawa		0%
Richmond Hill		0%
Stratford		0%
Tecumseh		0%
Timmins		0%
Toronto		0%
Vaughan		0%
Whitchurch-Stouffville		0%
London	$ 7	1%
Waterloo	$ 32	4%
Lincoln	$ 57	6%
Welland	$ 87	8%
North Dumfries	$ 108	13%
Wellesley	$ 108	13%
Peterborough	$ 124	25%
Cambridge	$ 136	16%
Orangeville	$ 146	17%
Wilmot	$ 156	18%
Brantford	$ 157	18%
Newmarket	$ 168	21%
St. Thomas	$ 174	22%
Guelph	$ 184	23%
Hamilton **	$ 194	31%
Ajax	$ 207	29%
Clarington	$ 207	29%
Oshawa	$ 207	29%
Pickering	$ 207	29%
Whitby	$ 207	29%
Penetanguishene	$ 214	23%
St. Catharines	$ 222	25%

Municpality	Fixed Annual 5/8	Fixed as % of Total Residential 250 m^3
Quinte West	$ 240	38%
Barrie	$ 252	33%
Burlington	$ 261	37%
Halton Hills	$ 261	37%
Milton	$ 261	37%
Oakville	$ 261	37%
Bracebridge	$ 269	23%
Gravenhurst	$ 269	23%
Huntsville	$ 269	23%
Lambton Shores	$ 276	22%
Pelham	$ 279	35%
Innisfil	$ 299	31%
Woolwich	$ 312	28%
Thorold	$ 323	37%
Kingsville	$ 327	62%
King	$ 329	43%
Tillsonburg	$ 342	41%
Brockville	$ 349	59%
Thunder Bay	$ 352	40%
Belleville	$ 358	37%
Central Elgin	$ 368	31%
Chatham-Kent	$ 372	48%
Kawartha Lakes	$ 380	32%
Windsor	$ 391	36%
Sault Ste. Marie	$ 394	58%
West Lincoln	$ 396	40%
Greater Sudbury	$ 399	41%
St. Marys	$ 456	60%
The Blue Mountains	$ 481	54%
Niagara-on-the-Lake	$ 497	50%
Niagara Falls	$ 505	51%
Kingston	$ 521	58%
Port Colborne	$ 538	50%
Kenora	$ 539	59%
Leamington	$ 563	76%
Prince Edward County	$ 625	45%
Fort Erie	$ 727	58%
Sarnia	$ 813	88%
Average	**$ 222**	25%
Median	**$ 207**	25%
Minimum	**$ -**	0%
Maximum	**$ 813**	88%

Appendix C - Meter Equivalency Ratios (2012 Rates)

	Brantford	Chatham-Kent	Cambridge	Durham	Guelph	Halton	Hamilton	Kingston	Kitchener	Ottawa	Sarnia	Toronto	Waterloo	London
5/8"	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	N/A	1.0	1.0	N/A	1.0	1.0
3/4"	1.0	1.0	2.5	1.0	1.0	1.0	1.0	2.5	N/A	1.8	1.4	N/A	1.0	1.1
1"	1.0	1.2	5.0	2.0	1.4	1.7	5.3	2.5	N/A	2.8	2.5	N/A	2.0	8.7
1 1/2"	1.1	2.4	8.0	4.3	3.7	3.1	5.9	3.0	N/A	7.1	4.9	N/A	3.7	17.0
2"	1.2	3.4	17.5	9.3	8.0	7.2	7.0	3.5	N/A	11.1	9.1	N/A	4.6	22.8
3"	2.3	6.1	30.0	16.4	16.8	13.1	12.1	5.6	N/A	25.0	17.6	N/A	9.7	56.8
4"	2.7	7.6	62.5	32.7	29.0	22.7	15.5	7.5	N/A	44.4	27.5	N/A	14.1	83.7
6"	3.6	11.5	80.1	60.7	54.4	58.4	27.4	11.4	N/A	100.0	57.2	N/A	24.0	141.3
8"	4.5	17.2	115.1	103.5	156.4	94.0	47.3	21.0	N/A	177.8	110.0	N/A	36.3	218.0

Appendix D - 2012 Existing and 2012 Recommended Rates

Water

Residential Water Rates

Water Supply (Based on Consumption)	2012 Existing Rates per m3
First 16.990 m^3	$ 1.6149
Next 39.644 m^3	$ 1.6976
Additional m^3	$ 1.7789

Water Supply (Based on Consumption)	2012 Recommended Rates per m3
First 5 m3	no charge
Next 11.990 m^3	$ 1.1333
Next 39.644 m^3	$ 1.8132
Additional m^3	$ 1.9832

Non-Residential Water Rates

Water Supply (Based on Consumption)	2012 Existing Rates per m^3	2012 Recommended Rates per m^3
First 2.832 m^3	$ 6.1838	$ 1.5037
Next 707.925 m^3	$ 1.0588	$ 0.9022
Additional m^3	$ 0.8744	$ 0.8270

Fixed Rates

Fixed	2012 Existing Water Monthly Rates	2012 Recommended Water Monthly Rates
5/8"	$ 0.64	$ 11.29
3/4"	$ 0.70	$ 16.94
1"	$ 5.57	$ 28.23
1 1/2"	$ 10.88	$ 56.46
2"	$ 14.58	$ 90.34
3"	$ 36.36	$ 197.61
4"	$ 53.55	$ 338.76
6"	$ 90.41	$ 790.45
8"	$ 139.53	$ 1,355.06

Appendix D Recommended Rates Cont'd

Wastewater

		2012 Existing Rates per m^3	2012 Recommended Rates per m^3
Line 1	Residential	N/A	first 5 m3 free
Line 1	Residential	$ 1.65516	$ 1.42272
Line 2	Commercial	$ 1.00457	$ 0.81537
Line 3	Institutional	$ 0.73711	$ 0.61389
Line 4	Institutional over 600,000 m3	$ 0.60520	$ 0.57512
Line 5	Industrial	$ 0.67618	$ 0.61389
Line 6	Industrial over 600,000 m3 and under 1.2 million m3	$ 0.56788	$ 0.57512
Line 7	Industrial over 1.2 million m3	$ 0.47971	$ 0.45854

Fixed	2012 Recommended Existing Rates	2012 Recommended WW Monthly Rates
5/8"	N/A	$ 10.06
3/4"	N/A	$ 15.10
1"	N/A	$ 25.16
1 1/2"	N/A	$ 50.32
2"	N/A	$ 80.52
3"	N/A	$ 176.13
4"	N/A	$ 301.95
6"	N/A	$ 704.54
8"	N/A	$ 1,207.78