



Water Rate Harmonization
Background Study

February 9, 2006

EXECUTIVE SUMMARY

This report presents a review of the current practices and rate structure respecting the water and wastewater program, and an analysis of a number of options to provide a harmonized rate across the new city.

Currently no uniform rate exists amongst the former local municipalities, for which the retail rate ranges from \$0.7983 to \$1.034 per cubic metre. One of the primary reasons for such variation arises from the manner in which water and sewer costs were identified and allocated between the tax-supported and rate-supported program areas. This difference was most profound Scarborough, which funded sewer costs through the property tax levy, resulting in an apparently lower water rate. Due to the significant variations in the retail rates, the implementation of any harmonization strategy presents certain challenges.

A review of customer accounts revealed general customer profiles within certain consumption ranges. It is estimated that, while residential households make up approximately 91.0 percent of billing accounts, they provide only 31.0 percent of billing revenue. The one-percent of high volume accounts provide the City with 52.5 percent of its water revenues. As such, this commercial/industrial base should be considered important. A comparison of the water and wastewater rates and rate structures of the surrounding municipalities showed water and wastewater costs to be generally lower in Toronto for residential customers. However, such is not the case for higher-volume users, and this difference becomes more evident for consumption's greater than 10,000 cubic metres per year. Very high-volume customers would find costs to be as much as 40.0 percent lower in Durham than the average Toronto costs. Even Scarborough's apparently low current high-volume rate structure loses its competitiveness at volumes exceeding 100,000 cubic metres per year.

Option (1) considers the impacts of harmonizing to the average rate of \$0.9416 per cubic metres for all users. The analysis of this option indicates that, while the impacts may be manageable in absolute terms for the residential customer profile, it presents a significant impact to those medium and large industrial customers in Scarborough and Etobicoke.

Option (1A) attempts to mitigate the annual impact to all customer profiles by phasing-in the harmonized rate over several years. Phasing-in only serves to delay the impacts noted above. A modified version of this option was also explored, which prescribes phasing-in over two phases; each municipality would move to their full-cost accounting rate in the first year, followed by harmonization in the second year. The latter version may be considered by some to be fairer from a cost-accounting perspective should a harmonized rate not be immediately implemented. The end-impact in either approach is the same. Neither of these approaches address the competitiveness of the rate amongst the various customer profiles, and in particular, the one-percent of high-volume customers who generate more than half the water revenues.

Option (2) attempts to define a rate structure that mitigates the impacts to the high-volume customers, and in particular, the Scarborough high-volume customers. One approach explored is to adopt Scarborough's rate structure for all high-volume customers (consumption greater than 272,766 cubic metres per year). This would require a two-class rate structure, where high volume users pay at a rate of \$0.7983 for the first 272,766 cubic metres, and \$0.7225 on volumes over this amount; all other

users would pay \$0.9626. While this objective can be achieved, it is at the expense of all other users, encourages water inefficiency, and benefits only a small number of customers. A variation of this approach would be to provide a discount (31.2 percent) on volumes above the threshold, however, it too benefits only a few customers.

Option (3) presents an alternate approach that considers various rate structures for various customer classes. Since the water rate must provide for full funding for the water and wastewater program, this approach would result in shifts in burden between customer classes. Variations in the rate structure can be designed to mitigate the potential impact of harmonization, or to ensure competitiveness with the surrounding regions. Currently, the average cost of water in the amalgamated Toronto is lower for the residential (low-volume) user compared to the surrounding regions, and higher than the surrounding regions for high-volume users. Thus, there is room for cost-reallocation, which would enhance the city's competitiveness with the surrounding regions.

Amalgamation presents a unique opportunity for the City to reexamine its water pricing strategy with respect to all customers. The pricing strategy presented under Option (3) provides for fairness, encourages water efficiency, and improves the city's competitiveness amongst the various customer classes with the surrounding regions.

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FOREWORD

This report presents a review of the current practices and rate structure respecting the water and wastewater program, and an analysis of a number of options to provide a harmonized rate across the new city.

Part I presents a background of water and wastewater services and rates. Currently no uniform rate exists amongst the former local municipalities, for which the retail rate ranges from \$0.7983 to \$1.034 per cubic metre. One of the primary reasons for such variation arises from the manner in which water and sewer costs were identified and allocated between the tax-supported and rate-supported program areas. This difference was most profound Scarborough, which funded sewer costs through the property tax levy, resulting in an apparently lower water rate. In addition to differences in rate structure, other variations in policy continue to exist in the new City. These include differences in policies respecting early payment discounts, sewage surcharge rebates, and flat-rate billing, which are all considered in this report under the context of water and sewer rate harmonization.

Part II presents the results of the review of customer accounts culled from the billing systems of the former municipalities. This review revealed general customer profiles within certain consumption ranges. It is estimated that, while residential households make up approximately 91.0 percent of billing accounts, they provide only 31.0 percent of billing revenue. Analysis also indicated that 99.0 percent of accounts involve customers whose consumption are less than 10,000 cubic metres per year, and provides for 47.5 percent of the billing revenue. The remaining one-percent of higher-volume customers provide 52.5 percent of the billing revenue.

Part III presents a comparison of the water and wastewater rates and rate structures of the City of Toronto and of the surrounding municipalities. This comparison shows water and wastewater costs to be generally lower in Toronto for residential customers, however, such is not the case for higher-volume users, and this difference becomes more evident for consumption's greater than 10,000 cubic metres per year. Very high-volume customers would find costs to be as much as 40.0 percent lower in Durham than the average Toronto costs. Even Scarborough's apparently low current high-volume rate structure loses its competitiveness at volumes exceeding 100,000 cubic metres per year.

Part IV provides a discussion and analysis of the impacts of rate harmonization. Under simple harmonization, each former municipality's rates would move to the current average rate of \$0.9416 cents per cubic metre. Billing revenues will increase for municipalities whose current rates are below the average, and decrease for those whose rate is above the average. Ratepayers would experience an increase of 18.0 and 4.4 percent in Scarborough and Etobicoke, respectively, while ratepayers in the East York, Toronto, and York would see a decrease ranging from 7.0 to 9.0 percent. North York would be minimally impacted. The analysis indicates that the impact would be less than \$2.00 per month for two-thirds of residential customers. As such, harmonization of the rate for 99.0 percent of customer accounts could be immediately implemented with minimal impact to this customer base. However, the impacts are more significant for the one-percent of customers whose consumption exceeds 10,000 cubic metres per year, and in particular, for the high-volume industrial users. For some of these customers, the increase as a result of simple harmonization would be in the range of \$100,000 to \$700,000 per year. For some of these customers, the water bill exceeds the property tax bill.

Due to the significant variations that exist in the rate structures, the implementation of any harmonization strategy will present challenges. Part V presents several options and their advantages and disadvantages. Option (1), simple harmonization, is conceived on the basis that water is a basic service used by everyone, and that all users should pay at the same rate. While this option is viable, it results in significant impacts to large industrial users in Scarborough and Etobicoke. Option (1A) attempts to mitigate the impact by phasing-in the harmonized rate over several years. These options ignore the issue of competitive pricing for the one-percent of medium-to-large customers who provide more than half the water revenue. Option (2) attempts to mitigate the impacts to high-volume users, particularly in the former City of Scarborough. One approach would be to adopt Scarborough's rate structure for all high-volume users; another approach would be to find the discount on the rate that minimizes the impacts. Option (3) capitalizes on the fact that amalgamation presents a unique opportunity for the City to reexamine its water pricing strategy with respect to all customers, and considers various rate structures for various customer profiles. This option presents a rate structure that is designed to mitigate the potential impact of harmonization, encourage water-use efficiency, and to ensure competitiveness with the surrounding regions.

Part VI reviews other water and wastewater other harmonization issues. Recommendations are presented respecting flat-rate accounts, sewer surcharge rebates and late payments penalties.

INTRODUCTION

On January 1, 1998, the new City of Toronto was created under the authority of the City of Toronto Act (Parts I and II), and to which was transferred the responsibility for providing the water and wastewater services of the former lower tier and upper tier municipalities. The Toronto Transition Team was formed to provide recommendations and to guide the new City through its transition phase. With respect to water and wastewater services, the Transition Team recommended that a strategy be developed to harmonize rates across the new City, and that until water rates are harmonized, a consistent approach to costs should be applied in determining the water rates for each of the existing municipal areas.

At its meeting on June 3 to 5, 1998, during consideration of matters related to the 1998 Operating and Capital Budget for the Water and Water Pollution Control Programs (as contained in Clause 2 of Report No. 6 of The Strategic Policies and Priorities Committee), Council deferred the undertaking of water rate harmonization to 1999, to be part of a report on the harmonization of all fees and service level changes for the City. Instead, Council adopted certain recommendations respecting the standardization of fees for water and wastewater services. These included, among other things, fees for water valve turnoffs and account certificates, to be effective as of July 1, 1998.

In regard to the same matter, Council further authorized the transfer of \$18.7 million of expenditures from the tax levy to the water rate, reduced the combined program net expenditure in the amount of \$14.9 million, and authorized a general water rate increase of 2.0 percent to fund the difference. The 2.0 percent rate increase was applied to the former area municipalities' respective water, sewer and flat rates. Of the \$18.7 million transferred from the tax levy to the water rate, \$10.4 million was related to sewer costs in the former City of Scarborough, which was the only jurisdiction that did not provide funding for sewer costs within the water rate. The balance of the transfer was a result of a number of adjustments across all the municipalities to better reflect the allocation of costs between the rate supported and tax supported program areas.

Currently, no uniform rate or rate structure exists amongst the former local municipalities. The purpose of this study is to provide an analysis of the impacts of rate harmonization, identify the relevant issues, and to present a strategy towards a harmonized rate across the new City. To this end, the 1998 water billing tapes of the former municipalities was reviewed in order to characterize customer profiles and to estimate the impacts of various rate harmonization strategies. The assessment of each of the various options and strategies was made against the following harmonization principles:

- rates should be fair and equitable across municipalities and across customer classes;
- rates should position the City competitively with the surrounding regions in regards to various customer classes; and,
- rates should encourage water use efficiency.

It is believed that the conclusions drawn from this study point to a rate harmonization strategy that achieves these objectives.

I. REVIEW OF CURRENT RATES AND RATE STRUCTURES

Prior to amalgamation, the former Municipality of Metropolitan Toronto (Metro) operated four water treatment plants in the Metropolitan Toronto area and provided water at pressure on a wholesale basis to the area municipalities of East York, Etobicoke, North York, Scarborough, Toronto and York. The wholesale rate to the area municipalities for 1997 was 15.56 cents per cubic metre. Since 1975, Metro has also supplied water on a wholesale basis to the Region of York by agreement, which was renewed in 1998. The rate charged to the Region of York in 1997 and 1998 was 19.50 cents per cubic metre. Metro also operated four sewage treatment plants and sewer surcharge rate to the area municipalities for 1997 was 38.58 cents per cubic metre, resulting in a combined wholesale rate of 54.15 cents per cubic metre.

The former area municipalities were responsible for conveying the water from the trunk mains to the customer, as well as bill collection. The former area municipalities were also responsible for the part of the system from the connection at the Metro trunk mains to the end user for both water and sewer services. The combined average residential water and sewer surcharge rates charged by the area municipalities ranged from 78.26 to 101.40 cents per cubic metre (\$3.55 to \$4.60 per thousand gallons), prior to the 2.0 percent increase authorized effective July 1, 1998. All retail rates reflect the early payment discount, if any, for payment on or before the due date.

Although all the area municipalities purchased water from Metro at the same wholesale rate of 15.56 cents per cubic metre (plus 38.58 cents per cubic metre for the sewer surcharge), each municipality set their own retail rate depending on their accounting practices and customer base. For example, the City of Toronto offers water on a metered service as well as on a flat rate basis dependent on the number of water fixtures in a property rather than consumption. The former cities of Etobicoke, Scarborough and York offer a block structure providing for lower rates as certain consumption milestones are surpassed. The City of Scarborough did not charge for the cost of local sewer services in its water rate, which were instead funded by the property tax base.

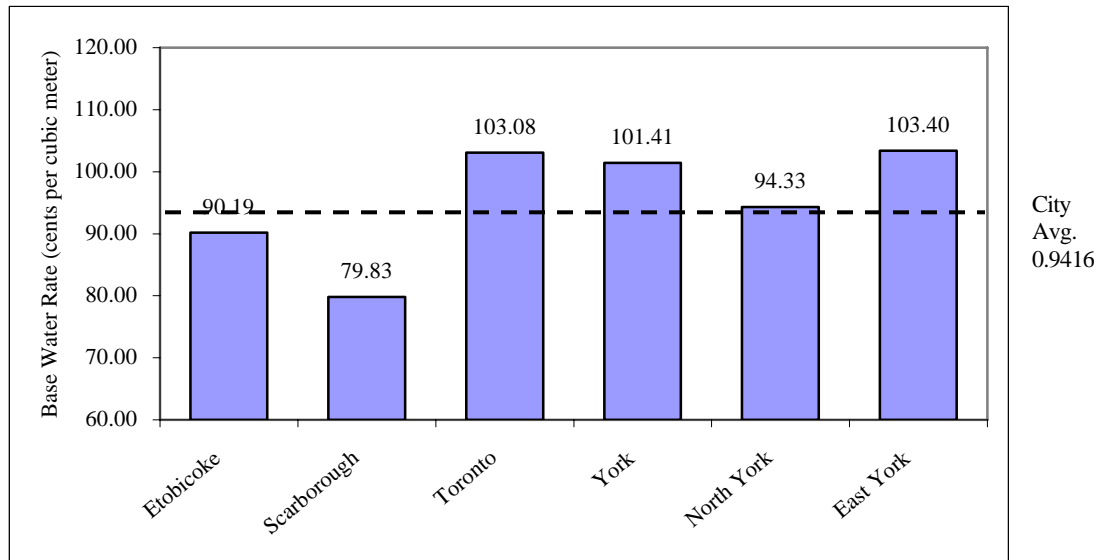
Currently, no uniform rate exists amongst the former local municipalities. By-law 356-1998, adopted by Council on June 5, 1998, continues the former municipalities various rate structures pending a water harmonization strategy, and is summarized in Table 1. For reference, the 1998 budgeted average unit cost for production and distribution of water, and the collection and treatment of wastewater (including the Scarborough sewer component), was calculated at 94.16 cents per cubic metre of water, based on the 1998 operating and capital requirements of the water and wastewater program. In addition to rate harmonization, it is also noted that other variations in policies respecting early payment discounts, sewage surcharge rebates, and flat-rate billing, which are all considered in this report under the context of water and sewer service harmonization.

Table 1
Summary of Current Rate Structure
(By-Law 356-1998)

City	Base Rate – Metered (paid by due date) (\$/M3)	High Volume Discount (% of bill)	Payment Discount/ Penalty (% of bill)	Flat Rate - Not Metered - Residential (\$ per year)	Flat Rate - Not Metered - Other Buildings (\$ per bill)	Minimum Bill – Commercial / Industrial (\$ per year)	Hydro Sub-Stations (\$ per year)
East York	1.03400	None	5.0% penalty	None	None	None	None
York	1.01406	23.2% if 454,600 M3 surpassed	5.0% penalty	None	None	None	None
Etobicoke	0.90187	5.0% above 272,766 M3	10.0% discount	296.13	840.00	45.46	213.03
Scarborough	0.7983	9.5% above 272,766 M3	5.0% penalty	None	None	None	None
North York	0.94330	None	10.0% penalty	None	None	None	None
Toronto	1.03083	None	4.0% discount	Yes - Depends on Fixtures	Yes - Depends on Fixtures	None	None

*all rates reflect discount, if any, for payments on or before the due date

Figure 1
Current Water Rates (cents per cubic metre)



Full-Cost Recovery in Setting Water Rates

The operating and capital programs of the city's water works is required by provincial legislation to remain fully self-funding through the imposition of a water rate upon owners or occupants of land who derive a benefit from such service. While not explicitly legislated, the sewer works of the former local municipalities, with the exception of Scarborough, were mostly self-funding through their respective water and sewer rates.

This section presents for information a discussion on what the former municipalities rates would have been had all costs been accounted for in a consistent manner. A consistent approach to costs until the water rates are harmonized is consistent with the recommendation of the Toronto Transition Team in their report dated December, 1997. Should a harmonization initiative not be under taken, then a full-cost approach to rate-setting would be warranted.

Table 2 shows the theoretical pre-amalgamation impact to the former municipalities combined water and sewer rates as a result of full-cost recovery within the water rate of the \$18.7 million in expenditures previously provided from the tax base. Scarborough's water rate would rise by \$0.1233 per cubic metre to \$0.9059 per cubic metre to reflect sewer costs, and to a lesser extent, administration costs that were previously funded by property taxpayers. Etobicoke's rate would rise by \$0.1038 per cubic metre to \$0.9880 per cubic metre, reflecting the sewer, administration and debt service costs previously funded by property taxpayers. Toronto's rate would fall by \$0.0068 cents per cubic metre to reflect the removal road cleaning costs from the water rate. North York's rate would rise by \$0.0208 per cubic metre to reflect administration costs. The impact York and East York are a result of other minor adjustments.

