



**CITY OF HAMILTON**  
**CORPORATE SERVICES DEPARTMENT**  
**Financial Planning and Policy Division**

<b>TO:</b>	Mayor and Members General Issues Committee
<b>COMMITTEE DATE:</b>	January 9, 2015
<b>SUBJECT/REPORT NO:</b>	2015 Recommended Water, Wastewater and Stormwater Budget (FCS15002)
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Charlie Elliott (905) 546-2424 x2162 John Savoia (905) 546-2424 x7298 Victoria Terella (905) 546-2424 x4169
<b>SUBMITTED BY:</b>	Mike Zegarac General Manager Finance and Corporate Services
<b>SIGNATURE:</b>	

**RECOMMENDATION**

- (a) That the metered water consumption charges for residential properties in the City of Hamilton be imposed at the following rates, as of January 22, 2015:

Monthly Water Consumption (m3)	Rate (\$/m3)
0 – 10	0.66
10 +	1.32

- (b) That the metered water consumption charge for commercial, industrial, institutional, and multi-residential (bulk meter) properties in the City of Hamilton be imposed at the rate of \$1.32 per cubic metre, as of January 22, 2015;
- (c) That daily water fixed charges for all properties in the City of Hamilton be imposed at the following rates, as of January 22, 2015:

Meter Size	Daily Water Rate
15 mm	\$ 0.30
16 mm	\$ 0.30
20 mm	\$ 0.30
25 mm	\$ 0.75
38 mm	\$ 1.50
50 mm	\$ 2.40
75 mm	\$ 4.80
100 mm	\$ 7.50
150 mm	\$ 15.00
200 mm	\$ 24.00
250 mm	\$ 34.50
300 mm	\$ 51.00

- (d) That the wastewater/storm treatment charges for residential properties in the City of Hamilton be imposed at the following rates, effective January 22, 2015:

Monthly Water Consumption (m3)	Rate (\$/m3)
0 – 10	0.71
10 +	1.41

- (e) That the wastewater/storm treatment charge for all commercial, industrial, institutional, and multi-residential (bulk meter) properties in the City of Hamilton be imposed at the rate of \$1.41 per cubic metre, effective January 22, 2015;

- (f) That daily wastewater/storm fixed charges for all properties in the City of Hamilton be imposed at the following rates, effective January 22, 2015:

Meter Size	Daily Wastewater/Storm Rate
15 mm	\$ 0.30
16 mm	\$ 0.30
20 mm	\$ 0.30
25 mm	\$ 0.75
38 mm	\$ 1.50
50 mm	\$ 2.40
75 mm	\$ 4.80
100 mm	\$ 7.50
150 mm	\$ 15.00
200 mm	\$ 24.00
250 mm	\$ 34.50
300 mm	\$ 51.00

- (g) That the residential non-metered annual water rate be imposed at the flat rate of \$472.20 per annum, effective January 22, 2015;
- (h) That the residential non-metered annual wastewater/storm rate be imposed at the flat rate of \$499.40 per annum, effective January 22, 2015;
- (i) That the residential combined non-metered annual water and wastewater/storm rate be imposed at the flat rate of \$971.60 per annum, effective January 22, 2015;
- (j) That the Private Fire Line rates be imposed at the following rates, effective January 22, 2015:

Connection Size		Monthly Rate
(mm)	inches	
25	1.0	\$ 3.00
38	1.5	\$ 6.90
50	2.0	\$ 12.00
75	3.0	\$ 27.00
100	4.0	\$ 48.00
150	6.0	\$ 108.00
200	8.0	\$ 192.00
250	10.0	\$ 192.00
300	12.0	\$ 192.00

- (k) That the 2015 Water, Wastewater & Storm Proposed User Fees and Charges be imposed as per Appendix “G” to Report FCS15002, effective January 22, 2015;
- (l) That the 2015 Water, Wastewater and Stormwater Management Rate Supported Operating Budget in the amount of \$ 183,754,760 be approved as per Appendix “A” to Report FCS15002;
- (m) That the long-term financing plan for the Water, Wastewater and Stormwater programs and related rate increases required to meet sustainable financing, as identified in the 2015-2024 Water, Wastewater and Stormwater Management Rate Supported Operating Budget forecast (Appendix “A” to Report FCS15002) be approved in principle;
- (n) That the 2015 Water, Wastewater and Stormwater Management Rate Supported Capital Budget and Financing Plan in the amount of \$ 148,036,000 be approved as per Appendix “H” to Report FCS15002;
- (o) That the 2015-2024 Water, Wastewater and Stormwater Management Rate Supported Capital Budget forecast and financing plan (Appendix “I” to Report FCS15002) be approved in principle;
- (p) That the additional 6.73 Full Time Equivalent Rate Supported Staffing be approved as per Appendix “F” to Report FCS15002;
- (p) That the City Solicitor be authorized and directed to prepare, for Council approval, all necessary by-laws respecting the 2015 water and wastewater/storm user fees, charges and rates set out in recommendations (a) through (k) of Report FCS15002.

## **EXECUTIVE SUMMARY**

The 2015 Rate Budget is submitted for Council’s consideration. The 2015 Rate Budget balances the need to invest in environmental infrastructure upgrades and changing trends in demand for water and growth in users relative to “Places to Grow.” Over the period 2015 to 2024, water, wastewater and stormwater capital investment is forecast at nearly \$1.6 billion which represents an increase of \$0.1 billion from last year’s 10-year forecast. This budget continues to focus on a number of Council’s Strategic Objectives, including, growing our economy, environmental stewardship, financial sustainability and effective inter-governmental relations.

The 2015 requested operating budget for water, wastewater and storm is approximately \$184 million, which represents an increase over the 2014 Budget of approximately \$5 million, or 2.7%.

2015 operating expenditures reflect an increase of \$3.4 million or 4.5% over 2014 budget with the following major cost drivers:

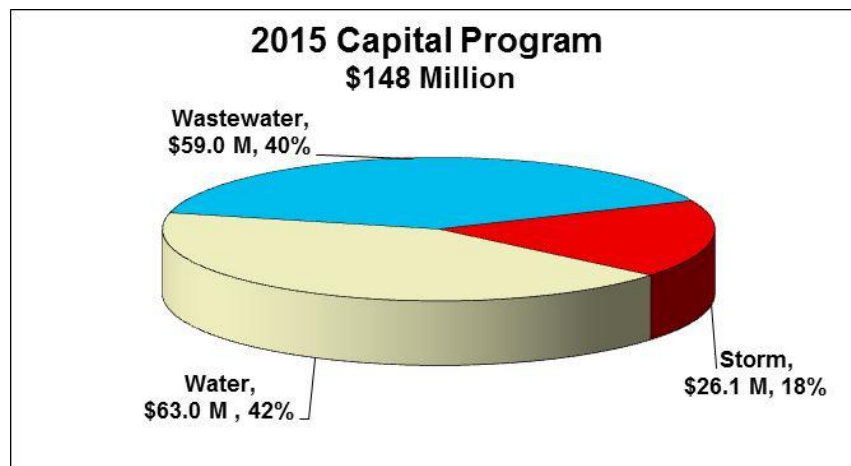
- Employee related expenditures reflecting the additional 6.73 full time equivalent employees incorporated into the 2015 budget at a gross cost of \$707,000
- Building and ground costs increase of \$915,000 reflecting increase electric expenses
- Contractual services increase of approximately \$1 million over a number of services including the Horizon service contract (\$150,000)
- Increased cost allocations of approximately \$500,000

It should be noted, while the recommended combined rate increase is 4.2%, metered revenues are forecast to increase by 2.8%, in part due to forecast decline in consumption. The following table summarizes the budget changes for the 2015 Requested Budget:

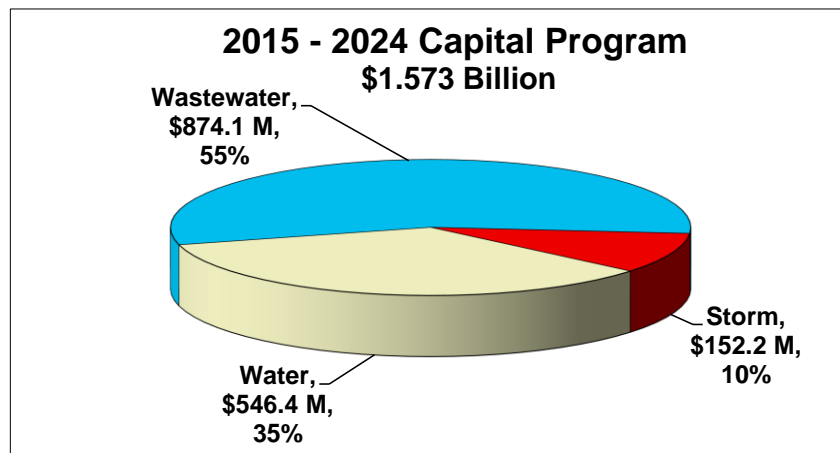
<b>Summary of the 2015 Operating Budget</b>				
(\$ millions)	2014 Restated Budget	2015 Requested Budget	2015 Requested /2014 Restated Change	
			\$	%
<b>Expenditures</b>				
Program Expenditures	\$ 75.3	\$ 78.7	\$ 3.4	4.5%
Capital/Debt Financing	\$ 103.5	\$ 105.0	\$ 1.5	1.5%
<b>Total Expenditures</b>	<b>\$ 178.8</b>	<b>\$ 183.7</b>	<b>\$ 4.9</b>	<b>2.7%</b>
<b>Revenues</b>				
Rate Revenue	\$ 176.3	\$ 181.2	\$ 4.9	2.8%
Non-Rate Revenue	\$ 2.5	\$ 2.5	\$ -	0%
<b>Total Revenue</b>	<b>\$ 178.8</b>	<b>\$ 183.7</b>	<b>\$ 4.9</b>	<b>2.7%</b>
<b>Average Residential Water/Wastewater/Storm Bill</b>	<b>\$ 577.10</b>	<b>\$ 601.20</b>	<b>\$ 24.10</b>	<b>4.2%</b>

Other water and wastewater service user fees have been reviewed in accordance with the Water/Wastewater User Service Fee and Charges Policy approved by Council in February 2013. The Policy requires identification of both the cost of the service and the fees/charges to recover such cost with the intent that full cost recovery is achieved. Many service fees have remained unchanged with full cost recovery currently being achieved with others undergoing varying fee increases to achieve full cost recovery.