Table 2
Impact of Full-Recovery of Costs in Water Rate Pre-Amalgamation

Former City	Volume* (000's M3)	Pre-Amalgamation					
		1997 Water and Sewer Rate (\$/M3)	1997 Revenue from Rate (\$000's)	1997 Program Expenditures Transferred from Tax Base to Water Rate (\$000's)	1997 Total Program Revenue (\$000's)	1997 Effective Rate** (\$/M3)	1997 Impact on Water Rate (\$/M3)
	(1)	(2)	(3)=(1)*(2)	(4)	(5)=(3)+(4)	(6)=(5)/(1)	(7)=(6)-(2)
Scarborough	86.179	0.7826	67.44	10.55	77.99	0.9059	0.1233
Etobicoke	65.705	0.8842	58.10	6.76	64.86	0.9880	0.1038
Toronto*	131.010	1.0106	132.40	-1.00	131.40	1.0038	-0.0068
North York	103.880	0.9248	96.07	2.07	98.14	0.9456	0.0208
York	19.622	0.9947	19.52	0.00	19.52	0.9956	0.0009
East York	16.824	1.0137	17.05	0.00	17.05	1.0146	0.0009
Total	423.220	0.9231	390.58	18.38	408.96	0.9672	0.0440
Metro**	423.220			0.37			

*Volume for Toronto flat-billing customers estimated at 30 million M3 for rate calculation purposes

**Metro cost allocated proportionately on a per-cubic-metre consumption basis

In conjunction with the transfer of the above noted expenditures to the water rate, Council also directed program expenditure reductions in the amount of \$15.0 million. These reductions were general in nature, such as restructuring savings, and cannot be attributed to any particular city. The expenditure transfer and reductions together provide of consistent basis for the pricing of water. Council also further directed a 2.0 percent general increase to each of the former municipalities' water rates. Table 3 shows the theoretical post-amalgamation impact of these actions. With a consistent approach to costing, it can be seen that the variation in the rates is greatly reduced, ranging from \$0.8861 to \$0.9995 under a full-cost recovery approach rather than the \$0.7983 to \$1.034 that currently exists.

Table 3
Impact of Full-Recovery of Costs in Water Rate Post-Amalgamation

City	Volume (000's M3)	1998 Authorized Water and Sewer Rate (\$/M3)	1998 Revenue Increase from 2% Rate Increase (\$000's)	1998 Rate Increase Impact on Rate (\$/M3)	1998 Amalgama- tion Reductions (\$000's)	1998 Reduction Rate Impact (\$/M3)	1998 Full Cost Rate (\$/M3)
	(1)	(8)	(9)=.02*(8)*(1)	(10)=.02*(8)	(11)	(12)=(11)/(1)	(12)
Scarborough	86.179	0.7983	1.35	0.0157	(3.05)	(0.0354)	0.8861
Etobicoke	65.705	0.9019	1.16	0.0177	(2.33)	(0.0354)	0.9702
Toronto	131.010	1.0308	2.65	0.0202	(4.64)	(0.0354)	0.9887
North York	103.880	0.9433	1.92	0.0185	(3.68)	(0.0354)	0.9287
York	19.622	1.0141	0.39	0.0199	(0.69)	(0.0354)	0.9801
East York	<u>16.824</u>	<u>1.0340</u>	<u>0.34</u>	<u>0.0203</u>	<u>(0.60)</u>	<u>(0.0354)</u>	<u>0.9995</u>
Total	423.220	0.9416	7.81*	0.0185	(14.98)	(0.0354)	0.9350*
			3.91**				0.9416**

*Annualized; actual increase effected July 1, 1998

**Half-year effect of above

II. CUSTOMER PROFILE

Based on a review of the 1998 water billing tapes of the former municipalities, approximately 393.0 million cubic metres of water was sold to 373,000 metered customers in the Toronto proper. Water was also sold to an additional 86,700 customers without meters on a flat-rate basis, primarily in the former City of Toronto. The estimated revenue was approximately \$370.0 million (before high volume discounts of approximately \$1.4 million) from the metered customers, with an additional \$30.0 million in billing revenue from flat-rate customers. The "average" 1998 budgeted water and sewer rate was previously determined to be 94.16 cents per cubic metre.¹ Similarly, the average annual flat-rate bill is calculated to be approximately \$350.00 per customer account.

¹ Clause 2 of Report No. 6 of The Strategic Policies and Priorities Committee, as considered by Council on June 3 to 5, 1998, during consideration of matters related to the 1998 Operating and Capital Budget for the Water and Water Pollution Control Programs. It should be noted that the 0.9416 rate includes a 2% rate increase effective July 1, 1998; the average annualized rate for 1998 is estimated at 0.9350.

The review of the accounts revealed general customer profiles within certain consumption ranges. Billing where consumption was less than 1,000 cubic metres per year consisted predominantly of single-family households. This class makes up 75.0 percent of all accounts (342,627 accounts), however, it provides only 25.0 percent of water revenues (\$98.0 million).

Accounts in the range of 1,000 to 10,000 cubic metres per year generally consisted of small commercial/industrial/office buildings, small condominium and apartment complexes (i.e., less than 20 units), small strip malls and stand-alone restaurants. This class makes up 5.5 percent of all accounts (25,505 accounts), and generates 15.0 percent of the water revenue (\$60.0 million).

Accounts in the range of 10,000 to 250,000 cubic metres per year generally consisted of medium-size commercial/industrial/office buildings, medium condominium and apartment complexes (i.e., less than 100 units), larger strip malls and restaurants. As a whole, this class makes up less than 1.0 percent of all accounts (4,578 accounts), yet generates 42.0 percent of the water revenue (\$167.0 million). Table 4 provides a further breakdown of the distribution amongst this class. A preliminary review of these accounts suggests the industrial property class occupy 25.0 to 35.0 percent of these properties, with the balance being of the commercial and residential class. It should be noted that there are just over one thousand premises in this category consuming over 50,000 cubic metres per year and generating \$100.0 million in revenue.

Table 4
Customer Distribution within Medium-Sized Properties
(10,000 M3 to 250,000 M3)

	<u>No. of Customers</u>	<u>Volume (000's M3)</u>	<u>Revenue (\$000's)</u>
10,000 < Volume <=25,000 M3	2,372	37,674	35,930
25,000 < Volume <=50,000 M3	1,113	39,658	37,529
50,000 < Volume <=100,000 M3	772	53,409	49,851
100,000 < Volume <=250,000 M3	<u>321</u>	<u>46,674</u>	<u>44,281</u>
Total- Medium-Size	4,578	177,415	\$167,591

Accounts that consumed more than 250,000 cubic metres per year includes several large office towers, a regional shopping centre, several very large apartment and condominium complexes, hospitals, but predominantly consists of very large industrial properties. Most are located in the Cities of Scarborough, Etobicoke and downtown Toronto. There are 75 properties of this class (0.016 percent of all accounts), which generate 10.2 percent of water revenues.

In this class, only the cities of Etobicoke, Scarborough and York currently provide discounts for high-volume usage. The cities of Etobicoke and Scarborough provide a rate discount of 5.0 percent and 9.5 percent, respectively, on volumes in excess of 272,766 cubic metres per year. The City of York provides a rate discount of 23.2 percent on the entire volume if consumption exceeds 454,600 cubic metres per year. The total discount provided in 1998 amounted to \$1.37 million for 30 customer accounts. With respect to the City of Etobicoke, the high volume discount would apply to a total of 17 accounts, consuming 17.6 million cubic metres of water and generating \$15.8 million in gross revenue before discounts in the amount of \$583.6 thousand. With respect to the City of Scarborough, the high volume discount would apply to a total of 10 accounts, consuming 8.6 million cubic metres of water

and generating \$6.9 million in gross revenue before discounts in the amount of \$448.0 thousand. With respect to the City of York, the high volume discount would apply to a total of 3 accounts, consuming 1.8 million cubic metres of water and generating \$1.8 million in gross revenue before discounts in the amount of \$337.0 thousand.

Flat rate accounts predominate in the former City of Toronto, for which there are approximately 85,000 flat rate accounts versus 45,000 metered accounts. A customer on a flat rate account is generally charged in accordance with the number of rooms and fixtures installed in the building, or in some cases, on per-building basis. It should be noted, however, that while flat rate service accounts for 65% of the City of Toronto accounts, it only represents 22% of the revenues billed in that city. The former City of Etobicoke also has a few remaining flat rate accounts (less than 1,500), which is not significant compared to its 66,000 metered accounts. A preliminary review of the flat-rate accounts suggests that approximately 75,000 accounts are attributable to residential properties.

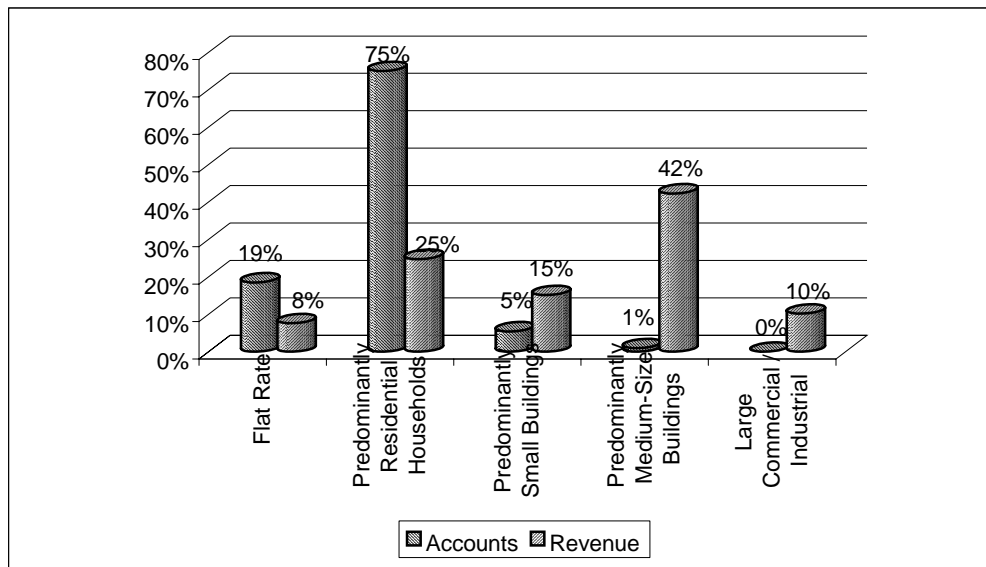
Table 5 provides a summary of the profile of water customers in the City of Toronto proper. Additional details are shown in Appendix 1. The summary indicates that while residential customers make up approximately 91.0 percent of billing accounts (approximately 418,000 accounts), they provide only 31.0 percent of the billing revenue. The table also indicates that 99.0 percent of accounts involve customers whose consumption is less than 10,000 cubic metres per year, and provides for 47.5 percent of the billing revenue. The remaining one percent of "high-volume" customers whose consumption is greater than 10,000 cubic metres per year (4,653 accounts) provide 52.5 percent of the billing revenue. Figure 2 provides a relative comparison of the number of accounts versus revenue.

Table 5
Summary of Water Customer Profile

<u>Customer Profile</u>	<u>Volume Range</u>	<u>No. of Customers</u>	<u>% of Customers</u>	<u>Volume Consumed (000's M3)</u>	<u>% of Volume Consumed</u>	<u>Total Revenue (\$000's)</u>	<u>% of Total Revenue</u>	<u>Average Annual Cost per Account (\$'s)</u>
Flat Rate Customers (estimated residential)	Not Applicable	86,662* (75,000)	18.9% (16.0%)	Not Known	n/a	30,150 (26,100)	7.6% (6.6%)	\$ 348
Predominantly Residential Households, excluding condominiums and apartments	Less than 1,000 M3	342,627	74.6%	107,226	27.3%	98,112	24.8%	\$ 286
Predominantly Small Commercial / Industrial / Office, Small Condominium / Apartment Complexes, Strip Malls and Stand-alone Restaurants	1,000 M3 to 10,000 M3	25,505	5.6%	63,303	16.1%	60,004	15.1%	\$ 2,353
Predominantly Medium Commercial / Industrial, Medium Offices, Medium Condominiums and Apartment Complexes, Strip Malls	10,000 M3 to 250,000 M3	4,578	0.978%	177,415	45.1%	167,591	42.3%	\$ 36,608
Predominantly Large Industrial, Large Offices, Large Condominiums and Apartment Complexes, Including Hospitals	250,000 M3 to 500,000 M3	53	0.011%	18,281	4.6%	17,249	4.4%	\$325,453
Predominantly Large Industrial and Large Offices	500,000 M3 to 1,000,000 M3	14	0.003%	9,021	2.3%	8,318	2.1%	\$594,143
Large Industrial	Greater than 1,000,000 M3	8	0.002%	17,970	4.6%	14,817	3.7%	\$1,852,125
Grand Total		459,447	100.000%	393,217	100.0%	396,240	100.0%	

* approximately 75,000 residential households

Figure 2
Comparison of Customer Profiles and Revenue



III. COMPARISON OF WATER COSTS – TORONTO AND SURROUNDING AREA

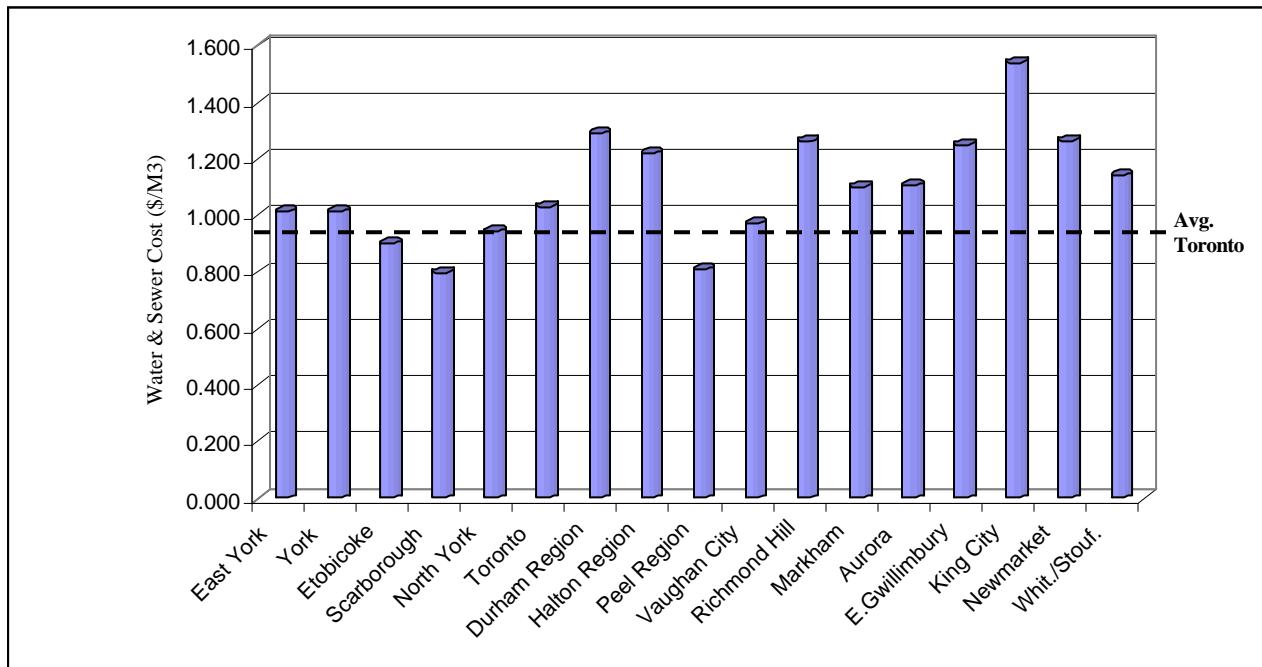
A review was performed of the 1998 water and sewer rates and rate structures for the cities and regions surrounding Toronto. The Regional Municipalities of Durham, Halton and Peel have already harmonized their water and sewer services. The Region of Durham provides a tiered rate depending on consumption for all its customers, with the rate falling as consumption increases. The rate breakpoints are at 45 and 4,500 cubic metres per month (540 and 54,000 cubic metres per year). In addition to the per-cubic-metre charge, customers must pay an additional water and sewer service charge. The Region of Halton also provides a tiered rate structure, however, the water rate increases rises in three blocks as consumption increases to 60 cubic metres per month (720 cubic metres per year), then falls back to the original low-consumption rate when volumes exceed 460 cubic metres per month (5,500 cubic metres per year). For residential customers, the sewer charge is capped when consumption exceeds 60 cubic metres per month (720 cubic metres per year). In addition to the per-cubic-metre charge, Halton customers must also pay a monthly service charge based on meter size. Peel Region has no block structure, however, the sewer rate for residential customers is at 85.0 percent of the rate to non-residential customers. In the Regional Municipality of York, the lower tier municipalities set their own rate applicable to all users within that municipality.

Table 6 provides a comparison of the cost of water for a typical residential user of 25 and 50 cubic metres per month (300 and 600 cubic metres per month). Figure 3 presents the information graphically. Generally, water and sewer costs are lower in Toronto than in the surrounding regions, with the exception of Peel Region.

Table 6
Monthly Water Cost - Residential Customers (Ascending Cost)

City	Monthly Cost for 25 M3 (typical residential use)	Effective Rate* (\$/M3)	City	Monthly Cost for 50 M3 (high residential use)	Effective Rate* (\$/M3)
Scarborough	19.96	0.7983	Scarborough	39.92	0.7983
Peel Region	20.18	0.8100	Peel Region	40.36	0.8073
Etobicoke	22.55	0.9019	Etobicoke	45.09	0.9019
North York	23.58	0.9433	North York	47.17	0.9433
Vaughan City	24.33	0.9730	Vaughan City	48.65	0.9730
East York	25.34	1.0134	East York	50.67	1.0134
York	25.35	1.0141	York	50.7	1.0141
Toronto	25.77	1.0308	Toronto	51.54	1.0308
Markham	27.55	1.1021	Halton Region	52.54	1.0507
Aurora	27.68	1.1070	Markham	55.1	1.1021
Whitchurch/Stouffville	28.55	1.1420	Aurora	55.35	1.1070
Halton Region	30.42	1.2200	Durham Region	55.85	1.1170
East Gwillimbury	31.25	1.2500	Whitchurch/Stouffville	57.1	1.1420
Newmarket	31.61	1.2643	East Gwillimbury	62.5	1.2500
Richmond Hill	31.63	1.2650	Newmarket	63.22	1.2643
Durham Region	32.18	1.2900	Richmond Hill	63.25	1.2650
King City	38.51	1.5403	King City	77.02	1.5403

Figure 3
Monthly Water Cost - Residential Customers



While water and sewer costs may be generally lower in Toronto for residential customers, such is not the case for higher-volume users (i.e., commercial/industrial sector), and this difference becomes more evident for consumption's greater than 10,000 cubic metres per year. A 50,000 cubic metre per year customer would find water and sewer costs to be 4 to 7 percent lower in the regions surrounding Toronto (with the exception of Scarborough, for which sewer costs were previously funded from property taxes). As consumption rises, the difference becomes more profound, and a 500,000 cubic metre customer would find the costs 40 percent lower in Durham than the average Toronto cost. This comparison is shown in Table 6.

Currently, the former City of Scarborough offers the lowest water cost for consumption's less than 100,000 cubic metres per year. Above, 100,000 cubic metres per year, the Region of Durham becomes the low cost supplier. While slightly higher than Scarborough's and Halton's costs, the former Cities of Etobicoke and North York are competitively positioned against the regions of Peel and Durham in the under 50,000 cubic metre per year market. Figure 4 compares Etobicoke, York and Scarborough's rates (i.e., those former municipalities with high-volume discounts) for various consumption's with the surrounding regions rates.

Table 7
Annual Water Cost - Commercial / Industrial / Institutional Customers (Ascending Cost)

	<u>10,000 M3 per year</u>			<u>50,000 M3 per year</u>	
	<u>\$ Cost</u>	<u>Effective Rate* (\$/M3)</u>		<u>\$ Cost</u>	<u>Effective Rate* (\$/M3)</u>
Scarborough	7,983	0.7983	Scarborough	39,915	0.7983
Peel	8,799	0.8799	Durham	43,635	0.8727
Durham	9,013	0.9013	Peel	43,994	0.8799
Etobicoke	9,019	0.9019	Etobicoke	45,094	0.9019
Average Toronto**	9,416	0.9416	Halton	45,591	0.9118
North York	9,433	0.9433	Average Toronto**	47,080	0.9416
Vaughan City	9,730	0.9730	North York	47,165	0.9433
Halton	9,999	0.9999	Vaughan City	48,650	0.9730
York	10,141	1.0141	York	50,703	1.0141
Toronto	10,308	1.0308	Toronto	51,542	1.0308
East York	10,340	1.0340	East York	51,700	1.0340
Markham	11,021	1.1021	Markham	55,105	1.1021

Table 7 (continued)

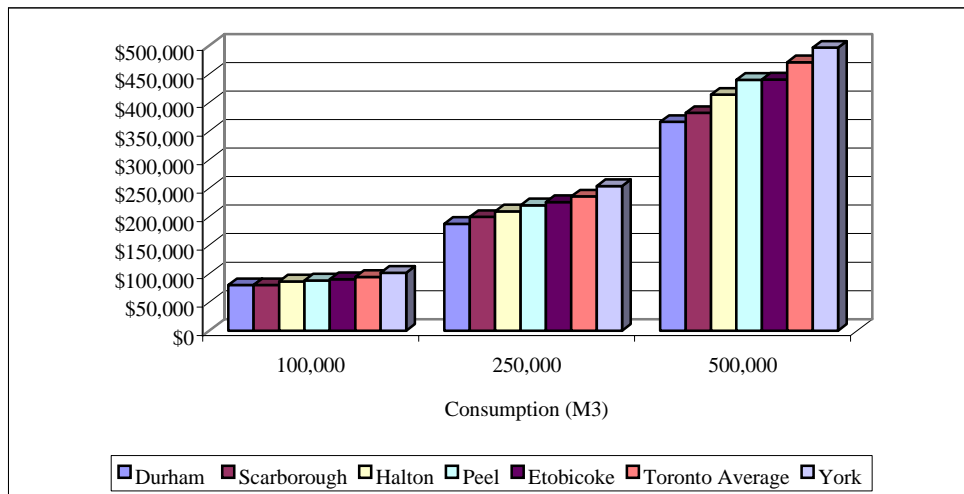
	100,000 M3 per year			500,000 M3 per year	
	\$ Cost	Effective Rate* (\$/M3)		\$ Cost	Effective Rate* (\$/M3)
Scarborough	79,830	0.7983	Durham	366,259	0.7325
Durham	79,859	0.7986	Scarborough	381,916	0.7638
Halton	86,506	0.8651	York	389,399	0.7788
Peel	87,987	0.8799	Halton	413,826	0.8277
Etobicoke	90,188	0.9019	Peel	439,935	0.8799
Average Toronto**	94,160	0.9416	Etobicoke	440,693	0.8814
North York	94,330	0.9433	Average Toronto**	470,800	0.9416
Vaughan City	97,300	0.9730	North York	471,650	0.9433
York	101,406	1.0141	Vaughan City	486,500	0.9730
Toronto	103,083	1.0308	Toronto	515,415	1.0308
East York	103,400	1.0340	East York	517,000	1.0340
Markham	110,210	1.1021	Markham	551,050	1.1021

*including volume break-points and minimum services charges

**based on \$0.9416 per cubic metre

Note: In the Regional Municipality of York, the lower tier municipalities set their own rate applicable to all users within that municipality, and no volume discounts are provided. With the exception of the City of Vaughan, these rates are higher than that shown above, and range from \$1.1021 to \$1.5403 per cubic metre.

Figure 4
Cost of Water at Various Consumption Points



From the analysis of the cost of water, several observations are made. First, with respect to residential and low-volume users, water costs in Toronto are low relative to the neighboring municipalities, save Peel. Even at \$1.00 per cubic metre, Toronto's cost would still be competitive in this market. Second, with respect to high-volume users (i.e., greater than 50,000 cubic metres), water costs are generally higher than that of the neighboring municipalities. Even with its perceived low water cost, Scarborough loses its competitiveness in the market segment above 100,000 cubic metres per year. It should be noted that while this segment represents only 1.0 percent of the water accounts, it includes many industrial firms that contribute to the economic wealth of the City, and provides for

approximately one-third of the water revenues. Thus, it may be of benefit to ensure the continued competitiveness of this segment, and an effective water rate of \$0.80 is not unreasonable in the context of competitiveness.

IV. THE IMPACTS OF RATE HARMONIZATION

This section provides a discussion and analysis of the impacts of rate harmonization. Harmonization is premised on the basis that water and sewage treatment are basic services for everyone in the City, and that all property owners (and all tenants through their rents) should pay for this basic service at the same rate. The Regional Municipalities of Peel, Durham and Halton have harmonized rates for their respective municipalities.

Under a simple harmonization scenario, each former municipality's rates would move to the current calculated average rate of \$0.9416 per cubic metre. Such a move will cause shifts in the revenue collected between former municipalities, however, it would be revenue neutral across the City. The effect is most profound for the former Cities of Scarborough and Etobicoke, where water users would experience an increase in their bill of 18.0 percent and 4.4 percent, respectively, while water users in East York, Toronto, and York would see their bills decrease by approximately 7.0 to 9.0 percent. North York would be minimally affected, as its current rate is very close to the harmonized rate. Table 8 shows the impact of this option on water users in the former municipalities.

Table 8
Rate Impact of Immediate Harmonization

Former City	1998 Authorized Rate (\$/M3)	1999 Immediate Harmonization of Rate (\$/M3)	% Change (Impact)	Total Revenue Impact (\$000's)
East York	1.03400	0.94160	(8.9%)	(1,674.1)
Etobicoke	0.90187	0.94160	4.4%	2,143.5
North York	0.94330	0.94160	(0.2%)	(914.9)
Scarborough	0.79830	0.94160	18.0%	11,737.0
Toronto	1.03083	0.94160	(8.7%)	(9,730.2)
York	<u>1.01406</u>	<u>0.94160</u>	<u>(7.1%)</u>	<u>(1,561.3)</u>
City Average	0.94160	0.94160	0.0%	(0.0)

In terms of monetary shifts, the largest impact would result in the former City of Scarborough where water users would pay \$11.7 million more in the aggregate across all customer classes, while customers in the former Toronto would pay \$9.7 million less in the aggregate. Users in the former City of Etobicoke would also be negatively impacted, paying \$2.1 million more, while the remaining municipalities would benefit in the range of \$0.9 million to \$1.7 million from the lower average rate. Table 9 summarizes the monetary shifts by former municipalities and by customer profiles, and additional details are shown in Appendix 2. The following section elaborates on the impacts to the various customer profiles.

Table 9
Total Impact² by Customer and City of Immediate Harmonization (\$000's)

Customer Profile	East York	Etobicoke	North York	Scarborough	Toronto	York	Total
Predominantly Residential Households, excluding condominiums and apartments	(537)	448	(317)	4,324	(1,184)	(644)	2,091
Predominantly Small Commercial / Industrial / Office, Small Condominium / Apartment Complexes, Strip Malls and Stand-alone Restaurants	(158)	177	(200)	1,477	(1,927)	(216)	(848)
Predominantly Medium Commercial / Industrial, Medium Offices, Medium Condominiums and Apartment Complexes, Strip Malls	(873)	937	(346)	4,723	(5,678)	(561)	(1,798)
Predominantly Large Industrial, Large Offices, Large Condominiums and Apartment Complexes, Including Hospitals ^{2(A)}	(106)	104	(36)	425	(630)	(27)	(269)
Predominantly Large Industrial and Large Offices ^{2(B)}	-	61	(17)	84	(312)	(114)	(297)
Large Industrial ^{2(C)}	-	418	-	704	-	-	1,122
Grand Total	(1,674)	2,143	(915)	11,737	(9,730)	(1,561)	(0)

Residential Customer Profile (less than 1,000 M3 annual consumption)

This segment consists of accounts where billing indicated consumption was less than 1,000 cubic metres per year, and consists predominantly of single-family households. This class makes up 75.0 percent of all accounts (342,629 accounts), however, it provides only 25.0 percent of water revenues (\$98.0 million).

For comparative purposes, a typical residential household that consumes approximately 25 cubic metres per month (300 cubic metres per year) would see an increase in its water bill of approximately \$3.58 per month (\$42.99 per year) in the former City of Scarborough, and a decrease ranging from \$1.81 to \$2.31 per month (\$21.74 to \$27.72 per year) in the former cities of East York, Toronto and York. The example of the impact to a typical household consuming 300 cubic metres per year is shown in the left columns of Table 10 below. In reality, actual household consumption will vary from

² Gross Impact; it is noted that high-volume users in Scarborough and Etobicoke (>272,766 M3 per year) and York (>454,600 M3 per year) qualify for discounts; the net impact to these customers would be \$1.37 million more in total if it is assumed that the high-volume discounts are eliminated; city-wide, this would result in a revenue gain of \$1.37 million, which is equivalent to the amount of discounts that was provided.

Customer Profile	East York	Etobicoke	North York	Scarborough	Toronto	York	Total
Large Industrial (A) – Net Impact	(106)	137	(36)	496	(630)	(27)	(165)
Large Industrial (B) – Net Impact	-	107	(17)	111	(312)	223	113
Large Industrial (C) – Net Impact	-	921	-	1,055	-	-	1,976
Total – Net Impact	(1,674)	2,727	(915)	12,185	(9,730)	(1,561)	1,369

household to household, and between former cites. The right most columns show the actual impacts based on the 1998 billings.

Table 10
Average Per-Account Impact of Simple Harmonization – Residential Customer Profile

Former City	Example of Impact Based on Typical 300 M3 Consumption		Impact Based on Actual Consumption		
	Typical Annual Residential Impact Based on 300 M3 / Year (\$ / Year)	Typical Monthly Impact (\$ / Month)	No. of Accounts	Average Annual Impact Based on 1998 Billings (\$ / Year)	Average Monthly Impact Based on 1998 Billings (\$ / Month)
East York	(27.72)	(2.31)	21,689	(24.76)	(2.06)
Etobicoke	11.92	0.99	61,949	7.23	0.60
North York	(0.51)	(0.04)	82,142	(3.86)	(0.32)
Scarborough	42.99	3.58	110,560	39.11	3.26
Toronto	(26.77)	(2.23)	36,851	(32.12)	(2.68)
York	<u>(21.74)</u>	<u>(1.81)</u>	<u>29,436</u>	<u>(21.87)</u>	<u>(1.82)</u>
City Average	n/a	n/a	342,627	6.10	0.51

With respect to increases Scarborough, no residential household will see an increase in their bill greater than \$20.00 per month (\$240.00 per year). In fact, the increase will be less than \$10.12 per month (\$121.48 per year) for 99.5 percent of the households. Eighty-four percent of households will experience an increase of less than \$5.00 per month (\$60.00 per year). Twenty-six percent of households will experience an increase of less than \$2.00 per month (\$24.00 per year).

With respect to increases Etobicoke, no residential household will see an increase greater than \$5.00 per month (\$60.00 per year). In fact, the increase will be less than \$2.38 per month (\$28.57 per year) for 99.5 percent of the households. Eighty-eight percent of households will experience an increase of less than \$1.00 per month. Table 11 provides a summary of the increase impacts.

Table 11
Increase Impact – Residential Customer Profile

Monthly Impact Range (\$ / month)	Scarborough				Etobicoke			
	No. of Customers	% of Customers	Average Monthly Impact (\$/Month)	Average Annual Impact (\$ / Year)	No. of Customers	% of Customers	Average Monthly Impact (\$/Month)	Average Annual Impact (\$ / Year)
\$0.00 and \$1.00	10,225	9.2%	0.51	6.01	54,494	88.0%	0.49	5.88
\$1.00 and \$2.00	18,429	16.7%	1.55	18.63	6,582	10.6%	1.31	15.68
\$2.00 and \$5.00	64,474	58.3%	3.30	39.61	875	1.4%	2.30	27.61
\$5.00 and \$10.00	16,795	15.2%	6.37	76.47	-	-	-	-
\$10.00 and \$20.00	<u>637</u>	<u>0.6%</u>	<u>10.61</u>	<u>127.31</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
City Average	110,560	100.0%	3.26	39.11	61,951	100.0%	0.60	7.23

With respect to decreases as a result of immediate harmonization, households in the residential profile in the cities of East York, Toronto, and York will see an average decrease of \$2.21 per month (\$26.52 per year), and no household would see a decrease greater than \$10.00 per month (\$120.00 per year). In the City of Toronto, 99.5 percent of households would experience a decrease of less than \$7.81 per month (\$93.72 per year). The bulk of the customers, 45.9 percent, would see a decrease of between \$2.00 and \$5.00 per month (\$24.00 and \$60.00 per year with the average being \$3.14 per month (\$37.68 per year). In the City of East York, 99.5 percent of customers would experience a decrease of less than \$7.13 per month (\$85.58 per year), with the bulk, 79.2 percent, seeing a decrease of between \$2.00 and \$5.00 per month (\$24.00 and \$60.00 per year). In the City of York, 99.5 percent of customers would experience a decrease of less than \$6.09 per month (\$73.02 per year), with the bulk, 73.5 percent, seeing a decrease of between \$2.00 and \$5.00 per month (\$24.00 and \$60.00 per year). The City of North York would be minimally impacted, with 100.0 percent of customers experiencing a decrease of less than \$1.00 per month (\$12.00 per year), the average being \$0.32 per month (\$3.86 per year). Table 12 provides a summary of the decrease impacts.

Table 12
Decrease Impact of Simple Harmonization – Residential Customer Profile

Monthly Impact Range (\$ / month)	Toronto				East York			
	No. of Customers	% of Customers	Average Monthly Impact (\$/Month)	Average Annual Impact (\$ / Year)	No. of Customers	% of Customers	Average Monthly Impact (\$/Month)	Average Annual Impact (\$ / Year)
\$0.00 and \$1.00	5,265	14.3%	(0.63)	(7.61)	3,798	17.5%	(0.68)	(8.15)
\$1.00 and \$2.00	10,463	28.4%	(1.51)	(18.10)	8,311	38.3%	(1.50)	(18.03)
\$2.00 and \$5.00	16,925	45.9%	(3.14)	(37.73)	8,973	41.4%	(2.88)	(34.58)
\$5.00 and \$10.00	<u>4,198</u>	<u>11.4%</u>	<u>(6.27)</u>	<u>(75.18)</u>	<u>643</u>	<u>3.0%</u>	<u>(6.10)</u>	<u>(73.19)</u>
City Average	36,851	100.0%	(2.61)	(32.12)	21,689	100.0%	(2.06)	24.76

Monthly Impact Range (\$ / month)	York				North York			
	No. of Customers	% of Customers	Average Monthly Impact (\$/Month)	Average Annual Impact (\$ / Year)	No. of Customers	% of Customers	Average Monthly Impact (\$/Month)	Average Annual Impact (\$ / Year)
\$0.00 and \$1.00	7,023	23.9%	(0.60)	(7.24)	82,142	100.0%	(0.32)	(3.86)
\$1.00 and \$2.00	12,038	40.9%	(1.48)	(17.81)	-	-	-	-
\$2.00 and \$5.00	9,707	33.0%	(2.86)	(34.34)	-	-	-	-
\$5.00 and \$10.00	<u>668</u>	<u>2.3%</u>	<u>(5.65)</u>	<u>(67.76)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
City Average	29,436	100.0%	(1.82)	(21.87)	82,142	100.0%	(0.32)	(3.86)

In summary, the analysis indicates that 64.7 percent of the customers city-wide in this class will see an impact (increase or decrease) of less than \$2.00 per month (\$24.00 per year), 28.8 percent of customers would see an impact of between \$2.00 and \$5.00 per month (\$24.00 and \$60.00 per year), and 6.5 percent of customers would see an impact of between \$5.00 and \$10.00 per month (\$60.00 and \$120.00 per year).