The following chart provides a breakdown of the 2015 Rate Capital Program totalling \$148.1 million, by the three major program areas: Water, Wastewater and Storm.



The chart below illustrates the \$1.573 billion capital program for the 2015 – 2024 water, wastewater and storm capital budget. Of this amount, \$874.1 million or 55% is for wastewater, \$546.4 million or 35% is for water and \$152.2 million or 10% is for the storm program. A total of \$578 million or 37% of the 10 year capital program is required in the first three years (2015 – 2017).



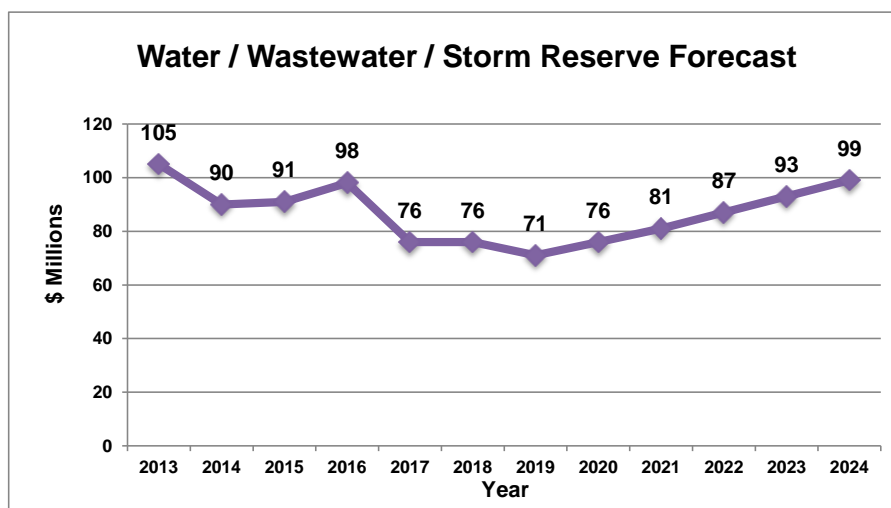
The 10 year capital program relies on a significant amount of debt financing, with the associated debt charges funded from both rates and development charges (DCs). The rate supported debt is projected to peak at \$293 million in 2019, compared with the 2014 budget forecasted debt peak of \$308 million in 2017. The debt funded from DC's is projected to peak at \$278 million in 2020, whereas the 2014 forecast was \$297 million in 2019. The levels of debt supported by development charges represent a significant risk if future growth does not materialize as planned; however, relative to forecasts prior to 2014, the risk has been deferred as a significant portion of the growth component of

the Wastewater Plant Expansion is now planned in the years beyond the next 10 years until after 2024. This will allow an opportunity to monitor growth and DC Revenues over the next 10 years (2015 – 2024) and make adjustments to the plant expansion project and associated financing plan to align with growth requirements.

The table below provides the ten year debt forecast compared to the 2014 Budget forecast.

<b>Projected Rate &amp; DC Supported Outstanding Debt</b> (\$ Millions)											
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>2014 Rate Budget</b>											
Funded from Rates (15 Yr)	129	200	287	308	288	267	246	224	200	176	151
Funded from DC's (20 Yr)	62	151	260	286	291	297	296	297	292	289	271
<b>Total</b>	<b>191</b>	<b>351</b>	<b>547</b>	<b>594</b>	<b>579</b>	<b>564</b>	<b>542</b>	<b>521</b>	<b>492</b>	<b>465</b>	<b>422</b>
<b>2015 Rate Budget</b>											
Funded from Rates (15 Yr)	84	148	208	276	281	293	271	248	225	201	176
Funded from DC's (20 Yr)	1	50	133	231	255	275	278	278	275	274	273
<b>Total</b>	<b>85</b>	<b>198</b>	<b>341</b>	<b>507</b>	<b>536</b>	<b>568</b>	<b>549</b>	<b>526</b>	<b>500</b>	<b>475</b>	<b>449</b>
<b>Increase (Decrease)</b>	<b>(106)</b>	<b>(153)</b>	<b>(206)</b>	<b>(87)</b>	<b>(43)</b>	<b>4</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>27</b>

The following graph provides the projected reserve balances for the Water, Wastewater and Storm programs. Consistent with the 2014 Budget Forecast, the reserve forecast for 2015 reflects utilizing \$40.0 million in reserve funds to fund the WWTP – Clean Harbour project. The 2015 - 2024 Rate Financing Plan assumes funding from reserves in years 2017 (\$25 million), 2018 (\$5 million) and 2019 (\$10 million) in order to reduce the reliance on debt to fund this project. Also consistent with the 2014 Financing Plan, \$5.0 million is being used to fund the Wastewater System Lining Program in 2015, which also reduces the reliance on debt. It should be noted the reserve forecast below does not include the Provincial Wastewater Improvement Subsidy reserve (\$100 million Provincial subsidy) or the Meter Replacement Reserve.



Reserves are essential to assist the City in mitigating unanticipated events such as consumption fluctuations, unforeseen increase in capital costs and potentially to decrease future debt issuance. The current reserve forecast indicates the reserve balance will decrease from \$105 million at the end of 2013, to \$71 million in 2019 and then increase over the years to \$99 million in 2024.

The 2015 recommended water and wastewater/storm rate increases will result in an annual cost impact of approximately \$24 per typical household. The impact of the recommended rate increases on the water and wastewater/ storm fixed charges as well as the water consumption and wastewater/storm treatment charges are identified in the table below.

<b>Impact of Recommended Rate Increases on Water and Wastewater/Storm Rates</b>			
	<b>2014</b>	<b>2015</b>	<b>Increase</b>
<b>Water Fixed Charge (daily)</b> <sup>1</sup>	\$ 0.29	<b>\$ 0.30</b>	\$ 0.01
Consumption Charge Block 1 ( 0-10 cubic metres/month)	\$ 0.65	<b>\$ 0.66</b>	\$ 0.01
Consumption Charge Block 2 ( >10 cubic metres/month)	\$ 1.29	<b>\$ 1.32</b>	\$ 0.03
<b>Wastewater/Storm Fixed Charge (daily)</b> <sup>1</sup>	\$ 0.29	<b>\$ 0.30</b>	\$ 0.01
Treatment Charge Block 1 ( 0-10 cubic metres/month)	\$ 0.65	<b>\$ 0.71</b>	\$ 0.05
Treatment Charge Block 2 ( >10 cubic metres/month)	\$ 1.32	<b>\$ 1.41</b>	\$ 0.09
<sup>1</sup> Rate is for a 15-20 mm meter which most residential homes have installed.			

The following table identifies the impact of the proposed rate increase on a residential customer:

<b>Impact of Recommended 2015 Water and Wastewater/Storm Rate Increases on a Typical Residential Bill</b>	
(based on annual water consumption of 200m <sup>3</sup> )	
2014 Residential Bill	\$577.10
<b>2015 Residential Bill</b>	<b>\$601.20</b>
<i>Recommended Change (\$)</i>	<i>\$ 24.10</i>
<b><i>Recommended Change (%)</i></b>	<b><i>4.20%</i></b>

This report identifies the steps staff have incorporated in the current 10-year forecast related to significant risks that have been identified related to a variety of conditions which may impact ratepayers, and more significantly, in combination may place significant financial pressures on ratepayers. These risk factors detailed further in later sections of this report include:



- Declining consumption
- Sustainability of grant/subsidy programs funded by water/wastewater rates

Staff pursued a variety of measures in an effort to control the impact of the above risks in order to maintain a safe and reliable service at a reasonable cost.

The recommended 2015 Rate Supported Strategy endeavours to achieve a balance between capital investment, rate of growth and rate stability. The 2015 Rate Supported Strategy links the change in demand for water with a staged approach to necessary capital investments at the Woodward wastewater treatment plant.

While the Rate Supported Strategy has changed from time to time, the overall goal, of achieving a sustainable level of funding to support the necessary infrastructure investments, has not. The Strategy has been in place since 1997, which at that time, called for water rates to increase by three to seven percent after adjusting for inflation over a 15-year period. The 2015 – 2024 Strategy is a continuation of the Strategy which assumes combined annual rate increases ranging from 4.0 – 4.5% over the 10-year period.

Since 2001, staff have recommended further amendments, for reasons including changing economic conditions, which in effect resulted in lower rate increases in the short-term and extending the period for rate increases in excess of inflation. When comparing the 2002 Strategy versus the 2015 Strategy, annual water and wastewater/storm billings based on the 2015 Strategy continue to be lower than had staff and Council continued based on the 2002 Strategy.

In general, the goal of the Strategy has been to support the water, wastewater and storm programs through a sustainable level of funding. While revenue forecasts have been adjusted from time to time, for a variety of reasons, so too have expenditure forecasts, and the need for additional financial resources. It should be noted that the intention of the 2002 Strategy was to provide approximately \$92.5 million (2000\$) in support to the capital program in the form of capital financing (contribution and debt). The current Strategy calls for capital funding in 2015 of approximately \$102 million (2014\$) and climbing to \$161 million (2014\$) by 2024.

The 2015 Strategy includes financing from the Federal and Provincial Governments with respect to the WWTP rehabilitation and upgrades, specifically in support of the Hamilton Harbour Remedial Action Plan.

### ***Alternatives for Consideration – Not Applicable***

**FINANCIAL – STAFFING – LEGAL IMPLICATIONS (for recommendation(s) only)**

**Financial:** As per Recommendation (l) of Report FCS15002, approval of the 2015 Water, Wastewater and Stormwater Management Rate Supported Operating Budget will support operating and capital financing expenditures of \$183,754,760 for 2015.

**Staffing:** The 2015 Rate Supported staffing complement reflects a requested increase of 6.73 in total FTE headcount as reflected in Appendix “F” to Report FCS15002.

**Legal:** Recommendation (p) of Report FCS15002 relates to By-laws requiring Council approval, respecting the implementation of 2015 water and wastewater user fees and charges set out in the recommendations (a) through (k) of Report FCS15002.

**HISTORICAL BACKGROUND (Chronology of events)**

The 2015 Rate Budget continues to support the priority of investing in infrastructure as evidenced by the 2015 to 2024 forecast investment of approximately \$1.6 billion in water, wastewater and stormwater capital infrastructure.

Report FCS15002 outlines the various aspects and components that the recommended 2015 Rate Supported strategy incorporates:

- Sustainable Rate Strategy
- Proposed 2015 Water and Wastewater/Storm Rates
- Operating Budget Highlights
- Capital Budget Highlights
- Water Consumption Review and Forecast

**POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

The recommended options support the principle of a user-pay water and wastewater/storm system.

**RELEVANT CONSULTATION**

City Manager’s Office – Legal Services Division has been consulted for this report’s recommendations.

Public Works – Hamilton Water Division provided operating/capital expenditure and non-rate revenue forecasts as reflected in this report.

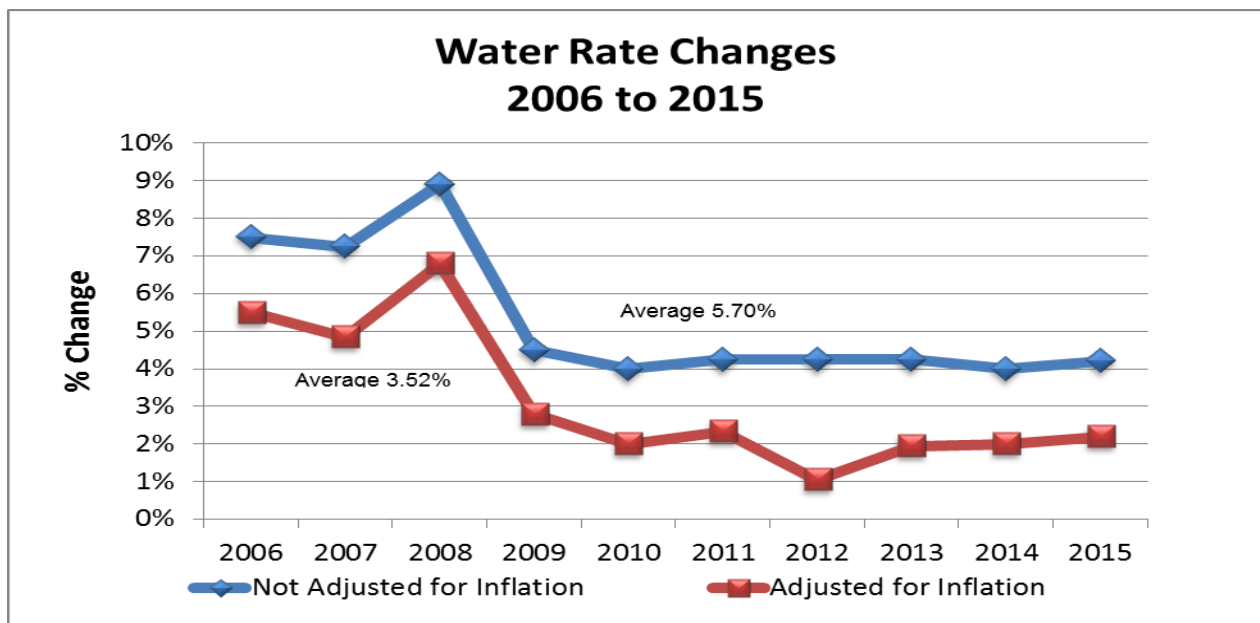
**ANALYSIS AND RATIONAL FOR RECOMMENDATION  
(Include Performance Measurement/Benchmarking Data if applicable)**

Appendix A to Report FCS15002 summarizes the 2015 operating budget expenditures (program and capital) and revenues relative of \$184 million to the 2014 forecast and 2014 restated budget.

Other water and wastewater service user fees have been reviewed in accordance with the Water/Wastewater User Service Fee and Charges Policy approved by Council in February 2013. The Policy requires identification of both the cost of the service and the fees/charges to recover such cost with the intent that full cost recovery is achieved. By charging the full cost of these specific services, there should be reduced pressure on general water and wastewater rates.

## Trends in Water Rate Charges 2006-2015

Hamilton's overall average annual water rate increase is 5.70% before adjusting for inflation during the 10 year period from 2006 to 2015. Accounting for inflation results in the overall average annual rate increase over the same period amounting to 3.52%. The following chart shows the trend in Hamilton's water rates for the period 2006 to 2015.



## Comparative Rates

In recent years, staff reported that Hamilton's water and wastewater/storm rates have remained competitive, inclusive of the fact that annual rate increases over the past decade averaged 5.70%, before adjusting for inflation.

An updated review of 2014 annual water and wastewater/storm charges places Hamilton, in the case of residential users, within the lowest range of a 15 municipality comparator group.

Over the past decade, Hamilton's ability to maintain competitive water and wastewater/storm rates, given the magnitude of the rate increases approved over this

same period, is a reflection of the fact that similar to Hamilton, other municipalities are addressing many of the same investment requirements identified above. Also, it should be noted, that other municipalities, like Hamilton, have adjusted consumption forecasts as a result of the adoption of water efficient appliances and fixtures and more stringent water efficiency measures within Ontario Building Code updates.

Over the period 2002 to 2014, Hamilton’s residential annual water and wastewater/storm bill has ranged from 8<sup>th</sup> to the current ranking of 14<sup>th</sup>. Other municipalities within the comparator group are facing similar infrastructure investment requirements as Hamilton. Even though Hamilton is one of the few listed in the comparator group that largely funds its stormwater management program through its wastewater/storm fee, it still has been able to maintain competitive rates.

<b>2014 COMBINED METERED WATER/WASTEWATER CHARGE COMPARISON WITH OTHER MUNICIPALITIES</b>				
<b>MUNICIPALITY</b>	<b>AVERAGE RESIDENTIAL 210 M<sup>3</sup></b>		<b>SMALL COMM/IND 325 M<sup>3</sup></b>	
	<b>Annual Charge</b>	<b>Ranking</b>	<b>Annual Charge</b>	<b>Ranking</b>
Norfolk	\$1,235	1	\$1,724	1
Haldimand	\$956	2	\$1,232	4
West Lincoln	\$915	3	\$1,231	5
London**	\$905	4	\$1,554	2
Cambridge	\$901	5	\$1,355	3
Kitchener**	\$870	6	\$1,216	7
St. Catharines	\$828	7	\$1,200	9
Waterloo**	\$819	8	\$1,204	8
Guelph	\$808	9	\$1,186	10
Brantford	\$796	10	\$1,228	6
Durham	\$738	11	\$1,041	11
Halton	\$701	12	\$957	13
Toronto*	\$592	13	\$961	12
<b>Hamilton*</b>	<b>\$577</b>	<b>14</b>	<b>\$903</b>	<b>14</b>
Peel	\$354	15	\$575	15

\* Include stormwater management in their rates.  
 \*\* Have dedicated stormwater management user fee that is excluded in above table.  
 Note: All other municipalities fund stormwater from property taxes.