Small and Medium Volume Customer Impact

The small and medium volume user profile encompasses a wide range of users from small to medium commercial/industrial/office buildings, small condominium and apartment complexes, strip malls and stand-alone restaurants. Generally, the account is to a landlord or property management firm, which would allocate water costs to the tenants as provided for in their lease agreements. In such a case, potential increases or decreases would be shared amongst a number of tenants. This small volume user represents 5.5 percent of customer accounts (25,505 accounts) and generates 15.0 percent of the City's water revenue (\$60.0 million), and the medium volume user (10,000 to 250,000 cubic metres per year) accounts for 1 percent (4,578 accounts) and generates 42.0 percent of the City's water revenues. This class would not qualify for high-volume discounts in any of the former municipalities.

Due to the wide variations in consumption amongst this customer profile, it is difficult to generalize about the potential harmonization impact. The impact of immediate harmonization ranges from minimal to more than a thousand dollars per year, of course depending on consumption. The impacts presented below are based on sample properties typical of this class. These sample properties include a free-standing restaurant, strip-retail with residential above, a small office building, and a medium-sized industrial building. The water consumption was based on an average derived from random samples of each property type.

Table 13
Estimated Annual Impact of Simple Harmonization On Small & Medium Volume Users

	East York	Etobicoke	North York	Scarborough	Toronto	York
<u>Restaurant @ 3,000 Sq. Ft.</u>						
Monthly Consumption (M3)	267	267	267	267	267	267
Annual Consumption (M3)	3,204	3,204	3,204	3,204	3,204	3,204
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	3,313	2,890	3,022	2,558	3,303	3,249
Harmonized Rate	0.9416	0.9416	0.9416	0.9416	0.9416	0.9416
Estimated Harmonized Bill	<u>3,017</u>	<u>3,017</u>	<u>3,017</u>	<u>3,017</u>	<u>3,017</u>	<u>3,017</u>
Estimated Annual Impact	<u>(296)</u>	<u>127</u>	<u>(5)</u>	<u>459</u>	<u>(286)</u>	<u>(232)</u>
<u>Strip-Retail c/w Residential @ 2,000 Sq. Ft.</u>						
Monthly Consumption (M3)	33	33	33	33	33	33
Annual Consumption (M3)	396	396	396	396	396	396
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	409	357	374	316	408	402
Harmonized Rate	0.9416	0.9416	0.9416	0.9416	0.9416	0.9416
Estimated Harmonized Bill	<u>373</u>	<u>373</u>	<u>373</u>	<u>373</u>	<u>373</u>	<u>373</u>
Estimated Annual Impact	<u>(37)</u>	<u>16</u>	<u>(1)</u>	<u>57</u>	<u>(35)</u>	<u>(29)</u>
<u>Small Office Building @ 10,000 Sq. Ft.</u>						
Monthly Consumption (M3)	167	167	167	167	167	167
Annual Consumption (M3)	2,004	2,004	2,004	2,004	2,004	2,004
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	2,072	1,807	1,890	1,600	2,066	2,032
Harmonized Rate	0.9416	0.9416	0.9416	0.9416	0.9416	0.9416
Estimated Harmonized Bill	<u>1,887</u>	<u>1,887</u>	<u>1,887</u>	<u>1,887</u>	<u>1,887</u>	<u>1,887</u>
Estimated Annual Impact	<u>(185)</u>	<u>80</u>	<u>(3)</u>	<u>287</u>	<u>(179)</u>	<u>(145)</u>

Medium Industrial Building @ 40,000 Sq. Ft.

Monthly Consumption (M3)	467	467	467	467	467	467
Annual Consumption (M3)	5,604	5,604	5,604	5,604	5,604	5,604
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	5,795	5,054	5,286	4,474	5,777	5,683
Harmonized Rate	0.9416	0.9416	0.9416	0.9416	0.9416	0.9416
Estimated Harmonized Bill	<u>5,277</u>	<u>5,277</u>	<u>5,277</u>	<u>5,277</u>	<u>5,277</u>	<u>5,277</u>
Estimated Annual Impact	<u>(518)</u>	<u>223</u>	<u>(10)</u>	<u>803</u>	<u>(500)</u>	<u>(406)</u>

The following section provides additional analysis for the small and medium volume customers.

Small Commercial Profile (1,000 M3 to 10,000 M3 annual consumption)

Under simple harmonization, this class as a whole will see a reduction of approximately \$850.0 thousand per annum in water costs, predominantly from the benefit of the rate reduction under harmonization in Toronto, whose customers will benefit by approximately \$1.9 million in the aggregate. Customers in Scarborough will see their water costs rise by approximately \$1.5 million in the aggregate.

With respect to increases Scarborough, no property in this class will see an increase in their bill greater than \$250.00 per month (\$3,000.00 per year). In fact, the increase will be less than \$109.23 per month (\$1,310.72 per year) for 99.5 percent of the properties. Eighty percent of properties will experience an increase of less than \$50.00 per month (\$600.00 per year). Thirty-four percent of properties will experience an increase of less than \$20.00 per month (\$240.00 per year).

With respect to increases Etobicoke, no property in this class will see an increase greater than \$50.00 per month (\$600.00 per year). In fact, the increase will be less than \$26.46 per month (\$317.48 per year) for 99.5 percent of the properties. Seventy-six percent of properties will experience an increase of less than \$10.00 per month (\$120.00 per year), and 47.7 percent of properties (almost half) will experience an increase of less than \$5.00 per month (\$60.00 per year). Table 14 provides a summary of the increase impacts.

Table 14
Increase Impact of Simple Harmonization – Small Commercial Profile

Monthly Impact Range (\$ / month)	Scarborough			Etobicoke		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$2.00 and \$5.00	-	-	-	894	47.7%	3.60
\$5.00 and \$10.00	-	-	-	522	27.9%	6.94
\$10.00 and \$20.00	1,240	34.2%	14.83	317	16.9%	14.42
\$20.00 and \$50.00	1,668	46.0%	31.52	141	7.5%	23.50
\$50.00 and \$100.00	650	17.9%	68.55	-	-	-
\$100.00 and \$250.00	<u>71</u>	<u>2.0%</u>	<u>106.39</u>	<u>-</u>	<u>-</u>	<u>-</u>
City Average	3,629	0.0%	33.91	1,874	47.7%	7.86

With respect to decreases as a result of immediate harmonization, properties in this class in the cities of East York, Toronto, and York will see an average decrease of \$22.98 per month (\$275.80 per year), and no household would see a decrease greater than \$100.00 per month (\$1200.00 per year). In the City of Toronto, 99.5 percent of households would experience a decrease of less than \$78.54 per month (\$942.46 per year). The bulk of the customers, 70.3 percent, would see a decrease of between \$20.00 and \$50.00 per month (\$240.00 and \$600.00 per year with the average being \$23.69 per month (\$284.27 per year). In the City of East York, 99.5 percent of customers would experience a decrease of less than \$76.31 per month (\$915.77 per year), with the bulk, 774.9 percent, seeing a decrease of between \$20.00 and \$50.00 per month (\$240.00 and \$600.00 per year). In the City of York, 99.5 percent of customers would experience a decrease of less than \$64.22 per month (\$770.67 per year), with the bulk, 71.9 percent, seeing a decrease of between \$5.00 and \$20.00 per month (\$60.00 and \$240.00 per year). The City of North York would be minimally impacted, with 97.2 percent of customers experiencing a decrease of less than \$5.00 per month (\$60.00 per year), the average being \$1.43 per month (\$17.18 per year). Table 15 provides a summary of the decrease impacts.

Table 15
Decrease Impact of Simple Harmonization – Small Commercial Profile

Monthly Impact Range (\$ / month)	Toronto			East York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$0.00 and (\$1.00)	-	-	-	-	-	-
(\$1.00) and (\$2.00)	-	-	-	-	-	-
(\$2.00) and (\$5.00)	-	-	-	-	-	-
(\$5.00) and (\$10.00)	1,306	19.3%	(8.93)	86	15.6%	(9.03)
(\$10.00) and (\$20.00)	2,665	39.3%	(14.03)	233	42.1%	(14.00)
(\$20.00) and (\$50.00)	2,100	31.0%	(31.67)	181	32.7%	(31.81)
(\$50.00) and (\$100.00)	<u>709</u>	<u>10.5%</u>	<u>(63.65)</u>	<u>53</u>	<u>9.6%</u>	<u>(63.39)</u>
	6,780	100.0%	(284.27)	553	100.0%	(21.54)

Monthly Impact Range (\$ / month)	York			North York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$0.00 and (\$1.00)	-	-	-	5,679	48.7%	(0.84)
(\$1.00) and (\$2.00)	-	-	-	4,255	36.5%	(1.33)
(\$2.00) and (\$5.00)	-	-	-	1,401	12.0%	(3.05)
(\$5.00) and (\$10.00)	396	39.2%	(7.87)	324	2.8%	(6.11)
(\$10.00) and (\$20.00)	330	32.7%	(13.68)	-	-	-
(\$20.00) and (\$50.00)	230	22.8%	(31.67)	-	-	-
(\$50.00) and (\$100.00)	<u>54</u>	<u>5.3%</u>	<u>(56.81)</u>	<u>-</u>	<u>-</u>	<u>-</u>
	1,010	100.0%	(17.81)	11,659	100.0%	(1.43)

In summary, the analysis of the impact on the small property customer profile is that 58.3 percent of the customers in this class will see an impact (increase or decrease) of less than \$10.00 per month (\$120.00 per year), 35.7 percent of customers would see an impact of between \$20.00 and \$50.00 per month (\$240.00 and \$600.00 per year), and 6.0 percent of customers would see an impact of between \$50.00 and \$250.00 per month (\$60.00 and \$3,000.00 per year).

Medium-Commercial/Industrial Profile (10,000 M3 to 250,000 M3 annual consumption)

This class as a whole will see a reduction of approximately \$1.8 million per annum in water costs, predominantly arising from the rate reduction under harmonization in Toronto, whose customers will benefit by approximately \$5.7 million in the aggregate. Customers in Scarborough will see their water costs rise by approximately \$4.7 million in the aggregate.

For comparative purposes, a typical property in this class that consumes approximately 40,000 cubic metres per month (3,300 cubic metres per month) would see an increase in their water bill of approximately \$477.67 per month (\$5,732.00 per year) in the City of Scarborough, and a decrease of approximately \$241.53 to \$308.00 per month (\$2,898.40 to \$3,696.00 per year) in the cities of East York, Toronto and York. The example of the impact to a typical property consuming 40,000 cubic metres per year is shown in the left columns of Table 16 below. In reality, actual consumption will vary from property to property, and between former cites. The right most columns show the actual impacts for this class based on the 1998 billings.

Table 16
Average Per-Account Impact of Simple Harmonization – Medium-Commercial/Industrial Profile

Former City	Example of Impact Based on Typical 40,000 M3 Consumption		Impact Based on Actual Consumption		
	Typical Annual Residential Impact Based on 40,000 M3 / Year (\$ / Year)	Typical Monthly Impact (\$ / Month)	No. of Accounts	Average Annual Impact Based on 1998 Billings (\$ / Year)	Average Monthly Impact Based on 1998 Billings (\$ / Month)
East York	(3,696.00)	(308.00)	183	(4,771.60)	(397.63)
Etobicoke	1,589.20	132.43	666	1,406.77	117.23
North York	(68.00)	(5.67)	1,088	(317.73)	(26.48)
Scarborough	5,732.00	477.67	842	5,609.30	467.44
Toronto	(3,569.20)	(297.43)	1,605	(3,537.57)	(294.80)
York	<u>(2,898.40)</u>	<u>(241.53)</u>	<u>194</u>	<u>(2,891.94)</u>	<u>(241.00)</u>
City Average	n/a	n/a	4,578	(392.70)	(32.72)

Due to the wide variations in consumption amongst this customer profile, it is difficult to generalize about “average” harmonization impacts. With respect to increases in Scarborough, there are 3 customers that would experience an average increase of approximately \$2,600.00 per month (\$31,500.00 per year). Two are industrial firms, and one is a hospital. A further 81 customers would experience an average increase of approximately \$1,300.00 per month (\$16,000.00 per year). Twenty-five percent of these customers are industrial firms and or institutions (i.e., hospitals,

correctional facility). These businesses would have to directly absorb the cost increase, which may affect their economic and competitive position. The balance consists of condominium corporations, apartments, office buildings and commercial properties, whose consumption is directly related to the number of tenant units. Such properties would distribute the increases amongst its tenants, and the individual tenant impact would likely be similar to that of the small property class or single-family residence.

With respect to increases in Etobicoke, there are 19 customers that would experience an average increase of approximately \$575.00 per month (\$7,000.00 per year). Nine of these properties are industrial firms (i.e., chemical, food processing), five are condominium corporations, and the other five are office buildings. There are a further 57 properties that would experience in average increase of approximately \$335.00 per month (\$4,000.00 per year). A review of the billing data indicates that thirty-three percent of these properties are industrial firms, including two hospitals. The balance consists of condominium corporations, apartments, office and commercial properties. Again, industrial firms would likely have to directly absorb such cost increases, while the other property types would likely distribute such increases amongst its tenant units, and individual tenant impact is likely to be similar to that of the small property class or single-family residence.

Table 17
Increase Impact of Simple Harmonization – Medium-Commercial/Industrial Profile

Monthly Impact Range (\$ / month)	Scarborough			Etobicoke		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$20.00 and \$50.00	-	0.0%	-	243	36.5%	36.84
\$50.00 and \$100.00	-	0.0%	-	179	26.9%	68.87
\$100.00 and \$250.00	326	38.7%	169	168	25.2%	159.88
\$250.00 and \$500.00	240	28.5%	353	57	8.6%	333.59
\$500.00 and \$1000.00	192	22.8%	705	19	2.9%	574.72
\$1000.00 and \$2500.00	81	9.6%	1,365	-	0.0%	-
\$2500.00 and \$5000.00	<u>3</u>	<u>0.4%</u>	<u>2,619</u>	<u>-</u>	<u>0.0%</u>	<u>-</u>
	842	100.0%	467	666	100.0%	117.23

As previously discussed, Toronto, East York and York would be the primary beneficiaries of decreases amongst this customer profile. The averages decrease for medium-sized properties in these cities ranges from approximately \$240.00 to \$400.00 per month (\$2,880.00 to \$4,800.00 per year). The impact in North York is minimal for this size property, with the average decrease being approximately \$27.00 per month (\$324.00). A summary of the analysis of the decreases is shown in Table 18. In Toronto, East York, and York, there are a total of 84 accounts which will see average decreases of \$14,000.00 and \$18,000.00 per year. A review of the billing data indicates these properties would include office and commercial buildings, condominium corporations, apartment complexes, as well as some industrial properties. Table 18 provides a summary of the decrease impacts.

Table 18
Decrease Impacts of Simple Harmonization – Medium-Commercial/Industrial Profile

Monthly Impact Range (\$ / month)	Toronto			East York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
(\$50.00) and (\$100.00)	262	16.3%	(89.57)	14	7.7%	(89.95)
(\$100.00) and (\$250.00)	769	47.9%	(157.40)	81	44.3%	(155.48)
(\$250.00) and (\$500.00)	339	21.1%	(358.11)	52	28.4%	(338.88)
(\$500.00) and (\$1000.00)	172	10.7%	(705.94)	18	9.8%	(764.55)
(\$1000.00) and (\$2500.00)	<u>63</u>	<u>3.9%</u>	<u>(1,362.26)</u>	<u>18</u>	<u>9.8%</u>	<u>(1,529.46)</u>
	1,605	100.0%	(294.80)	183	100.0%	(397.63)

Monthly Impact Range (\$ / month)	York			North York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
(\$5.00) and (\$10.00)				210	19.3%	(8.48)
(\$10.00) and (\$20.00)				393	36.1%	(13.89)
(\$20.00) and (\$50.00)				346	31.8%	(31.45)
(\$50.00) and (\$100.00)	51	26.3%	(81.48)	117	10.8%	(67.48)
(\$100.00) and (\$250.00)	72	37.1%	(149.20)	22	2.0%	(126.91)
(\$250.00) and (\$500.00)	47	24.2%	(328.46)			
(\$500.00) and (\$1000.00)	21	10.8%	(611.73)			
(\$1000.00) and (\$2500.00)	<u>3</u>	<u>1.5%</u>	<u>(1,190.37)</u>	<u>-</u>	<u>-</u>	<u>-</u>
	194	100.0%	(241.00)	1,088	100.0%	(26.48)

In summary, this customer profile, which represents only one percent of accounts yet generates 45.0 percent of the revenue, is an important class to the City. City-wide, approximately a quarter of the accounts are to industrial businesses and institutions, some of which are large customers in terms of the volume of water consumption. Potential rate increases in Scarborough and Etobicoke would have to directly absorbed by these businesses, which may negatively affect their economic and/or competitive position. Some of these firms will be experiencing increases of more than \$30,000 per year. The balance of customers is made up of commercial and office properties, condominium corporations and multi-residential properties. For these types of properties, cost increases would be shared across the tenanted units, and individual tenant impact is not likely to be more significant than that to small businesses and residences.