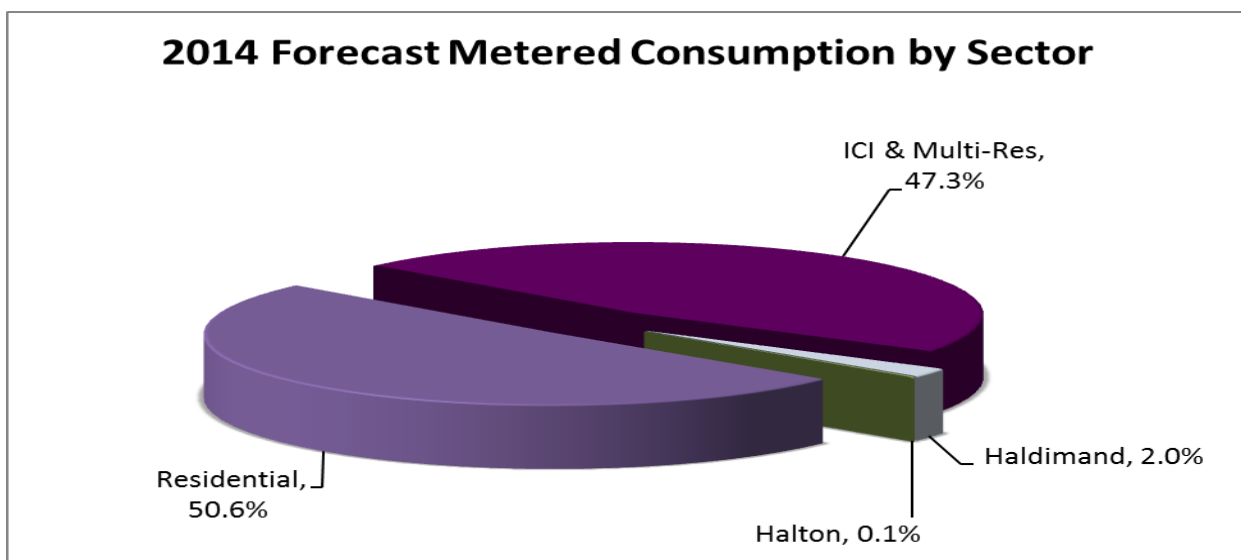
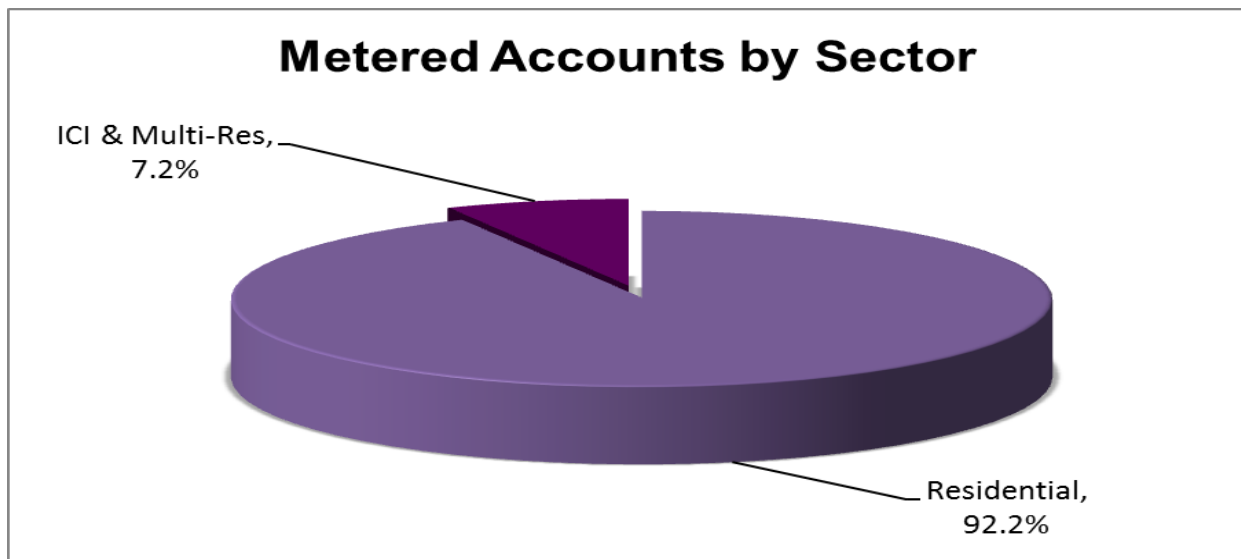
In the case of commercial and industrial ratepayers, the comparison of average annual charges indicates that Hamilton ranks in the mid-range which is consistent with last year.

<b>2014 COMBINED METERED WATER/WASTEWATER CHARGE COMPARISON WITH OTHER MUNICIPALITIES</b>				
<b>MUNICIPALITY</b>	<b>MID-SIZE COMM/IND 2,272 M<sup>3</sup></b>		<b>LARGE COMM/IND 22,727 M<sup>3</sup></b>	
	<b>Annual Charge</b>	<b>Ranking</b>	<b>Annual Charge</b>	<b>Ranking</b>
Cambridge	\$8,678	1	\$83,952	2
Kitchener**	\$8,501	2	\$85,035	1
Waterloo**	\$8,248	3	\$82,221	3
Brantford	\$7,929	4	\$78,314	4
Norfolk	\$7,677	5	\$66,118	8
Guelph	\$7,168	6	\$70,435	5
St. Catharines	\$7,080	7	\$68,223	6
West Lincoln	\$6,771	8	\$60,771	9
Toronto*	\$6,720	9	\$67,224	7
<b>Hamilton*</b>	<b>\$5,993</b>	<b>10</b>	<b>\$60,541</b>	<b>10</b>
Halton	\$5,982	11	\$50,577	12
London**	\$5,773	12	\$42,856	14
Durham	\$5,400	13	\$49,840	13
Haldimand	\$5,239	14	\$52,622	11
Peel	\$4,023	15	\$40,238	15
* Include stormwater management in their rates. ** Have dedicated stormwater management user fee that is excluded in above table. Note: All other municipalities fund stormwater from property taxes.				

## CONSUMPTION AND RATE-GENERATED REVENUES

### Metered Water Consumption

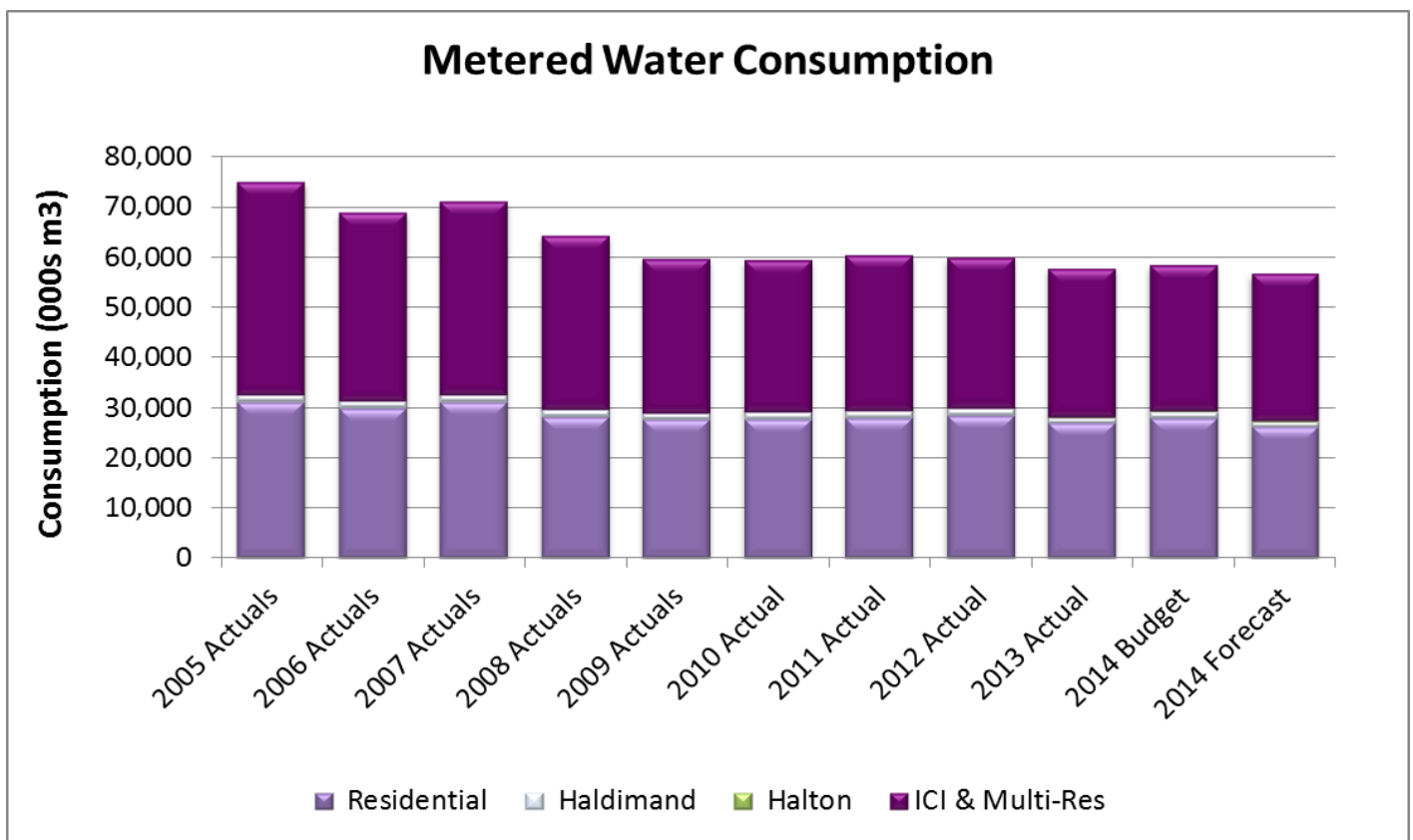
Currently, the City of Hamilton has approximately 145,000 metered water accounts. Residential users account for 92.2% of total metered accounts and approximately 50.6% of total water consumption. While industrial, commercial, institutional and multi-residential accounts only make up 7.2% of total metered accounts, ICI and multi-res water consumption accounts for 47.3% of total consumption.