Large Commercial/Industrial Profile (Greater than 250,000 M3 annual consumption)

The large business profile encompasses a wide range of users from large industrial firms, large office buildings, large condominiums and apartment complexes, and large hospitals. For the purposes of customer categorization, large-volume is meant to include those customers whose consumption exceeds 250,000 cubic metres per year. There are only 75 customers in this category (less than 0.02 percent of all accounts), yet this class generates 10.2 percent of the City's water revenue (\$40.0 million). Under the present rate structure, these customers would qualify for high-volume discounts of 5.0 percent and 9.5 percent on volumes in excess of 272,766 cubic metres in the cities of Scarborough and Etobicoke, respectively. In 1998, 10 customers in Scarborough, and 10 customers in Etobicoke qualified for high-volume discounts totaling \$1.0 million. Customers in York would qualify for a high-volume discount of 23.2 percent on the entire volume if consumption exceeds 454,600 cubic metres per year. In 1998, two customers in the City of York received high volume discounts, totaling \$337.0 thousands.

In the former cities of Toronto, East York, and North York, this class would see a decrease of approximately \$1.10 million as a result of rate harmonization. In contrast, the 32 high-volume customers in the former Scarborough, York and Etobicoke would be paying \$3.02 million more on a net basis in the aggregate (assuming the elimination of approximately \$1.3 million in high-volume discounts). Table 19 below provides a summary of the average impact of simple harmonization on the class.

Table 19
Average Per-Account Impact** of Simple Harmonization – Large Commercial/Industrial Profile

Former City	No. of Accounts	Average Annual Impact Based on 1998 Billings (\$ / Year)	Average Monthly Impact Based on 1998 Billings (\$ / Month)
East York	3	(35,356)	(2,946)
Etobicoke*	18	64,757	5,396
North York	15	(3,474)	(289)
Scarborough*	11	150,999	12,583
Toronto	25	(37,659)	(3,138)
York*	<u>3</u>	<u>(65,468)</u>	<u>(5,456)</u>
City Average	75	25,645	2,137

*net impact after high-volume discounts

**assuming elimination of any high-volume discounts

With respect to increases in the former City of Scarborough, the average customer in this class would experience an increase in its water bill of \$12,583 per month (\$150,999 per year). There would be 3 customers who would experience an increase of between \$2,500.00 and \$5,000 per month (\$30,000.00 and \$60,000.00 per year) under simple harmonization. A further 8 customers who would experience an increase of greater than \$5,000.00 per month (\$60,000.00 per year). All but one of these properties are industrial firms; the other is a large residential co-operative. The top 3 industrial firms would experience increases ranging from \$110,000 to \$673,000 per year.

With respect to increases in the former City of Etobicoke, there are 4 customers that would experience an average increase of approximately \$795.13 per month (\$9,541.59 per year), 6 customers that would experience an average increase of approximately \$1,790.37 per month (\$21,484.45 per year), 2 customers that would experience an average increase of approximately \$3,230.09 per month (\$38,761.13 per year), and 6 customers that would experience an average increase of approximately \$12,792.11 per month (\$153,505.35 per year). All but two of these properties are large industrial firms. The other two include a hotel and a condominium. The top 3 industrial firms would experience increases ranging from \$145,000 to \$236,000 per year.

With respect to the former City of York, one customer would experience a decrease of \$2,220.07 per month (\$26,640.86 per year), while two customers would experience an average increase of \$9,293.49 per month (\$111,521.88 per year). All three are large industrial firms. The decrease arises for the one customer who did not qualify for the high-volume discount, but would benefit from the harmonized rate which is lower than York's existing undiscounted rate. It is noted that customers whose consumption surpasses 454,600 cubic metres qualify for a 23.2 percent discount on the entire volume, and consequently, an increase would arise under simple harmonization for the two customers who would have previously qualified for the much lower high-volume discounted rate.

Due to the wide variations in consumption amongst this customer profile, it is difficult to generalize about "average" harmonization impacts. A review of the property assessment and taxation data indicates no material change in the level of taxation as a result of re-assessment. For several of these properties, the water bill is comparable in magnitude or exceeds their property tax bill. The impacts of simple harmonization on this property class is shown in Table 20.

Table 20
Simple Harmonization Impacts – Large Commercial/Industrial Profile

Monthly Impact Range (\$ / month)	Scarborough*			Etobicoke*		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$500.00 and \$1000.00	-	-	-	4	22.2%	795
\$1000.00 and \$2500.00	-	-	-	6	33.3%	1,790
\$2500.00 and \$5000.00	3	27.3%	3,541	2	11.1%	3,230
Greater than \$5000.00	<u>8</u>	<u>72.7%</u>	<u>15,974</u>	<u>6</u>	<u>33.3%</u>	<u>12,792</u>
	11	100.0%	8,610	18	100.0%	5,396

Monthly Impact Range (\$ / month)	Toronto			East York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
(\$1000.00) and (\$2500.00)	8	32.0%	(2,201)	1	33.3%	(2,394)
(\$2500.00) and (\$5000.00)	15	60.0%	(3,232)	2	66.7%	(3,223)
Greater than (\$5000.00)	<u>2</u>	<u>8.0%</u>	<u>(6,180)</u>	-	-	-
	25	100.0%	(3,138)	3	100.0%	(2,946)

Table 20 (continued)

Monthly Impact Range (\$ / month)	York*			North York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
Greater than \$5000.00	2	66.7%	9,293			
\$0.00	-	-	-			
(\$100.00) and (\$250.00)	-	-	-	7	46.7%	(212)
(\$250.00) and (\$500.00)	-	-	-	7	46.7%	(322)
(\$500.00) and (\$1000.00)	-	-	-	1	6.7%	(558)
(\$1000.00) and (\$2500.00)	<u>1</u>	<u>33.3%</u>	<u>(2,220)</u>	<u>-</u>	<u>-</u>	<u>-</u>
	3	100.0%	5,456	15	100.0%	(289)

*net impact assuming elimination of high-volume discounts

V. OTHER RATE HARMONIZATION OPTIONS

Due to the significant variations that exist in the rate structure, the implementation of any harmonization strategy presents certain challenges. First and foremost is the concern of the rate increases and its potential impact on certain classes of users. This is of particular concern for the City of Scarborough, whose users see an increase of 18.0 percent under simple harmonization. Other challenges include addressing the variations in the volume block structure discounts, the sewer rebate policy, and ensuring the City's competitiveness with the surrounding regions for all classes of users. The following section presents various harmonization options, and their advantages and pitfalls.

Option (1) – Simple Harmonization

One approach that has been discussed in this report that may be taken is that all users pay the same rate. This concept is premised on the basis that water is a basic service available to everyone in the city, and that all users should pay at the same rate. The impact of this approach was previously discussed under impacts of harmonization. Under immediate harmonization, Scarborough, and to a lesser extent Etobicoke, are primarily negatively affected.

With respect to the residential (single-family household) class, the actual impact in absolute terms is not as large as given by the impression of an "18.0 percent increase". In real terms, simple harmonization of rates would mean an increase of less than \$5.00 per month for eighty-four percent of households in Scarborough. City-wide, two-thirds of households will experience a change of less than \$2.00 per month. Given that the typical household water bill represents approximately 10.0 percent of a household's municipal expenditure (i.e., a \$300.00 water bill versus a \$3,000.00 property tax bill), this represents an impact of less than 0.06 percent on the overall cost of municipal services (rate and property tax supported). Furthermore, to the extent that the increases in former cities of Scarborough and Etobicoke are largely attributable to the transfer of water and sewer costs previously borne by the property tax base to the water rate, property tax impacts should be considered in conjunction with water rates.

It is noted that while customers of the former cities of Scarborough and Etobicoke will experience a water rate increase on average, the property tax burden has fallen, partly due to the implementation of CVA and the transfer of certain water and sewer costs to the water rate (for some households, the CVA impact above a certain threshold is being phased-in). These two factors, when taken together, should alleviate some of the concern of the impact of immediate water rate harmonization with respect to the residential class in Scarborough and Etobicoke. These impacts, and other potential harmonization impacts such as that which may arise from solid waste and snow clearing service level harmonization, as well as hydro rate harmonization, are discussed in a concurrent report of all rate and service harmonization impacts (“Service Harmonization”, from the Chief Administrative Officer and Chief Financial Officer and Treasurer, dated March 22, 1999).

However, such an impact-mitigating situation does not exist for the large industrial class. Through CVA, notwithstanding the 2.5 percent capping initiative adopted by Council, the average large industrial property will experience a decrease in property tax burden in all of the former municipalities. The average industrial property will see a property tax decrease, including the education component, ranging from \$14,000 to \$35,000 in the former cities of East York, Etobicoke and York, while the average industrial property in the former cities of North York, Scarborough and Toronto will see a property tax decrease in the range of \$2,000 to \$7,000. The impact of immediate water rate harmonization, however, presents a greater impact to this class. While the average industrial property in Scarborough will see a property tax decrease of approximately \$1,700, the water rate impact is significantly larger at an average \$150,999 for the largest industrial users. Thus immediate harmonization of water rates on a simple basis would be problematic for the large industrial class.

The advantage of harmonizing to one rate is that it achieves the principle that “all users pay the same rate”. However, this approach would have a significant impact on the industrial class, and does not address the pricing competitiveness of the City amongst the various customer classes relative the surrounding regions.

Option (1A) – Phase-in of Harmonization Impacts:

If the philosophy is that all users should pay at the same rate, then several tools are available to spread the impact out over time. These tools would include phasing-in of rate changes, and capping of increases. At the end of the phase-in, the total impact would still be the same.

The following Table presents the impact of a 3-year phase-in to a harmonized rate. The annual impact to the former City of Scarborough ratepayers would be 6.0 percent for three years (18.0 percent divided by 3 years), while the decreases for ratepayers in the former Toronto would be 3.0 percent for three years.

Table 21
3-Year Phase-In to Harmonized Rate (all users)

	<u>1998</u>	<u>1999</u>	<u>% Change</u>	<u>2000</u>	<u>% Change</u>	<u>2001</u>	<u>% Change</u>	<u>Total Change</u>
York	1.0141	0.9899	(2.4%)	0.9658	(2.4%)	0.9416	(2.5%)	(7.1%)
North York	0.9433	0.9427	(0.1%)	0.9422	(0.1%)	0.9416	(0.1%)	(0.2%)
East York	1.0340	1.0032	(3.0%)	0.9724	(3.1%)	0.9416	(3.2%)	(8.9%)
Scarborough	0.7983	0.8461	6.0%	0.8938	5.6%	0.9416	5.3%	18.0%
Etobicoke	0.9019	0.9151	1.5%	0.9284	1.4%	0.9416	1.4%	4.4%
Toronto	<u>1.0308</u>	<u>1.0011</u>	<u>(2.9%)</u>	<u>0.9713</u>	<u>(3.0%)</u>	<u>0.9416</u>	<u>(3.1%)</u>	<u>(8.7%)</u>
City-Average	0.9416	0.9416	0.0%	0.9416	0.0%	0.9416	0.0%	(0.0%)

One of the primary reasons for differences in the water rate prior to amalgamation arises from the manner in which water and sewer costs were identified and allocated between the tax-supported and rate-supported program areas. This difference was most profound in the former City of Scarborough, which funded sewer costs through the property tax levy, resulting in an apparently lower water rate. Given such accounting differences, a consistent approach to costing, based on full-cost recovery, may be warranted if immediate harmonization is not followed. Such an approach might be considered fairer in keeping with the full-cost recovery principle. In this way, the first-year impact of harmonization for Scarborough would be 11.0 percent if full-cost recovery pricing is considered, as shown in Table 22.

Table 22
2-Year Phase-In to Harmonized Rate (all users)
(Based on Full-Cost Pricing in First Year)

	<u>1998</u>	<u>1999 Full-Cost Recovery</u>	<u>% Change</u>	<u>2000 Harmon- ization</u>	<u>% Change</u>	<u>Total Change</u>
York	1.0141	0.9801	(3.4%)	0.9416	(3.9%)	(7.1%)
North York	0.9433	0.9287	(1.5%)	0.9416	1.4%	(0.2%)
East York	1.0340	0.9995	(3.3%)	0.9416	(5.8%)	(8.9%)
Scarborough	0.7983	0.8861	11.0%	0.9416	6.3%	18.0%
Etobicoke	0.9019	0.9702	7.6%	0.9416	(2.9%)	4.4%
Toronto	<u>1.0308</u>	<u>0.9887</u>	<u>(4.1%)</u>	<u>0.9416</u>	<u>(4.8%)</u>	<u>(8.7%)</u>
City-Average	0.9416	0.9416	0.0%	0.9416	0.0%	0.0%

Both of these approaches are viable, however, the impact is the same in the end. These approaches do not address the issue of competitiveness with the surrounding regions.

Option (2) - Rate Structure to Mitigate the Impact of Harmonization on Large Customers

The analysis of the impacts of simple harmonization has shown a negative financial impact of approximately \$3.02 million on a net basis assuming elimination of the high-volume discounts (\$1.7 million on a gross basis before high-volume discounts) on those 31 high volume customers in the former cities of Scarborough, Etobicoke and York. One approach to mitigate this impact would be to harmonize to Scarborough's existing rate and high-volume breakpoint for all high-volume users.

Scarborough's existing rate structure provides for a discount of 9.5 percent from the rate of \$0.7983 per cubic metre on volumes consumed above 272,766 cubic metres per year. The rate on volumes above the breakpoint would thus be \$0.7225 per cubic metre. In this way, any increase to large customers in Scarborough would be eliminated, however, this would be at the expense of all users whose consumption was less than 272,766 cubic metres per year. High volume users in the other cities would experience win-fall gains as compared to straight harmonization. Such an approach would result in a rate of \$0.9626 per cubic metre, or an additional 2.2 percent on top of the impact of simple harmonization for any customer whose consumption was less than 272,766 cubic metres. This rate structure is shown in Table 23, and the total impact by former municipality is shown in Table 24 below.

Table 23
Rate Structure to Mitigate Harmonization Impact to High-Volume Users

<u>Block</u>	<u>Rate</u> <u>(\$ / M3)</u>	
Annual Volume less than 272,766 M3	0.9626	
Annual Volume greater than 272,766 M3:	0.7983	First 272,766 cubic metres
	0.7225	Above 272,766 cubic metres

Table 24
Total Impact of Rate Structure to Mitigate Increases to High Volume Customers (\$000's)

<u>Consumption</u>	<u>No.</u> <u>Customers</u>	<u>East York</u>	<u>Etobicoke</u>	<u>North</u> <u>York</u>	<u>Scarbor-</u> <u>ough</u>	<u>Toronto</u>	<u>York</u>	<u>Total</u>
Volume < 272,766 M3	375,715	(1,274)	2,467	963	12,006	(7,148)	(1,088)	5,926
Volume > 272,766 M3	<u>70</u>	<u>(270)</u>	<u>(2,219)</u>	<u>(996)</u>	<u>0</u>	<u>(2,324)</u>	<u>(116)</u>	<u>(5,926)</u>
Total	372,785	(1,544)	248	(33)	12,006	(9,472)	(1,204)	0

The funding for the decreases to the large-volume customers would come from all consumers whose consumption was less than the break-point, resulting in a rate of \$0.9626 to this group versus \$0.9416 under simple harmonization. The impact to the residential customer profile is minimally higher (2.2 percent more) than that shown under immediate harmonization (Option 1), as shown in Table 25. The impact on high-volume users is shown in Table 26.