## 2014 Consumption Forecast

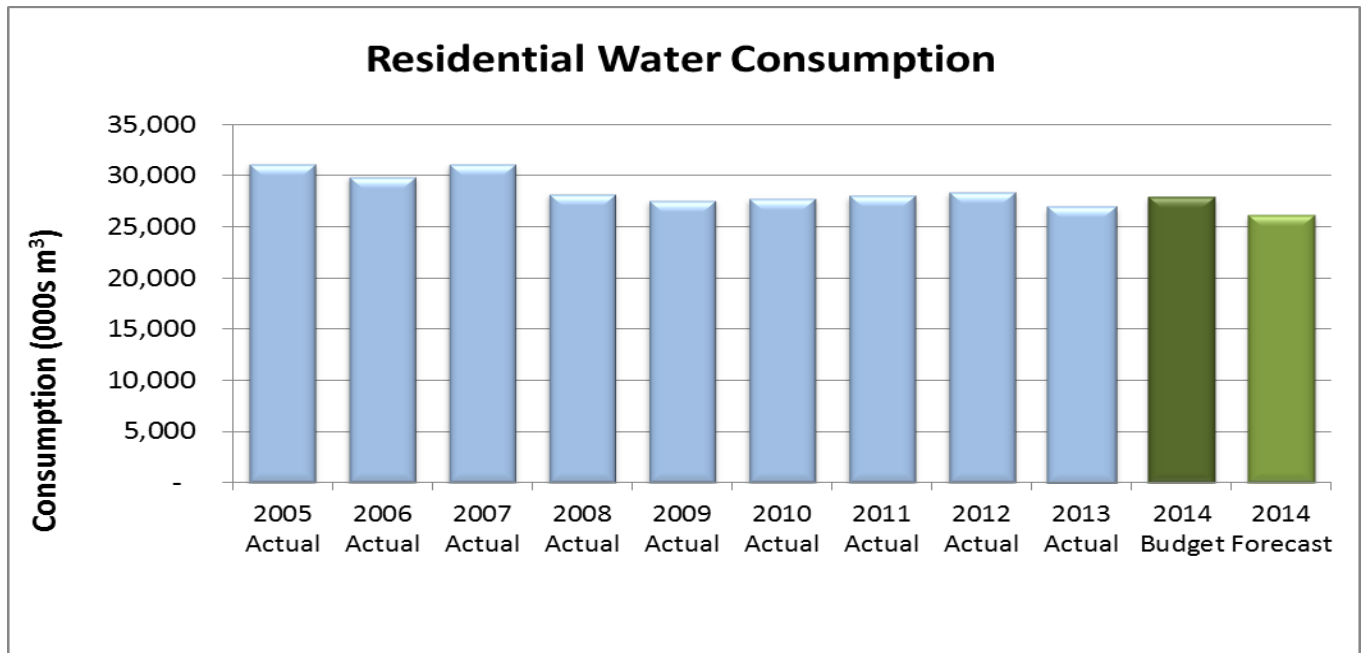
Environment Canada tracks municipal water usage and has observed a downward trend on water consumption across the country over the last decade.

For 2014, total water and wastewater/storm revenues are projected to amount to \$165 million, based on metered sales of approximately 57 million cubic metres. The 2014 metered and non-metered water and wastewater/storm revenues are forecast to be approximately \$3.9 million below budget.

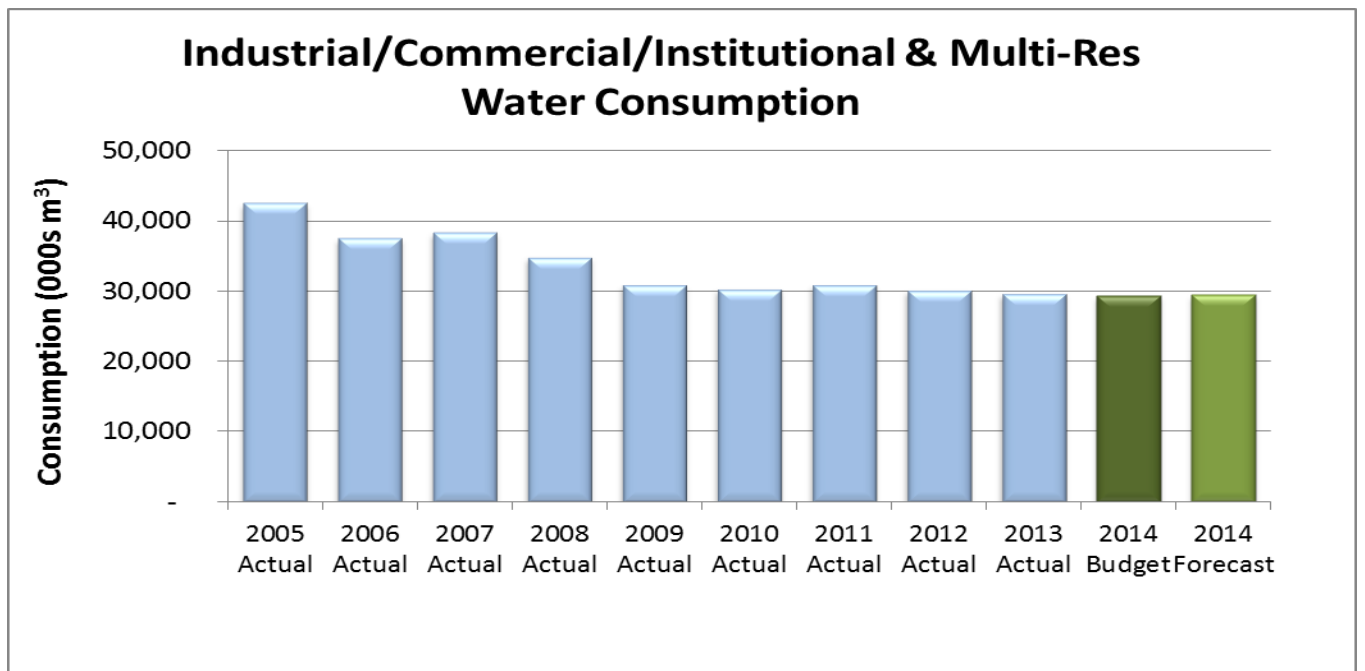


The following figure highlights consumption trends in the residential sector.

The average water consumption, per household, during the last three years was approximately 210m<sup>3</sup>, and for the purpose of the 2014 forecast 195m<sup>3</sup> was assumed.



The residential sector is forecasting a budget variance for 2014, reflecting ongoing conservation efforts.



The figure above highlights consumption trends in the ICI & Multi-Res sector.



For 2014, the ICI & Multi-Res sector is expected to come in at a slightly favourable variance to budget, reflecting consistent consumption levels seen in the ICI & Multi-Res sector since 2009.

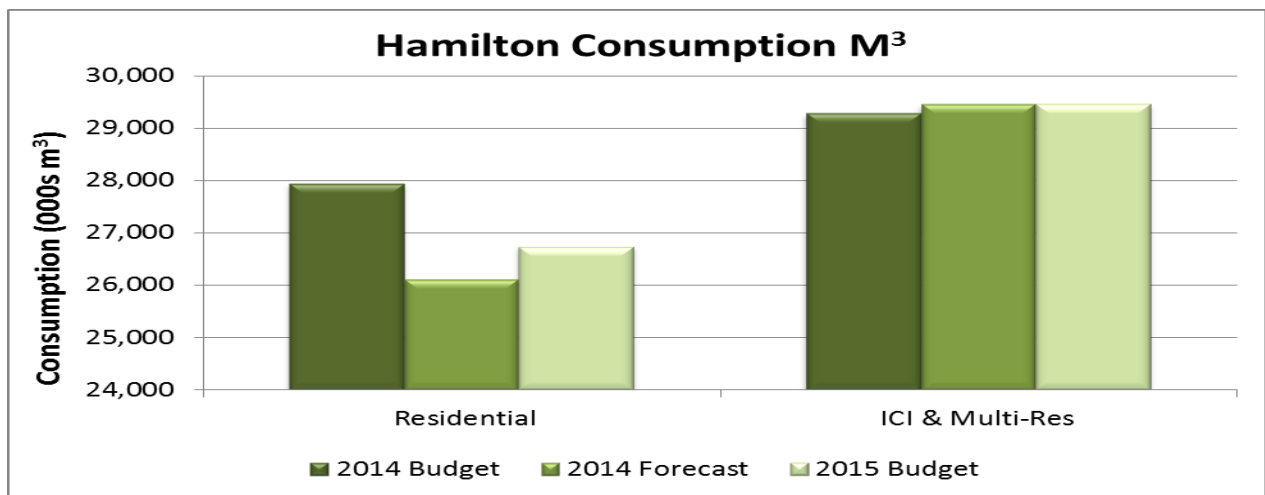
In the 2013 Annual Survey report of the Hamilton Industrial Environmental Association (HIEA), the City's largest manufacturers and other companies reported large reductions in water consumption. The report found that HIEA member companies have reduced potable water use by 53% since 2008 with City water use expected to show a declining trend.

Staff will continue to monitor consumption across all sectors and take efforts to ensure that the City is maximizing its full revenue potential with respect to metered water and wastewater/storm. Similarly, staff will be monitoring changes in consumption on an ongoing basis identifying trends and related financial impacts through the Budget Variance Reports and Information Reports provided to Council.

### 2015 Consumption Budget

Over the past number of years, staff recommended varying degrees of adjustment to the consumption assumptions in recognition of changing demand for water across all sectors.

For 2014, total metered water consumption is forecast at approximately 57.4 million cubic metres, a reduction of approximately 1.8% relative to 2014 budget. The following chart compares forecast budgeted consumption in the years 2014 and 2015.



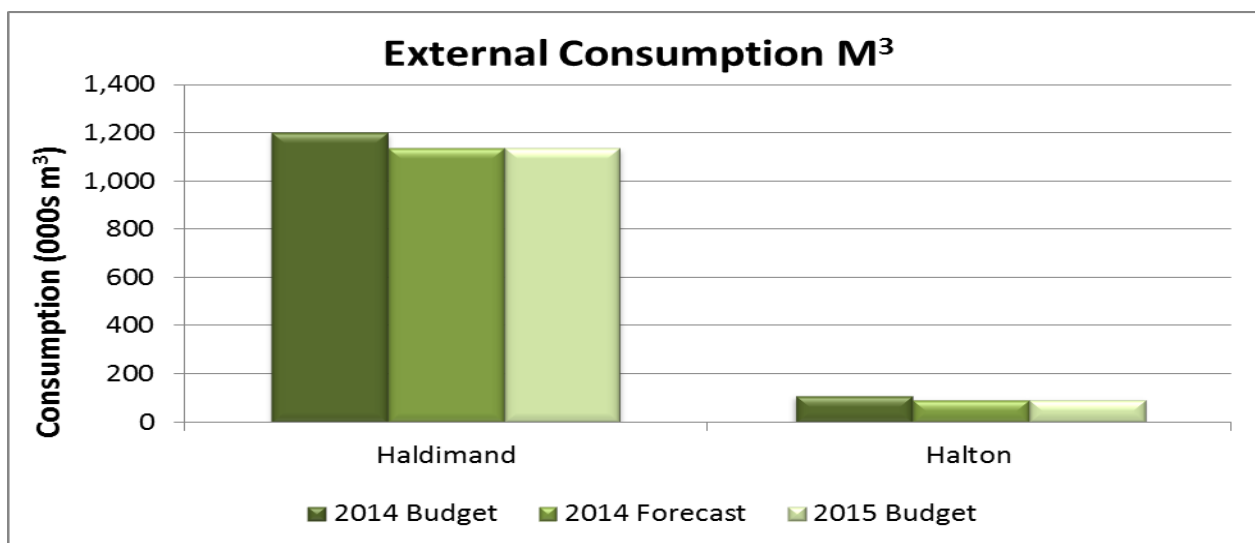
Based on the review of residential consumption patterns, residential consumption, on average, has been declining over the past decade. The declining consumption reflects ongoing conservation efforts associated with fixture/ appliance obsolescence such as the installation of water efficient toilets and washer machines. For 2015, staff is recommending that the forecast for average residential consumption be reduced to 200m<sup>3</sup> to reflect the declining consumption trends observed in 2012 – 2014.

It is not clear how much further average residential consumption can decline, but there exists the potential for further declines, principally due to conservation efforts and the associated regulations. For example, the Ontario Building Code has changed requirements related to the installation of high-efficiency toilets (4.5L) and expanding the end uses of rainwater and other non-potable water.

The ICI & Multi-Res sector has experienced significant revenue shortfalls in the last several years that resulted in staff recommending for the 2011 Rate budget with subsequent Council approval, that ICI & Multi-Res budgeted consumption be reduced over a 3 year period (2011-2013) to consumption realized for the ICI & Multi-Res sector in 2009-10 as consumption has not rebounded to pre-recession levels. For the 2015 ICI & Multi-Res sector consumption forecast, staff is recommending basing consumption on prior year actuals to better reflect the consumption trends that have been seen in 2014.

It should be noted that the 2015 ICI & Multi-Res sector consumption forecast reflects US Steel Canada at current consumption levels. Depending on the outcome of the creditor protection proceedings related to US Steel Canada's Hamilton operations, there is a risk of the loss of consumption and related revenues. The Hamilton operations are forecast in 2014 to utilize upwards of 800,000m<sup>3</sup> of City water which would equate to approximately \$2 million in water and wastewater/storm revenues. Additionally, US Steel Hamilton is subject to Sewer Discharge Permit fees related to water sourced directly from Lake Ontario utilized in US Steel's operations that is discharged into the City's sewer system amounting to roughly \$350,000 annually. Therefore, the total Rate related revenues provided by US Steel's Hamilton's operations amount to nearly \$2.4 million annually.

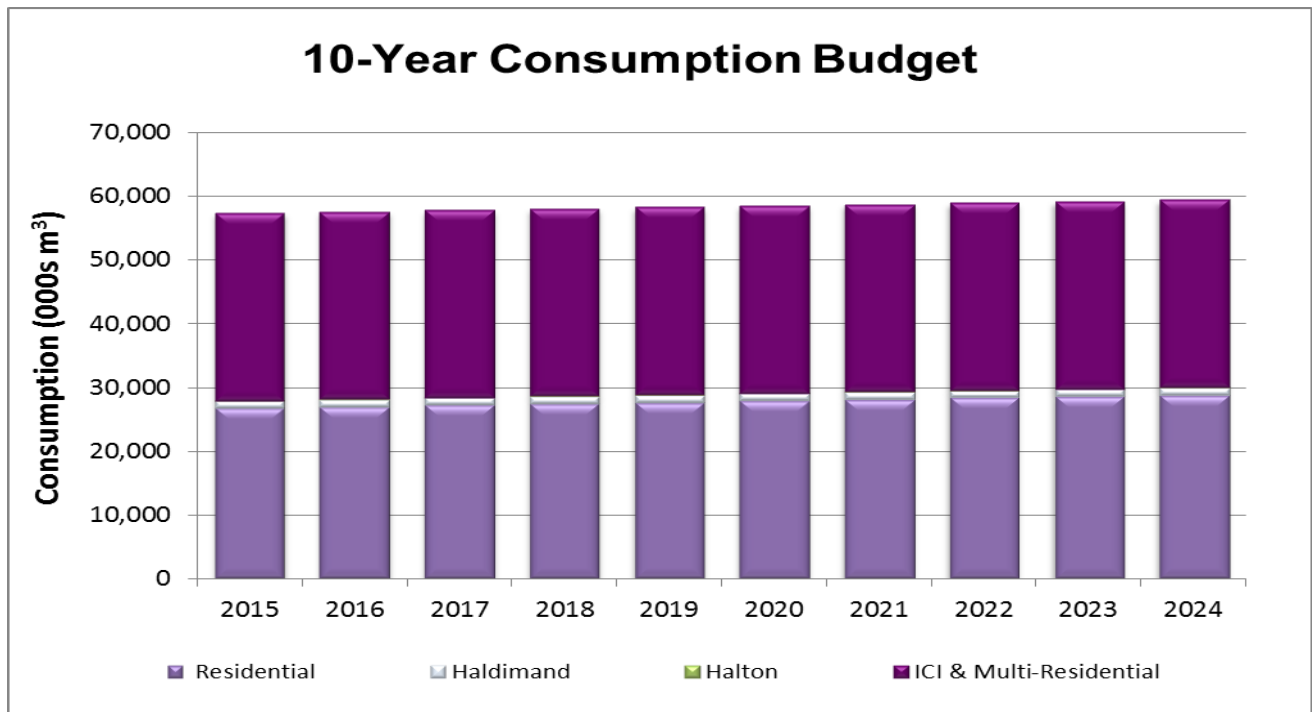
Under long-term arrangements, Hamilton supplies Haldimand County and Halton Region potable water but does not provide wastewater/storm services to either community. The following chart compares consumption in the years 2014 and 2015.



## 10-Year Consumption Budget

Total water consumption over the 10-year budget is projected to slightly increase. This relatively conservative forecast reflects the following:

- Lack of recovery from 2009-10 Recession and continued uncertainty surrounding growth/decline of consumption in the ICI & Multi-Res sector
- Price elasticity in the ICI & Multi-Res sector
- Conservation impacts
  - residential toilet consumption = 30% of indoor consumption
  - newer high-efficiency toilets (4.5L) represents 25% reduction over 6L toilet flush
  - 5% reduction in residential use = reduction of 1.6M m<sup>3</sup>
  - energy conservation initiatives in the ICI & Multi-Res sector usually include water impacts
- Renewed Haldimand water agreement executed in 2014
- Renewed Halton water agreement executed in 2011



## 2015-2024 Rate Capital Budget

The following tables summarize the \$1.573 billion capital program and the financing requirements for the 2015 – 2024 water, wastewater and storm capital budget. Of this amount, \$874.1 million or 55% is for wastewater, \$546.4 million or 35% is for water and \$152.2 million or 10% is for the storm program. A total of \$578 million or 37% of the 10 year capital program is required in the first three years (2015 – 2017). The capital program also includes \$306 million for growth infrastructure related to GRIDS which will be funded from Development Charges, except for \$71 million in Development Charge exemptions which the city is legislatively required to fund from rate revenues if Council chooses to discount its DC's or recover less than 100% of growth-related capital costs.