Table 25
Residential Impact of Above Rate Structure
(\$0.9626 if volume < 272,766 M3; if volume >272,766 M3, \$0.7983 on first 272,766 M3, \$0.7225 on volumes above 272,766 M3)

	1998	1999 (@ 25 M3/month)	% Change	Option (2) Average Residential Household Impact (\$/month)	Comparison with Simple Harmonization Option (1)
East York	1.0340	0.9626	(6.9%)	(1.67)	(2.06)
Etobicoke	0.9019	0.9626	6.7%	0.95	0.60
North York	0.9433	0.9626	2.0%	0.33	(0.32)
Scarborough	0.7983	0.9626	20.6%	3.69	3.26
Toronto	1.0308	0.9626	(6.6%)	(2.11)	(2.68)
York	<u>1.0141</u>	<u>0.9626</u>	<u>(5.1%)</u>	<u>(1.39)</u>	<u>(1.82)</u>
City-Average	0.9416	n/a	n/a	0.97	0.51

Table 26
Impact of “No-Increase” Rate Structure on High-Volume Customers (>272,766 M3)
(\$0.9626 if volume < 272,766 M3; if volume >272,766 M3, \$0.7983 on first 272,766 M3, \$0.7225 on volumes above 272,766 M3)

Monthly Impact Range (\$ / month)	Scarborough			Etobicoke		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$0.00	10	100.0%	0.00	-	-	-
(\$1000.00) and (\$2500.00)	-	-	-	2	11.8%	(2,426.24)
(\$2500.00) and (\$5000.00)	-	-	-	6	35.3%	(3,707.89)
Greater than (\$5000.00)	-	-	-	9	52.9%	(17,530.30)
	10	100.0%	0.00	17	100.0%	(10,874.85)

Monthly Impact Range (\$ / month)	Toronto			East York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
Greater than (\$5000.00)	22	100.0%	(8,804.40)	3	100.0%	(7,500.52)
	10	100.0%	(8,804.40)	17	100.0%	(10,874.85)

Table 26 (continued)

Monthly Impact Range (\$/ month)	York			North York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
(\$500.00) and (\$1000.00)	1	33.3%	(993.83)	-	-	-
(\$1000.00) and (\$2500.00)	1	33.3%	(2,284.00)	-	-	-
(\$2500.00) and (\$5000.00)	-	-	-	9	60.0%	(3,942.13)
Greater than (\$5000.00)	<u>1</u>	<u>33.3%</u>	<u>(6,412.33)</u>	<u>6</u>	<u>40.0%</u>	<u>(7,927.53)</u>
	3	100.0%	(5,536.29)	15	100.0%	(5,536.29)

This rate structure has the advantage of eliminating any increases for high-volume users as a result of harmonization, and specifically, to those in the former City of Scarborough. However, there are a number of disadvantages with this approach. For one, it may have the inadvertent effect of discouraging water efficiency for those customers approaching the break point. For example, a customer whose projected annual consumption requirement is 240,000 cubic metres may be inclined to consume an additional 30,000 cubic metres (enough water for 100 household-years) in order to reach the break-point and save \$14,000.00 in total water costs. For another, the existing breakpoint is arbitrary, and does not consider competitive pricing for the significant medium-use customer base.

Break-points that result in a reduced cost on the entire volume, such as that offered by the former City of York and discussed above, is inconsistent with water efficiency. An alternative would be to provide a discount on volumes above the break-point, an approach similar to the high-volume discounts offered by the former cities of Scarborough and Etobicoke. Based on the same break-point, such a rate structure would be \$0.9595 for the first 272,766 cubic metres, and \$0.6590 (31.3 percent discount) on volumes in excess of the break-point, as shown in Table 27. Although this strategy is impact neutral for high-volume users as a whole in the former City of Scarborough, the high breakpoint benefits only two of the ten high volume users, who will see decreases in their water costs, while the remaining eight will experience increases, albeit less than straight harmonization. The total impact by former municipality is shown in Table 29 and the average impact on the residential class in Table 30. The impact on high-volume users is shown in Table 31. Again, this break-point is arbitrary, and makes no consideration of competitiveness with the surrounding regions.

Table 27
Alternate Rate Structure to Mitigate Harmonization Impact to High-Volume Users

<u>Block</u>	<u>Rate (\$ / M3)</u>
First 272,766 cubic metres	0.9595
Above 272,766 cubic metres	0.6590

Table 28
Total Impact of Rate Structure to Mitigate Increases to High Volume Customers (\$000's)
(\$0.9595 on volumes < 272,766 M3, \$0.6590 on volumes above 272,766 M3)

<u>Consumption</u>	<u>No. Customers</u>	<u>East York</u>	<u>Etobicoke</u>	<u>North York</u>	<u>Scarborough</u>	<u>Toronto</u>	<u>York</u>	<u>Total</u>
Volume < 272,766 M3	375,715	(1,326)	2,308	6400	11,750	(7,451)	(1,147)	4,774
Volume > 272,766 M3	<u>70</u>	<u>(163)</u>	<u>(2,421)</u>	<u>(504)</u>	<u>0</u>	<u>(1,626)</u>	<u>(59)</u>	<u>(4,774)</u>
Total	372,785	(1,544)	248	(33)	12,006	(9,472)	(1,204)	0

Table 29
Residential Impact of Above Rate Structure
(\$0.9595 on volumes < 272,766 M3, \$0.6590 on volumes above 272,766 M3)

	<u>1998</u>	<u>1999</u>	<u>% Change</u>	<u>Average Residential Household Impact (\$/month)</u>	<u>Comparison with Simple Harmonization</u>
East York	1.034	0.9595	(7.2%)	(1.75)	(2.06)
Etobicoke	0.9019	0.9595	6.4%	0.89	0.60
North York	0.9433	0.9595	1.7%	0.24	(0.32)
Scarborough	0.7983	0.9595	20.2%	3.63	3.26
Toronto	1.0308	0.9595	(6.9%)	(2.25)	(2.68)
York	<u>1.0141</u>	<u>0.9595</u>	<u>(5.4%)</u>	<u>(1.47)</u>	<u>(1.82)</u>
City-Average	0.9416	n/a	n/a	0.91	0.51

Table 31
Impact of "No-Increase" Rate Structure on High-Volume Customers (>272,766 M3)
(\$0.9500 Base Rate on Volumes < 272,766 M3; \$0.6525 or 31.3 % Discount on Volumes >272,766 M3)

<u>Monthly Impact Range (\$ / month)</u>	<u>Scarborough</u>			<u>Etobicoke</u>		
	<u>No. of Customers</u>	<u>% of Customers</u>	<u>Average Monthly Impact (\$ / month)</u>	<u>No. of Customers</u>	<u>% of Customers</u>	<u>Average Monthly Impact (\$ / month)</u>
\$2500.00 and \$5000.00	4	40.0%	2,915	-	-	-
\$1000.00 and \$2500.00	4	40.0%	2,104	1	5.9%	1,082
\$500.00 and \$1000.00	-	-	-	2	11.8%	780
\$10.00 and \$20.00	-	-	-	1	5.9%	12
\$0.00	-	-	-	-	-	-
(\$250.00) and (\$500.00)	-	-	-	1	5.9%	(423)
(\$1000.00) and (\$2500.00)	-	-	-	3	17.6%	(2,028)
(\$2500.00) and (\$5000.00)	-	-	-	2	11.8%	(3,925)
Greater than (\$5000.00)	<u>2</u>	<u>20.0%</u>	<u>(10,036)</u>	<u>7</u>	<u>41.2%</u>	<u>(27,154)</u>
City Average	10	100.0%	0.00	17	100.0%	(11,869)

Table 31 (continued)

Monthly Impact Range (\$ / month)	Toronto			East York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$500.00 and \$1000.00	-	-	-	-	-	-
\$0.00	-	-	-	-	-	-
(\$1000.00) and (\$2500.00)	4	18.2%	(2,155)	1	33.3%	(2,418)
(\$2500.00) and (\$5000.00)	9	40.9%	(3,795)	1	33.3%	(4,143)
Greater than (\$5000.00)	<u>9</u>	<u>40.9%</u>	<u>(10,301)</u>	<u>1</u>	<u>33.3%</u>	<u>(7,051)</u>
City Average	22	100.0%	(6,159)	3	100.0%	(4,537)

Monthly Impact Range (\$ / month)	York			North York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$500.00 and \$1000.00	1	33.3%	666	-	-	-
\$0.00	-	-	-	-	-	-
(\$20.00) and (\$50.00)	-	-	-	1	6.7%	(25)
(\$100.00) and (\$250.00)	-	-	-	2	13.3%	(137)
(\$250.00) and (\$500.00)	-	-	-	1	6.7%	(274)
(\$500.00) and (\$1000.00)	-	-	-	2	13.3%	(688)
(\$1000.00) and (\$2500.00)	1	33.3%	(2,227)	3	20.0%	(1,458)
(\$2500.00) and (\$5000.00)	1	33.3%	(3,330)	3	20.0%	(3,500)
Greater than (\$5000.00)	<u>-</u>	<u>-</u>	<u>-</u>	<u>3</u>	<u>20.0%</u>	<u>(8,401)</u>
City Average	2	100.0%	(1,630)	15	100.0%	(2,802)

Option (3) – Competitive Rate Structure

Option (1) considers the impacts of harmonizing to the average rate for all users. The analysis of this option indicates that, while the impacts may be manageable in absolute terms for the residential customer profile, it presents a significant impact to those medium and large industrial customers in Scarborough and Etobicoke. Option (1A) attempts to mitigate the annual impact to all customer profiles by phasing-in the harmonized rate over several years. Phasing-in only serves to delay the impacts noted above. A modified version of this option was also explored, which prescribes phasing-in over two phases; each municipality would move to their full-cost accounting rate in the first year, followed by harmonization in the second year. The latter version may be considered by some to be fairer from a cost-accounting perspective should a harmonized rate not be immediately implemented. The end-impact in either approach is the same. Neither of these approaches address the competitiveness of the rate amongst the various customer profiles, and in particular, the one-percent of high-volume customers who generate more than half the water revenues. Option (2) attempts to mitigate the impacts to existing high-volume users. While this can be accomplished, it is at the expense of all other users, and benefits only a small number of customers.

An alternate approach involves consideration of various rate structures for various customer classes. Such an approach is not unique. The former cities of Etobicoke, Scarborough and York provided for a discount on the price of water after certain consumption milestones are surpassed. The Regions of Halton and Durham also utilize block structures with pricing dependent on the volume of water consumed. The Toronto Hydro Electric Commission also provides general service to its residential customers in a block structure, with the energy charge generally falling as electric consumption rises.

Since the water rate must provide for full funding for the water and wastewater program, this approach would result in shifts in burden between customer classes. Variations in the rate structure can be designed to mitigate the potential impact of harmonization, or to ensure competitiveness with the surrounding regions. Currently, average cost of water in the amalgamated Toronto is lower for the residential (low-volume) user compared to the surrounding regions, and higher than the surrounding regions for high-volume users. Thus, there is room for cost-reallocation, which would enhance the city's competitiveness with the surrounding regions.

Amalgamation presents a unique opportunity for the City to reexamine its water pricing strategy with respect to all customers. This option considers a pricing strategy that provides for fairness, encourages water efficiency, and improves the city's competitiveness amongst the various customer classes with the surrounding regions. Tables 6 and 7 provide a comparison of the existing pricing structure with that of the surrounding regions. Using this as a guideline, a new pricing structure was developed that meets the above objectives. This structure is shown in Table 32. The effective price at various consumption's is shown in Table 33, and shown graphically in Figure 5.

Table 32
Option (3) Pricing Structure

<u>Volume Range (M3 per Month)</u>	<u>Comment</u>	<u>Price (\$ per cubic metre)</u>
Volume <= 20 M3	First 20 M3	0.9354
20 M3 < Volume <= 500 M3	Next 480 M3	0.9738
500 M3 < Volume <= 1,000 M3	Next 500 M3	0.9677
1,000 M3 < Volume <=5,000 M3	Next 4,000 M3	0.9476
5,000 M3 < Volume <=10,000 M3	Next 5,000 M3	0.9181
10,000 M3 < Volume <=20,000 M3	Next 10,000 M3	0.8585
Volume > 20,000 M3	Over 20,000 M3	0.8060

Figure 5
Option (3) - Effective Price Based On Consumption

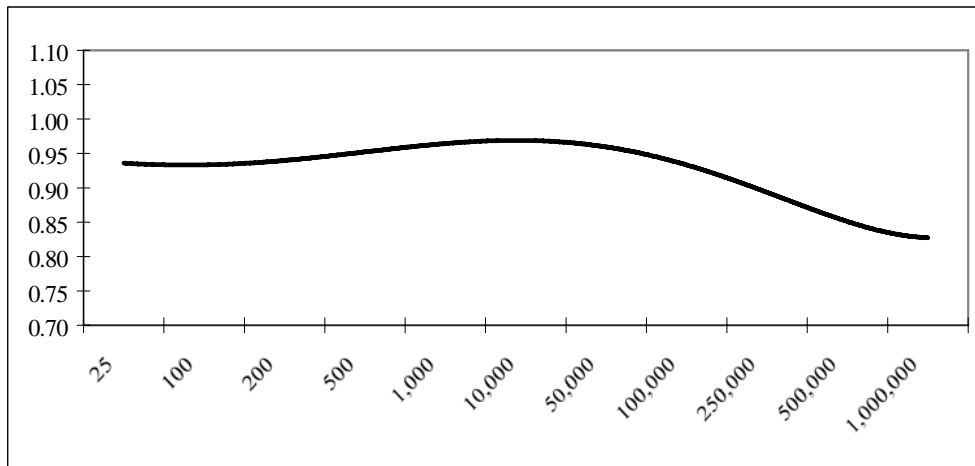


Table 33
Option (3) - Effective Rate for Various Consumption

Monthly Volume	Annual Volume	Monthly Cost (\$'s)	Annual Cost (\$'s)	Option (3) Effective Rate (\$/M3)
20	240	19	224	0.9354
25	300	24	283	0.9431
100	1,200	48	575	0.9662
500	6,000	486	5,834	0.9727
1,000	12,000	970	11,642	0.9723
5,000	60,000	4,760	57,124	0.9521
10,000	120,000	9,351	112,209	0.9351
20,000	240,000	17,936	215,229	0.8968
50,000	600,000	42,115	505,382	0.8423
100,000	1,200,000	82,414	988,970	0.8241

Such a pricing structure provides an opportunity for a reduced rate for residential customers, compared to the rate that would be derived from simple harmonization, encourages water conservation for residential homeowners who tend to consume more than average, and ensures competitive water pricing for the City's commercial and industrial base. As can be seen, such a strategy results in a shift in the water burden between the low- volume and high-volume users.

The impact of this pricing structure is not significantly different to the residential customer in comparison to the impact of simple harmonization, as shown in Table 34 and Table 35.

Table 34
Residential Impact of Option (3) Competitive Pricing

	<u>1998</u>	<u>Option (3)</u> <u>(assuming 25</u> <u>M3 / month)</u>	<u>%</u> <u>Change</u>	<u>Option (3)</u> <u>Average Residential</u> <u>Household Impact</u> <u>(\$/month)</u>	<u>Average Residential</u> <u>Household Impact under</u> <u>Simple Harmonization</u> <u>Option (1)</u> <u>(\$ / month)</u>
East York	1.03400	0.9431	(8.8%)	(1.90)	(2.06)
Etobicoke	0.90187	0.9431	4.6%	0.73	0.60
North York	0.94330	0.9431	0.0%	0.25	(0.32)
Scarborough	0.79830	0.9431	18.1%	3.49	3.26
Toronto	1.03083	0.9431	(8.5%)	(2.34)	(2.68)
York	<u>1.01406</u>	<u>0.9431</u>	<u>(7.0%)</u>	<u>(1.61)</u>	<u>(1.82)</u>
City-Average	0.94160	n/a	n/a	0.81	0.51

Table 35
Option (3) Increase Impact – Residential Customer Profile

Monthly Impact Range <u>(\$ / month)</u>	Scarborough			Etobicoke		
	<u>No. of</u> <u>Customers</u>	<u>% of</u> <u>Customers</u>	<u>Average</u> <u>Monthly</u> <u>Impact</u> <u>(\$ / month)</u>	<u>No. of</u> <u>Customers</u>	<u>% of</u> <u>Customers</u>	<u>Average</u> <u>Monthly</u> <u>Impact</u> <u>(\$ / month)</u>
\$0.00 and \$1.00	10,134	9.2%	0.50	49,780	80.4%	0.47
\$1.00 and \$2.00	18,229	16.5%	1.55	8,962	14.5%	1.37
\$2.00 and \$5.00	59,516	53.8%	3.30	3,207	5.2%	2.86
\$5.00 and \$10.00	21,021	19.0%	6.53	-	-	-
\$10.00 and \$20.00	<u>1,660</u>	<u>1.5%</u>	<u>11.35</u>	<u>-</u>	<u>-</u>	<u>-</u>
	110,560	100.0%	3.49	61,949	100.0%	0.73

Monthly Impact Range <u>(\$ / month)</u>	Toronto			East York		
	<u>No. of</u> <u>Customers</u>	<u>% of</u> <u>Customers</u>	<u>Average</u> <u>Monthly</u> <u>Impact</u> <u>(\$ / month)</u>	<u>No. of</u> <u>Customers</u>	<u>% of</u> <u>Customers</u>	<u>Average</u> <u>Monthly</u> <u>Impact</u> <u>(\$ / month)</u>
\$0.00 and (\$1.00)	5,325	14.5%	(0.63)	3,865	17.8%	(0.68)
(\$1.00) and (\$2.00)	11,017	29.9%	(1.52)	8,455	39.0%	(1.51)
(\$2.00) and (\$5.00)	18,766	50.9%	(3.00)	9,139	42.1%	(2.70)
(\$5.00) and (\$10.00)	<u>1,743</u>	<u>4.7%</u>	<u>(5.52)</u>	<u>230</u>	<u>1.1%</u>	<u>(5.58)</u>
	36,851	100.0%	(2.34)	21,689	100.0%	(1.90)

Table 35 (continued)

Monthly Impact Range (\$ / month)	York			North York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$1.00 and \$2.00	-	-	-	2,982	3.6%	1.08
\$0.00 and \$1.00	-	-	-	49,700	60.5%	0.40
\$0.00 and (\$1.00)	7,154	24.3%	(0.60)	29,460	35.9%	(0.08)
(\$1.00) and (\$2.00)	14,348	48.7%	(1.52)	-	-	-
(\$2.00) and (\$5.00)	<u>7,934</u>	<u>27.0%</u>	<u>(2.66)</u>	<u>-</u>	<u>-</u>	<u>-</u>
	29,436	100.0%	(1.81)	82,142	100.0%	0.25

The total impact to the various customer profiles and across cities is shown in Table 36, and a comparison with the impacts arising from simple harmonization is shown in Table 37.

Table 36
Option (3) – Competitive Rate Structure
Total Impact by Customer and City of Harmonization (\$000's)

Customer Profile	East York	Etob-icoke	North York	Scarbor-ough	Toronto	York	Option 3 Total	Option 1 Total
Predominantly Residential Households, excluding condominiums and apartments	(495)	540	248	4,633	(1,033)	(567)	3,326	2,091
Predominantly Small Commercial / Industrial / Office, Small Condominium / Apartment Complexes, Strip Malls and Stand-alone Restaurants	(115)	322	390	1,770	(1,388)	(143)	835	(848)
Predominantly Medium Commercial / Industrial, Medium Offices, Medium Condominiums and Apartment Complexes, Strip Malls	(943)	866	(171)	4,813	(5,561)	(526)	(1,523)	(1,798)
Predominantly Large Industrial, Large Offices, Large Condominiums and Apartment Complexes, Including Hospitals	(187)	(103)	(328)	243	(1,090)	(51)	(1,517)	(269)
Predominantly Large Industrial and Large Offices	-	(81)	(208)	48	(646)	71	(816)	(297)
Large Industrial	-	(697)	-	392	-	-	(305)	1,122
Total Option (3)	(1,740)	847	(69)	11,899	(9,718)	1,216	(0)	-
Total Option (1)	(1,674)	2,143	(915)	11,737	(9,730)	(1,561)	-	(0)

Table 37
Option (3) – Competitive Rate Structure
Comparison with Simple Harmonization

Customer Profile	East York	Etobicoke	North York	Scarborough	Toronto	York	Total
Predominantly Residential Households, excluding condominiums and apartments	42	92	565	309	151	77	1,235
Predominantly Small Commercial / Industrial / Office, Small Condominium / Apartment Complexes, Strip Malls and Stand-alone Restaurants	43	145	590	293	539	73	1,683
Predominantly Medium Commercial / Industrial, Medium Offices, Medium Condominiums and Apartment Complexes, Strip Malls	(70)	(71)	175	90	117	35	275
Predominantly Large Industrial, Large Offices, Large Condominiums and Apartment Complexes, Including Hospitals	(81)	(207)	(292)	(182)	(460)	(24)	(1,248)
Predominantly Large Industrial and Large Offices	-	(142)	(191)	(36)	(334)	185	(519)
Large Industrial	-	(1,115)	-	(312)	-	-	(1,427)
Grand Total	(66)	(1,296)	846	162	12	2,777	0

The competitive pricing strategy results in a greater cost for low volume users (than would exist under simple harmonization), for which the old pricing was generally lower than the surrounding municipalities, and a lower cost for the medium and large volume customers, for whom the old pricing was generally higher than the surrounding municipalities. Such an approach results in a shift in water rate burden to the residential and small commercial class in order to reduce the impacts to the medium and large volume users.

The estimated impact of the competitive pricing strategy on the small business class is shown in Table 38. As can be seen, the decreases under simple harmonization for low-volume users in Toronto, East York, North York and York is somewhat reduced, while the increases are raised in Scarborough and Etobicoke.

Table 38
Estimated Annual Impact of Option (3) Competitive Pricing on
Small & Medium Volume Users

	East York	Etobicoke	North York	Scarborough	Toronto	York
<u>Restaurant @ 3,000 Sq. Ft.</u>						
Annual Consumption (M3)	3,200	3,200	3,200	3,200	3,200	3,200
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	3,309	2,886	3,019	2,555	3,299	3,245
Harmonized Rate	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Estimated Harmonized Bill	<u>3,111</u>	<u>3,111</u>	<u>3,111</u>	<u>3,111</u>	<u>3,111</u>	<u>3,111</u>
Annual Impact - Option (3) Pricing	<u>(198)</u>	<u>225</u>	<u>92</u>	<u>556</u>	<u>(192)</u>	<u>(134)</u>
Annual Impact - Simple Harmonization	(296)	127	(5)	459	(286)	(232)
<u>Strip-Retail c/w Residential @ 2,000 Sq. Ft.</u>						
Annual Consumption (M3)	400	400	400	400	400	400
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	414	361	377	319	412	406
Harmonized Rate	0.9508	0.9508	0.9508	0.9508	0.9508	0.9508
Estimated Harmonized Bill	<u>376</u>	<u>376</u>	<u>376</u>	<u>376</u>	<u>376</u>	<u>376</u>
Annual Impact - Option (3) Pricing	<u>(38)</u>	<u>15</u>	<u>1</u>	<u>57</u>	<u>(36)</u>	<u>(30)</u>
Annual Impact - Simple Harmonization	(37)	16	(1)	57	(36)	(29)
<u>Small Office Building @ 10,000 Sq. Ft.</u>						
Annual Consumption (M3)	2,000	2,000	2,000	2,000	2,000	2,000
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	2,068	1,804	1,887	1,597	2,062	2,028
Harmonized Rate	0.9692	0.9692	0.9692	0.9692	0.9692	0.9692
Estimated Harmonized Bill	<u>1,942</u>	<u>1,942</u>	<u>1,942</u>	<u>1,942</u>	<u>1,942</u>	<u>1,942</u>
Annual Impact - Option (3) Pricing	<u>(126)</u>	<u>138</u>	<u>55</u>	<u>345</u>	<u>(120)</u>	<u>(86)</u>
Annual Impact - Simple Harmonization	(185)	79	(3)	287	(178)	(145)
<u>Medium Industrial Building @ 40,000 Sq. Ft.</u>						
Annual Consumption (M3)	5,600	5,600	5,600	5,600	5,600	5,600
1998 Rate	1.034	0.90187	0.9433	0.7983	1.03083	1.01406
1998 Estimated Water Bill	5,790	5,050	5,282	4,470	5,773	5,679
Harmonized Rate	0.9722	0.9722	0.9722	0.9722	0.9722	0.9722
Estimated Harmonized Bill	<u>5,448</u>	<u>5,448</u>	<u>5,448</u>	<u>5,448</u>	<u>5,448</u>	<u>5,448</u>
Annual Impact - Option (3) Pricing	<u>(342)</u>	<u>398</u>	<u>166</u>	<u>978</u>	<u>(325)</u>	<u>(231)</u>
Annual Impact - Simple Harmonization	(517)	222	(10)	802	(500)	(406)

However, this strategy significantly reduces the impacts to the large volume users, for whom a competitive water rate is provided relative to the surrounding regions. The negative impact to the former City of Scarborough high-volume users is reduced by almost forty percent on average, as shown in Table 41, compared to the impacts of simple harmonization as shown in Tables 20 and 21. Under this option, the negative impacts on the former cities of Etobicoke and York are eliminated.

Tables 39 and 40 show the ranking of the cost of water for residential users and higher-volume users for this option relative to the cost in the surrounding municipalities.

Table 39
Rank by Monthly Water Costs – Residential Customer Profile

	Monthly Cost of 25 M3	Effective Rate (\$/M3)		Monthly Cost of 50 M3	Effective Rate (\$/M3)
Peel Region	20.25	0.8100	Peel Region	40.36	0.8073
Toronto- Option (1)	23.54	0.9416	Toronto- Option (1)	47.08	0.9416
Toronto- Option (3)	23.58	0.9431	Toronto- Option (3)	47.92	0.9585
Vaughan City	24.33	0.9730	Vaughan City	48.65	0.9730
Markham	27.55	1.1021	Halton Region	52.54	1.0507
Aurora	27.68	1.1070	Markham	55.10	1.1021
Whit./Stouf.	28.55	1.1420	Aurora	55.35	1.1070
Halton Region	30.50	1.2200	Durham Region	55.85	1.1170
E.Gwillimbury	31.25	1.2500	Whit./Stouf.	57.10	1.1420
Newmarket	31.61	1.2643	E.Gwillimbury	62.50	1.2500
Richmond Hill	31.63	1.2650	Newmarket	63.22	1.2643
Durham Region	32.25	1.2900	Richmond Hill	63.25	1.2650
King City	38.51	1.5403	King City	77.02	1.5403

Table 40
Annual Water Cost - Commercial / Industrial / Institutional Customers (Ascending Cost)

	<u>10,000 M3 per year</u>			<u>50,000 M3 per year</u>	
	<u>\$ Cost</u>	Effective Rate* <u>(\$/M3)</u>		<u>\$ Cost</u>	Effective Rate* <u>(\$/M3)</u>
Peel	8,799	0.8799	Durham	43,635	0.8727
Durham	9,013	0.9013	Peel	43,994	0.8799
Toronto-Option (1)	9,416	0.9416	Halton	45,591	0.9118
Toronto- Option (3)	9,705	0.9705	Toronto-Option (1)	47,080	0.9416
Vaughan City	9,730	0.9730	Toronto- Option (3)	47,648	0.9530
Halton	9,999	0.9999	Vaughan City	48,650	0.9730
Markham	11,021	1.1021	Markham	55,105	1.1021

Table 40 (continued)

	<u>100,000 M3 per year</u>		<u>500,000 M3 per year</u>		
	<u>\$ Cost</u>	<u>Effective Rate* (\$/M3)</u>	<u>\$ Cost</u>	<u>Effective Rate* (\$/M3)</u>	
Durham	79,859	0.7986	Durham	366,259	0.7325
Halton	86,506	0.8651	Halton	413,826	0.8277
Peel	87,987	0.8799	Toronto- Option (3)	424,784	0.8496
Toronto- Option (3)	93,847	0.9385	Peel	439,935	0.8799
Toronto-Option (1)	94,160	0.9416	Toronto-Option (1)	470,800	0.9416
Vaughan City	97,300	0.9713	Vaughan City	485,650	0.9713
Markham	110,210	1.1021	Markham	551,050	1.1021

*including volume break-points and minimum services charges

Figure 6
Option (3) – Cost Impact Large Industrial Customer Profile

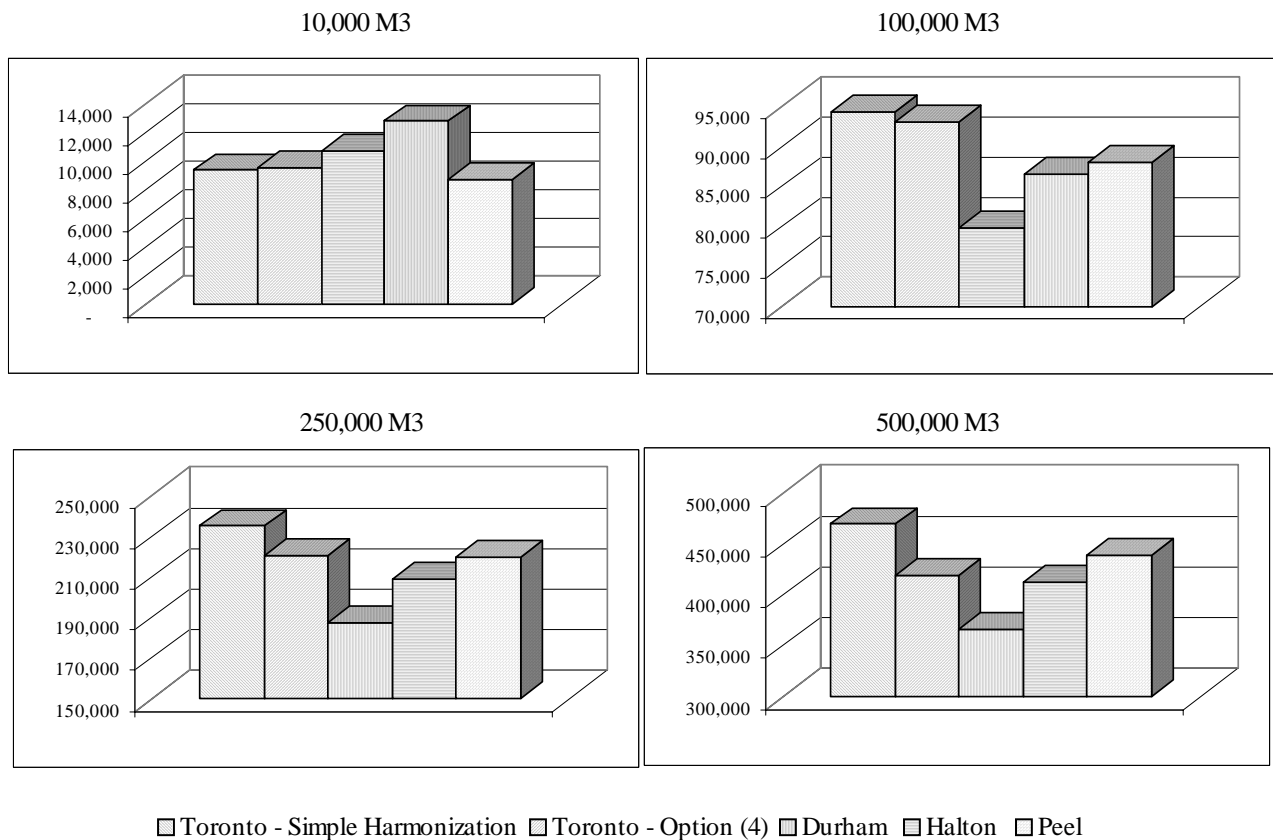


Table 41
Industrial/ Commercial Impact of Option (3) Competitive Pricing

Monthly Impact Range (\$ / month)	Scarborough			Etobicoke		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
Greater than (\$5000.00)	2	18.2%	16,345	-	-	-
\$2500.00 and \$5000.00	6	54.5%	3,058	-	-	-
\$1000.00 and \$2500.00	3	27.3%	1,952	-	-	-
\$0.00	-	-	-	-	-	-
(\$250.00) and (\$500.00)	-	-	-	1	5.6%	(484)
(\$500.00) and (\$1000.00)	-	-	-	5	27.8%	(748)
(\$1000.00) and (\$2500.00)	-	-	-	5	27.8%	(1,678)
(\$2500.00) and (\$5000.00)	-	-	-	1	5.6%	(2,764)
Greater than (\$5000.00)	-	-	-	<u>6</u>	<u>33.3%</u>	<u>(9,676)</u>
City Average	11	100.0%	5,172	18	100.0%	(11,869)

Monthly Impact Range (\$ / month)	Toronto			East York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
(\$2500.00) and (\$5000.00)	13	52.0%	(3,905)	2	66.7%	(4,412)
Greater than (\$5000.00)	<u>12</u>	<u>48.0%</u>	<u>(7,825)</u>	<u>1</u>	<u>33.3%</u>	<u>(6,744)</u>
City Average	25	100.0%	(5,786)	3	100.0%	(5,189)

Monthly Impact Range (\$ / month)	York			North York		
	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)	No. of Customers	% of Customers	Average Monthly Impact (\$ / month)
\$2500.00 and \$5000.00	2	66.7%	2,945	-	-	-
\$0.00	-	-	-	-	-	-
(\$1000.00) and (\$2500.00)	-	-	-	9	60.0%	(1,930)
(\$2500.00) and (\$5000.00)	1	33.3%	(4,230)	4	26.7%	(3,672)
Greater than (\$5000.00)	-	-	-	<u>2</u>	<u>13.3%</u>	<u>(6,311)</u>
City Average	3	100.0%	(553)	15	100.0%	(2,978)

VI. OTHER HARMONIZATION ISSUES

1999 Operating and Capital Budget Request and Pressures

The 1999 Operating Budget request together with the 1999-2003 Capital Works request for the Water and Wastewater Programs, as recommended by the Budget Committee, may have a negative financial implication on the average cost of water and sewer services. The impact on the water and sewer rate will be affected by the amount of capital financed through capital-from-current, debenture issuance, and reserves. The analysis indicates that the 1999 operating and capital requirements can be funded from capital-from-current and drawing down of reserves without impacting the average water and sewer rate and without necessitating debenture financing for 1999. However, projections indicate that the program cannot remain self-funding in future years without rate increases, debenture financing, expenditure reductions, or a combination thereof.

The strategy recommended in the above noted report involves a combination of debenture financing of the capital program in conjunction with moderate rate increases. Preliminary projections suggest \$50.0 to \$90.0 million in debenture financing over the 2000 – 2003 period coupled with a 2.0% per annum rate increase over the same period (which is less than the rate of inflation). Such a strategy achieves the objective of ensuring the program remains self-funding, minimizes the impact on the average water and sewer rate, and maintains adequate reserve balances. Such a strategy will also help minimize the additional financial impact that may potentially result from any water rate harmonization initiative, particularly if such a strategy involves the phasing-in of changes over time.

Table 42
Capital and Operating Budget Pressures on Water Rate

	1999	Projected Increase	
		2.0%	2.0%
		2000	2001
Volume <= 20 M3	0.9354	0.9541	0.9732
20 M3 < Volume <= 500 M3	0.9738	0.9933	1.0132
500 M3 < Volume <= 1,000 M3	0.9677	0.9870	1.0068
1,000 M3 < Volume <=5,000 M3	0.9476	0.9665	0.9859
5,000 M3 < Volume <=10,000 M3	0.9181	0.9365	0.9552
10,000 M3 < Volume <=20,000 M3	0.8585	0.8757	0.8932
Volume > 20,000 M3	<u>0.8060</u>	<u>0.8221</u>	<u>0.8385</u>
Weighted Average Retail Rate	0.9416	0.9604	0.9796

Flat Rate Billing and Universal Metering Plan

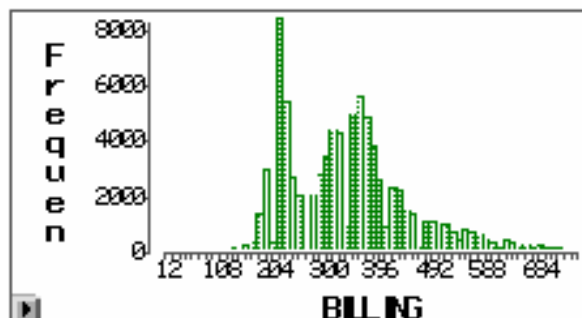
A customer on a flat rate account is generally charged in accordance with the number of rooms and fixtures installed in the building, or in some cases, on a per-building basis. Flat rate accounts predominate in the former City of Toronto, for which there are approximately 85,000 flat rate accounts versus 45,000 metered accounts. It should be noted, however, that while flat rate service

accounts for 65% of the City of Toronto accounts, it only represents 22% of the revenues billed in that city. The former City of Etobicoke also has a few remaining flat rate accounts (less than 1,500), which is not significant compared to its 66,000 metered accounts. A preliminary review of the billing data suggests that approximately 75,000 of the flat-rate accounts are residential in nature.