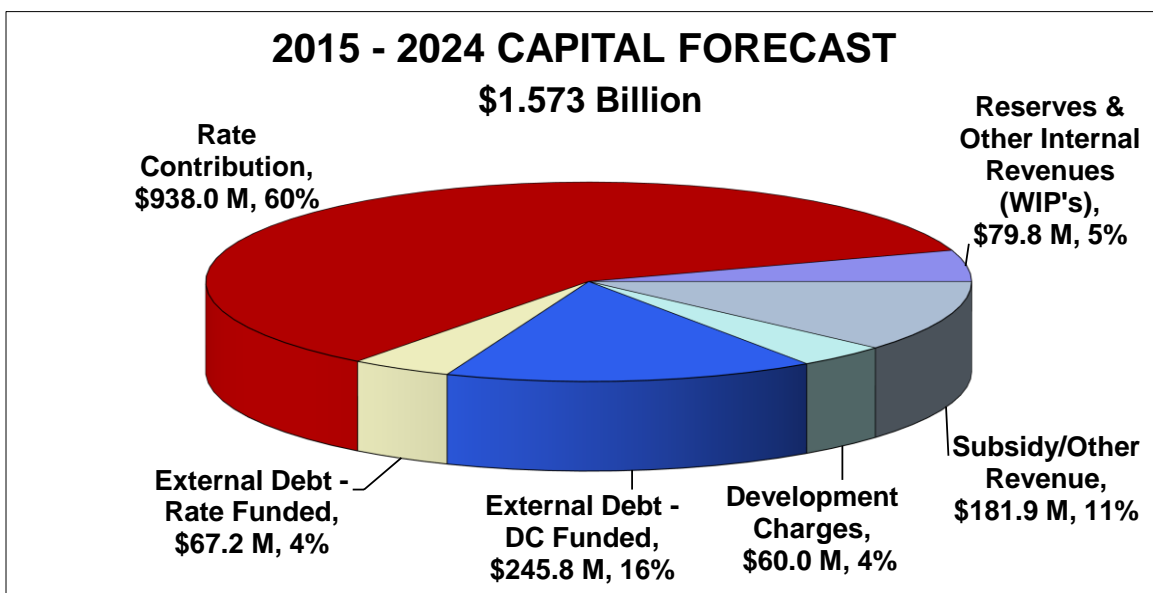
<b>2015 - 2024 Gross Capital Summary</b>											
<b>\$Millions</b>											
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>Total</b>
<b>Horizontal / Linear Programs</b>											
<b>Water</b>	55.8	57.1	52.5	24.7	56.2	43.4	42.9	35.5	38.1	38.5	444.7
<b>Wastewater</b>	49.5	52.4	41.9	25.0	17.8	22.6	37.5	54.5	63.9	71.8	436.9
<b>Storm</b>	26.1	13.1	13.0	9.9	16.9	16.6	20.9	12.6	11.5	11.6	152.2
<b>Subtotal</b>	131.4	122.6	107.4	59.6	90.9	82.6	101.3	102.6	113.5	121.9	1,033.8
<b>Treatment Plants / Outstations (Pumping Stations, Reservoirs)</b>											
<b>Water</b>	7.2	27.0	19.4	12.5	11.3	8.3	4.1	3.9	4.1	3.9	101.7
<b>Wastewater</b>	8.4	6.3	15.4	27.1	5.2	3.9	3.8	8.3	8.3	8.3	95.0
<b>Clean Harbour Project</b>	1.1	16.8	115.4	87.6	98.3	22.8	0.2	-	-	-	342.2
<b>Subtotal</b>	16.7	50.1	150.2	127.2	114.8	35.0	8.1	12.2	12.4	12.2	538.9
<b>Total</b>	148.1	172.7	257.6	186.8	205.7	117.6	109.4	114.8	125.9	134.1	1,572.7

**SOURCE OF CAPITAL FINANCING  
2015 to 2024 RATE PROGRAM CAPITAL BUDGET  
(000'S)**

	2015	2016	2017	2018 to 2024	Total 2015 to 2024
<b>WATERWORKS</b>					
<b>Capital Program</b>	<b>63,000</b>	<b>84,120</b>	<b>71,950</b>	<b>327,330</b>	<b>546,400</b>
<b>Source of Funding</b>					
Subsidy/Other Revenue	-	-	-	1,704	1,704
Development Charges	11,960	36,742	36,017	49,321	134,040
Reserves & Other Internal Sources	11,610	-	-	-	11,610
Contribution from Operating	39,430	47,378	33,558	266,736	387,102
External Debt	-	-	2,375	9,569	11,944
<b>Total</b>	<b>63,000</b>	<b>84,120</b>	<b>71,950</b>	<b>327,330</b>	<b>546,400</b>
<b>WASTEWATER</b>					
<b>Capital Program</b>	<b>58,962</b>	<b>75,450</b>	<b>172,726</b>	<b>566,975</b>	<b>874,113</b>
<b>Source of Funding</b>					
Subsidy/Other Revenue	380	5,426	71,080	102,226	179,112
Development Charges	17,339	33,514	21,519	38,481	110,853
Reserves & Other Internal Sources	13,065	9,000	29,150	15,000	66,215
Contribution from Operating	28,178	27,510	40,760	371,233	467,681
External Debt	-	-	10,217	40,035	50,252
<b>Total</b>	<b>58,962</b>	<b>75,450</b>	<b>172,726</b>	<b>566,975</b>	<b>874,113</b>
<b>STORM SEWERS</b>					
<b>Capital Program</b>	<b>26,074</b>	<b>13,174</b>	<b>12,950</b>	<b>99,970</b>	<b>152,168</b>
<b>Source of Funding</b>					
Subsidy/Other Revenue	380	75	75	525	1,055
Development Charges	11,305	5,780	6,450	37,410	60,945
Reserves & Other Internal Sources	1,960	-	-	-	1,960
Contribution from Operating	12,429	7,319	6,425	57,035	83,208
External Debt	-	-	-	5,000	5,000
<b>Total</b>	<b>26,074</b>	<b>13,174</b>	<b>12,950</b>	<b>99,970</b>	<b>152,168</b>
<b>TOTAL RATE PROGRAM</b>					
<b>Capital Program</b>	<b>148,036</b>	<b>172,744</b>	<b>257,626</b>	<b>994,275</b>	<b>1,572,681</b>
<b>Source of Funding</b>					
Subsidy/Other Revenue	760	5,501	71,155	104,455	181,871
Development Charges	40,604	76,036	63,986	125,212	305,838
Reserves & Other Internal Sources	26,635	9,000	29,150	15,000	79,785
Contribution from Operating	80,037	82,207	80,743	695,004	937,991
External Debt	-	-	12,592	54,604	67,196
<b>Total</b>	<b>148,036</b>	<b>172,744</b>	<b>257,626</b>	<b>994,275</b>	<b>1,572,681</b>

The chart below provides the sources of capital financing for the 2015 – 2024 forecast period. The growth related infrastructure investment included in the 2015 – 2024 forecast to accommodate for growth is \$305.8 million, of which all but \$60 million will be funded from debt with the associated debt charges recovered from development charges over the next 20 years. It is assumed DC collections of \$30 million each year in 2015 and 2016 will be utilized to fund growth capital in those years, reducing the amount of debt required to fund growth capital.

The 2015 – 2024 Capital Forecast includes \$19.8 million in funding from capital work-in-progress (WIP's) in 2015. Capital funding from reserves in years 2015 through 2019 totals \$59.7 million, which helps to mitigate debt financing.



## Wastewater Treatment Upgrade & Expansion Project

The implementation plan for the Upgrade and Expansion of the Woodward Avenue Wastewater Treatment Plant is consistent with the 2014 Rate Budget, in that the plant improvements are forecast using a phased approach. Phase 1 is for effluent quality improvements and Phase 2 is for expansion of the treatment plant to accommodate growth. The majority of the growth component costs (\$222.5 million) are forecast beyond the 10 year period (2015 – 2024) in the 2015 Budget.

The total budget for the Wastewater Treatment Plant upgrade and expansion has decreased by \$18.3 million in the 2015 budget forecast compared to the 2014 budget forecast, as reflected in the following table. The budget decrease is mainly attributable to a \$21.0 million decrease in the Phase 2 – Plant Expansion component. Also, some of the costs forecast in the 2014 budget for years 2015 and 2016 have been deferred to 2017, 2018 and 2019 in the 2015 budget.

The following table provides a comparison of the budgeted costs in the 2014 and 2015 Rate Budgets for the Wastewater Treatment Plant upgrade and expansion.

<b>Woodward Wastewater Treatment Plant Project - Gross Capital Forecasts</b>													
<b>(\$ Millions)</b>													
		<b>pre</b>											<b>post</b>
	<b>Total</b>	<b>2015</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2024</b>
<b>2015 Budget</b>													
Phase 1 - Clean Harbour	403.0	60.8	1.1	16.8	115.4	87.6	98.3	22.8	0.2				
Phase 2 - Expansion	237.5									5.0	5.0	5.0	222.5
<b>Total WWTP</b>	<b>640.5</b>	<b>60.8</b>	<b>1.1</b>	<b>16.8</b>	<b>115.4</b>	<b>87.6</b>	<b>98.3</b>	<b>22.8</b>	<b>0.2</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>222.5</b>
<b>2014 Budget</b>													
Phase 1 - Clean Harbour	400.3	60.8	71.7	198.8	66.0	3.0							
Phase 2 - Expansion	258.5									5.0	5.0	5.0	243.5
	658.8	60.8	71.7	198.8	66.0	3.0	-	-	-	5.0	5.0	5.0	243.5
<b>Increase (Decrease)</b>	<b>(18.3)</b>	<b>-</b>	<b>(70.6)</b>	<b>(182.0)</b>	<b>49.4</b>	<b>84.6</b>	<b>98.3</b>	<b>22.8</b>	<b>0.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(21.0)</b>

### Provincial/Federal Subsidy Programs

In 2010 the City received \$100 million of Provincial infrastructure funding related to the Wastewater Treatment Plant (WWTP) water quality improvement project, and in 2013 a \$100 million commitment for Federal funding for the WWTP project from the Green Infrastructure Fund on a claim reimbursement basis.

Consistent with the 2014 Rate Budget, the 2015 – 2024 Rate Capital Financing Plan incorporates both the Federal and Provincial Subsidies to fund the Clean Harbour project. Although none of the \$200 million in total subsidies from the Province and Fed’s has actually been spent to date, \$21.268 million has been committed as a funding source in previous years’ budgets, leaving \$178.732 million in funding for the Clean Harbour project in years 2016 – 2020.

### Projected Water / Wastewater / Storm Debt

The 2015 Water, Wastewater and Storm Budget incorporates a significant reliance on both rate supported debt and growth related debt supported from development charges over the 10-year period. The rate supported debt financing for the 10 year period 2015 – 2024 remains relatively unchanged from the 2014 Rate Budget, whereas the DC supported debt financing has decreased approximately \$37.8 M over the same period, resulting in an overall net decrease in debt financing from what was forecast in the 2014 Rate Budget. The decreased reliance on debt is attributable to funding \$60 million of growth capital in 2015 and 2016, plus \$40 million of previously approved growth capital, directly from DC reserves. The positive impact of the DC reserve funding on debt is

partially offset by an increase in the Growth Capital forecast in the 2015 Rate Budget compared to the 2014 Rate Budget of approximately \$58 million.