The water rates and terms and conditions for flat rate customers in the former City of Toronto is set out in Chapter 340 of the Municipal Code of the former City of Toronto, as amended by by-law 356-1998 to reflect 2.0 percent increase effective July 1, 1998. With respect to dwelling houses, the flat rate is \$12.14 per room per annum, subject to a minimum charge of \$73.02 per annum. In addition to the flat rate, there are additional charges dependent on the number and types of fixtures, which currently rate from \$23.44 per basin/bath/bidet/laundry tub, to \$37.44 per self-acting water closet. Apparently, such a per-fixture pricing was developed many years ago, and which has since been inflated in proportion to the increases in the Toronto metered rate. Specific flat rates also exist for factories, office buildings, stores and similar places of business.

An analysis of the Toronto flat-rate billing data indicated three distinct distributions of customers. Approximately 29.0 percent of flat-rate accounts (approximately 25,000 accounts) appeared to be small-residential homes, with a median bill of approximately \$216.00 per annum. This would be typical of a three-bedroom household with two water closets, one washing machine, a bath, and a basin (plus the minimum charge). The second distribution appeared to be larger households, with a median bill centering around \$360.00 per annum, which constituted approximately 58.0 percent of flat-rate accounts (50,000 accounts). This would be typical of a larger 10-room house, with 2 ½ bathrooms. A third distribution was also observed, centering around a median bill of approximately \$850.00 per annum. This group represented approximately 10,000 accounts, and was likely the small business group.

Figure 7
Toronto Flat-Rate Residential Customer Billing Distribution



The water rates and terms and conditions for flat rate customers in the former City of Etobicoke is set out in Chapter 257 of the Municipal Code of the former City of Etobicoke, as amended by by-law 356-1998. Currently, single-family homes are charged a flat-rate of \$296.00 per annum. It is understood that the flat-rate is periodically determined by works staff through a comparison of consumption with metered customers of similar household type and location.

The former City of Toronto adopted, in 1990, a policy of universal water metering whereby all new buildings must receive a meter, as well as all buildings where the water service or the plumbing in the basement is being replaced. Since 1990, approximately 23,000 water meters have been installed

under this program. The estimated total cost of retrofitting the 85,000 remaining buildings on flat-rate billing amounts to \$21.0 million. The 1999-2003 Capital Works Program includes funding for this work under the Water Efficiency Project (project No. 21), which also includes the necessary public relations work, promotion of water conservation and the supply and installation of water meters free of charge to the customers. Such a project should be amended to include the conversion of the approximately 1,500 flat-rate accounts in the former City of Etobicoke.

The implementation of universal metering will require full co-operation of property owners. While some customers have readily agreed or requested for conversion to metering, others have opposed the installation of a water meter. One approach to encouraging conversion would be to increase the annual rates for flat rate customers. For example, a 10.0 percent increase in the rate would generate an additional \$2.6 million in revenue, that could be used to accelerate and fund in part the conversion of flat-rate accounts to metered service, free of charge to the customer.

Table 43
Revenue Impact of Flat-Billing Account Rate Increase

	<u>1999*</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>Total 1999-2003</u>
Projected No. of Flat-Rate Customers	85,000	68,000	51,000	34,000	17,000	
Revenue from Flat-Rate Customers Assuming Same Rate	29,750	23,800	17,850	11,900	5,950	
Rate Increase	10.0%	-	-	-	-	
Incremental Revenue from Rate Increase	517,650*	828,240	621,180	414,120	207,060	<u>2,588,250</u>

*assuming July 1, 1999, implementation

**it is assumed that once a customer is placed on meter service, water consumption will fall to the average household consumption of 300 M3 per year.

Currently, the Revenue Division of the Finance Department is developing a unified water billing system for the City. To the extent that flat-rate billing will exist for several more years, planning is underway respecting the harmonization of the flat-rate billing structure. The matter of flat-rate accounts is to be the subject of a further report by the Chief Financial Officer and Treasurer, anticipated in July, 1999.

Sewer Surcharge Rebates

The former Municipality of Metropolitan Toronto and the City of Toronto have by-laws in place that provide to certain consumers a rebate of the sewer surcharge on the portion of water not discharged to the sanitary sewer system. Certain customers utilize water as part of their process or as an ingredient in their product, and the volume returned to the sewer is significantly less than that metered into the premises. Since the rate charged consists of both a water and sewer surcharge component, the rebate is intended to compensate the purchaser for the portion of the sewer surcharge not utilized.

Pursuant to by-law No. 32-93 of the former Municipality of Metropolitan Toronto, customers may make an application to the City for a sewer surcharge rate. Such an application requires, at the

customer's expense, a detailed engineering report issued by an independent professional engineer setting out the customer's water consuming processes and providing a water balance account. If the application is successful, the customer would qualify for a rebate on the portion of the treatment cost associated with the water not returned to the sanitary sewer. As of 1998, the rebate was calculated at a rate of 38.58 cents per cubic metre (on the volume qualifying for the rebate), which reflects the unit treatment cost of sewage. No rebates are given in relation to water utilized cooling purposes, as this is considered an inefficient use of water. As of 1998, 5 customers qualified for such a rebate, which approximately ranged from \$11,000 to \$184,000.

Pursuant to Chapter 292 of the Municipal Code of the former City of Toronto, a customer may make representation to the City for a refund of the portion of the sewer surcharge rate on that portion of water purchased and not returned to the sewer as a result of consumption of direct diversion. The rebate would apply to the local municipalities surcharge rate, which in 1998 was 21.0 percent, or \$0.2165 cents per cubic metre. A professional engineers report is not required, and the reduced rate applied to the calendar year in which the City's investigation was completed and subsequent years. Twelve customers were issued a sewer surcharge rebate in 1998 respecting the 1997 consumption year, and ranging from \$51.00 to \$22,700.00. The total 1997 rebate under this article amounted to \$57,446.00.

Table 44 summarizes the two sewer surcharge rebate programs that currently exist. By-Law 32-93 is already a harmonized program. That is, any customer may apply for a rebate of sewage treatment costs, regardless of location within the former municipalities. The City of Toronto article applies only to customers located within the former municipality of Toronto. Such a rebate would apply to the local sewage collection costs.

Several options exist with respect to a harmonized sewage surcharge rebate. One option would be to extend the City of Toronto's rebate program to the other municipalities. Neither the number of potential applicants nor the potential magnitude of the rebate is known, particularly since any customer can make representation rather than requiring a professional engineer's report. It is noted that one customer whose total annual consumption is less than a typical household has been receiving a rebate of \$40.00 to \$50.00 for several years. Furthermore, the City would be required to investigate each application. The resource requirement to extend this activity to the other jurisdictions is also not known and could be significant. Finally, rebates could be applied for as a result of the inefficient use of water (i.e., for cooling purposes).

Table 44
Sewer Surcharge Rebate Programs

	Metro By-Law 32-93		Toronto Chapter 292
	<u>Etobicoke</u>	<u>Scarborough</u>	<u>Toronto</u>
No. of Customers	4	1	12
Total Rebate (\$)	\$284,172	\$11,299	\$57,446

An alternate option would be to eliminate the former City of Toronto's rebate program, and continue with by-law 32-93. Even though a customer returns less water to the system than purchased, sewer

service costs still exist. Continuing with the Metro by-law would provide the customer for a rebate on treatment costs, and better reflects the fact that sewer service costs still exist. For these reasons, it is recommended that Article 1 of Chapter 292 of the Municipal Code of the former City of Toronto, respecting sewer surcharge rebates, be repealed, and that by-law 32-93 of the former Municipality of Metropolitan Toronto be amended to provide for the rebate of the sewer surcharge to qualifying customers in any of the former municipalities, and that the rebate for 1999 be based on the cost of sewage treatment of \$0.3858 per cubic metre.

Some concern has been previously raised by customers who receive water services from the City, but are not connected to the sewer system. These customers, mostly residential, have private septic systems, which are periodically pumped out and disposed of by private contractors at a cost to the resident. These customers have raised concern that the retail rate charged includes a sewer rate, a service which they are not participating in, and therefore, should not be charged for. For this reason, it is recommended that By-Law 32-93 of the former Municipality of Metropolitan Toronto be further amended to provide for a rebate of 55.85 percent of the retail rate charged to those customers receiving water services from the City and with a private septic system that is not connected to the sewer system. It is believed there are less than 200 customers in this position.

Private Water Works Agreements

For some customers, the sewer volume is greater than water usage. This might occur where the customer has access to other water sources or is a by-product of their processes. In such a case, the City should be compensated for the additional cost of sewer and treatment services rendered. By-law 96-80 of the former Municipality of Metropolitan Toronto authorizes the City to enter into an agreement containing such terms and conditions as may be necessary, including charging a rate for the treatment of the additional discharge of water. The 1998 rate is based on the unit sewage treatment cost of \$0.3858 per cubic metre. As of 1998, agreements were entered into under this by-law with 31 industries, providing for \$637,000.00 in additional sewer surcharge.

The former City of Toronto was the only other municipality that had a by-law in place to charge a rate where the sewage volume was greater than water usage. Article 5 of Chapter 292 of the Municipal Code of the former City of Toronto authorized the city to increase the sewer rate in proportion to the excess flow. As of 1998, there were no customers who were charged a rate higher than the existing 21.0 percent sewer rate.

Where sewage flow exceeds water usage, an additional burden is placed on both the local collection system and treatment processes, for which the user should compensate for the new City, rather than through the general water rate. Therefore, it is recommended that by-law 96-80 be amended to reflect both the cost of local sewage collection, as well as treatment, where sewage flow exceeds water usage, and that this replace Section (5) of Article 5 of Chapter 292 of the Municipal Act of the former City of Toronto. The 1999 private water surcharge, based on the average rate, would be \$0.3858 per cubic metre for treatment and \$0.1401 per cubic metre for local collection, for a total surcharge of \$0.5258 per cubic metre, or 55.85 percent of the retail rate.

Industrial Waste Surcharge Agreements

A discharge of any matter to the sewer system is regulated by Municipality of Metropolitan Toronto By-Law 153-89. The by-law, however, does provide for discharges of suspended solids, biochemical oxygen demand phenolic compounds at levels above that prescribed in the by-law where an Industrial Waste Surcharge Agreement is made by the Commissioner. Such an agreement provides compensation for any additional costs of operation, repair and maintenance of the sewer works as a result of such discharge. The amount of the surcharge is calculated on an individual basis, depending on such factors as suspended solids, biological oxygen demand and volume of discharge, and is in addition to the water and sewer rate. Such agreements apply only to the water pollution control program of the former Municipality of Metropolitan Toronto.

During 1998, 154 Industrial Waste Surcharge Agreements were in place, providing for \$8.2 million in surcharges for the treatment of 71.0 million cubic metres of discharge covered by the agreements. The amount of the surcharge ranged from nil to \$1.2 million for the treatment of from 344.0 to 9.0 million cubic metres of industrial waste.

The industrial waste surcharge by-law is already a harmonized service, applicable to all users in the Toronto proper.

Early Payment Discount

An early payment discount provides incentive to customers to pay their bills on time. All of the former municipalities provided this incentive. This discount ranged from 4.0 percent to 10.0 percent if the bill was paid on or before the due date. The Municipal Act prohibits the use of penalties with respect to water charges. Throughout this report, the rates quoted are discounted rates based on payment on or before the due date.

The Region of Durham, and the City of Newmarket have set their early payment discount at 10.0 percent. The Regions of Halton and Peel, and most of the lower-tier municipalities in York Region, have set their discount at 5.0 percent. The Toronto Hydro Electric Commission provide a 10.0 percent discount, which Edenbridge Gas (formerly Consumers Gas) provide a 4.0 percent discount.

Since three of the six former municipalities' penalty/discount was set at a 5.0 percent, it may be appropriate to harmonize to this level of early payment discount. No detailed analyses has been performed on quantifying the impacts on the City's revenues of higher or lower penalty/discount rates, however, it is believed that the proposed 5.0 percent would be revenue neutral.

Table 45
Summary of Former Municipalities Discount Program

Former City	<u>East York</u>	<u>York</u>	<u>Etobicoke</u>	<u>Scarborough</u>	<u>North York</u>	<u>Toronto</u>
Discount	5.0%	5.0%	10.0%	5.0%	10.0%	4.0%

Table 46
Rate to Be Charge if Bill Not Paid on or Before Due Date

<u>Monthly Volume Consumed:</u>		Discounted Price per Cubic Metre (paid on or <u>before due date)</u>	Rate to be Charge if not paid on or <u>before</u> <u>due date (@5.0 percent)</u>
Volume <= 20 M3	First 20 M3	\$ 0.9354	\$ 0.9822
20 M3 < Volume <= 500 M3	Next 480 M3	\$ 0.9738	\$ 1.0225
500 M3 < Volume <= 1,000 M3	Next 500 M3	\$ 0.9677	\$ 1.0161
1,000 M3 < Volume <=5,000 M3	Next 4,000 M3	\$ 0.9476	\$ 0.9950
5,000 M3 < Volume <=10,000 M3	Next 5,000 M3	\$ 0.9181	\$ 0.9640
10,000 M3 < Volume <=20,000 M3	Next 10,000 M3	\$ 0.8585	\$ 0.9014
Volume > 20,000 M3	Over 20,000 M3	\$ 0.8060	\$ 0.8463

III. CONCLUSION

This report presents a review of the current practices and rate structure respecting the water and wastewater program, and an analysis of a number of options to provide a harmonized rate across the new city.

Currently no uniform rate exists amongst the former local municipalities, for which the retail rate ranges from \$0.7983 to \$1.034 per cubic metre. One of the primary reasons for such variation arises from the manner in which water and sewer costs were identified and allocated between the tax-supported and rate-supported program areas. This difference was most profound Scarborough, which funded sewer costs through the property tax levy, resulting in an apparently lower water rate.

A review of customer accounts revealed general customer profiles within certain consumption ranges. It is estimated that, while residential households make up approximately 91.0 percent of billing accounts, they provide only 31.0 percent of billing revenue. The one-percent of high volume accounts provide the City with 52.5 percent of its water revenues. As such, this commercial/industrial base should be considered important. A comparison of the water and wastewater rates and rate structures of the surrounding municipalities showed water and wastewater costs to be generally lower in Toronto for residential customers. However, such is not the case for higher-volume users, and this difference becomes more evident for consumption's greater than 10,000 cubic metres per year. Very high-volume customers would find costs to be as much as 40.0 percent lower in Durham than the average Toronto costs. Even Scarborough's apparently low current high-volume rate structure loses its competitiveness at volumes exceeding 100,000 cubic metres per year.

Option (1) considers the impacts of harmonizing to the average rate for all users. The analysis of this option indicates that, while the impacts may be manageable in absolute terms for the residential customer profile, it presents a significant impact to those medium and large industrial customers in Scarborough and Etobicoke.

Option (2) attempts to mitigate the annual impact to all customer profiles by phasing-in the harmonized rate over several years. Phasing-in only serves to delay the impacts noted above. A

modified version of this option was also explored, which prescribes phasing-in over two phases; each municipality would move to their full-cost recovery rate in the first year, followed by harmonization in the second year. The latter version may be considered by some to be fairer from a cost-accounting perspective should a harmonized rate not be immediately implemented. The end-impact in either approach is the same. Neither of these approaches addresses the competitiveness of the rate amongst the various customer profiles, and in particular, the one-percent of high-volume customers who generate more than half the water revenues.

Option (2) attempts to define a rate structure that mitigates the impacts to the high-volume customers, and in particular, the Scarborough high-volume customers. One approach explored is to adopt the former City of Scarborough's rate structure for all high-volume customers (consumption greater than 272,766 cubic metres per year). This would require a rate of \$0.9626 for customers whose consumption was less than 272,766 cubic metres per year. An alternate approach would be to offer a uniform high-volume discount of 31.3 percent city-wide.

Option (3) presents an alternate approach that considers various rate structures for various customer classes. Since the water rate must provide for full funding for the water and wastewater program, this approach would result in shifts in burden between customer classes. Variations in the rate structure can be designed to mitigate the potential impact of harmonization, or to ensure competitiveness with the surrounding regions. Currently, the average cost of water in the amalgamated Toronto is lower for the residential (low-volume) user compared to the surrounding regions, and higher than the surrounding regions for high-volume users. Thus, there is room for cost-reallocation, which would enhance the city's competitiveness with the surrounding regions.

Amalgamation presents a unique opportunity for the City to reexamine its water pricing strategy with respect to all customers. The pricing strategy presented under Option (3) provides for fairness, encourages water efficiency, and improves the city's competitiveness amongst the various customer classes with the surrounding regions.