The 10 year capital program relies on a significant amount of debt financing, with the associated debt charges funded from both rates and development charges. The rate supported debt is projected to peak at \$293 million in 2019, compared with the 2014 budget forecasted debt peak of \$308 million in 2017. The debt funded from DC's is projected to peak at \$278 million in 2020, whereas the 2014 forecast was \$297 million in 2019. The levels of debt supported by development charges represent a significant risk if future growth does not materialize as planned; however, relative to forecasts prior to 2014, the risk has been deferred as a significant portion of the growth component of the Wastewater Plant Expansion is now planned in the years beyond the next 10 years until after 2024. This will allow an opportunity to monitor growth and DC Revenues over the next 10 years (2015 – 2024) and make adjustments to the plant expansion project and associated financing plan to align with growth requirements.

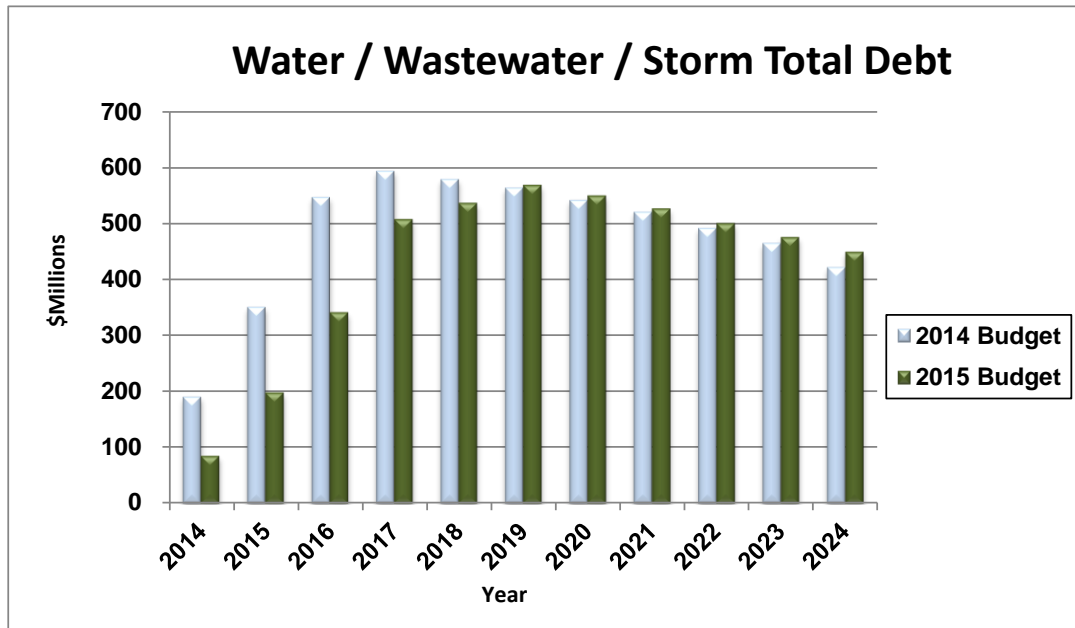
The table below provides the ten year debt forecast compared to the 2014 Budget forecast.

<b>Projected Rate &amp; DC Supported Outstanding Debt</b>											
<b>(\$ Millions)</b>											
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>2014 Rate Budget</b>											
Funded from Rates (15 Yr)	129	200	287	308	288	267	246	224	200	176	151
Funded from DC's (20 Yr)	62	151	260	286	291	297	296	297	292	289	271
<b>Total</b>	<b>191</b>	<b>351</b>	<b>547</b>	<b>594</b>	<b>579</b>	<b>564</b>	<b>542</b>	<b>521</b>	<b>492</b>	<b>465</b>	<b>422</b>
<b>2015 Rate Budget</b>											
Funded from Rates (15 Yr)	84	148	208	276	281	293	271	248	225	201	176
Funded from DC's (20 Yr)	1	50	133	231	255	275	278	278	275	274	273
<b>Total</b>	<b>85</b>	<b>198</b>	<b>341</b>	<b>507</b>	<b>536</b>	<b>568</b>	<b>549</b>	<b>526</b>	<b>500</b>	<b>475</b>	<b>449</b>
<b>Increase (Decrease)</b>	<b>(106)</b>	<b>(153)</b>	<b>(206)</b>	<b>(87)</b>	<b>(43)</b>	<b>4</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>27</b>

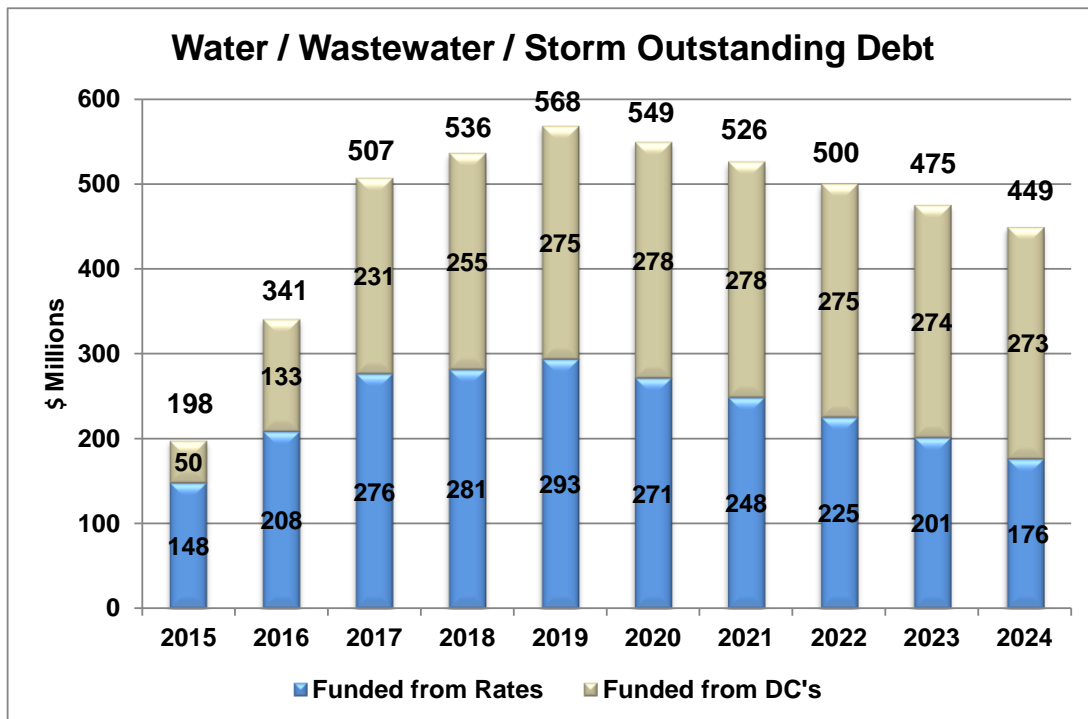
Consistent with the 2014 Rate Budget, and in an effort to more accurately forecast debt levels and the associated debt charges, the major multi-year Wastewater Treatment Plant projects are budgeted based on the projected cash flow of expenditures for the 2015 Rate Capital Budget, versus full commitment based budgeting.

The following graph compares the total outstanding debt (Rate & DC Funded) from the 2014 Budget forecast to the 2015 Budget forecast. The graph illustrates the overall decrease of the forecasted debt issuance from the 2014 forecast for the 10 year period 2015 - 2024.

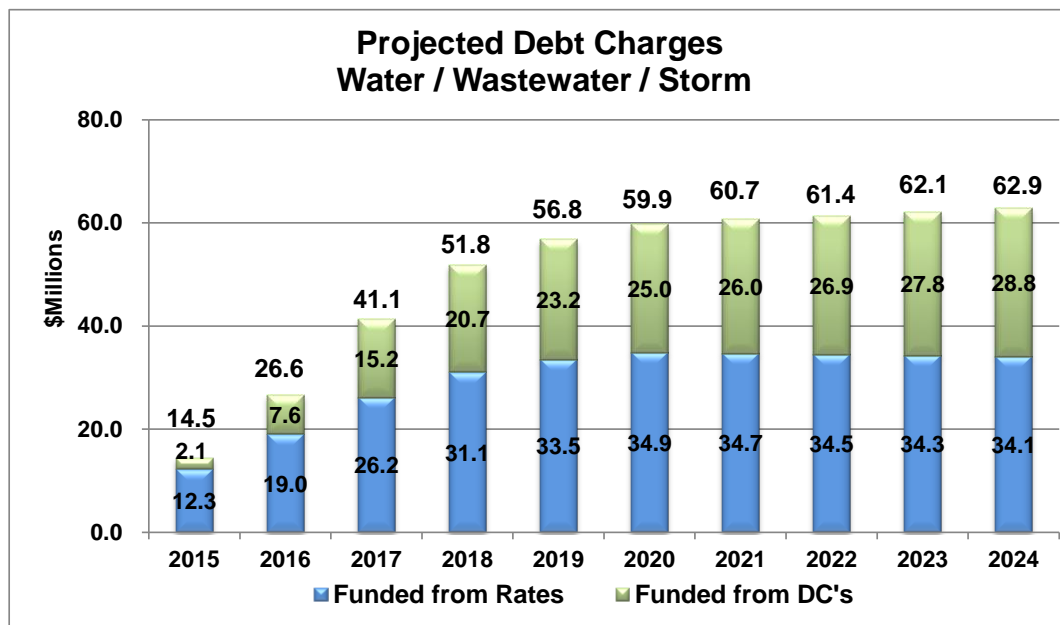




The following graph illustrates the projected outstanding debt for the 10 year period (2015 – 2024) and the funding source of the associated debt charges.



The following graph shows the forecasted debt charges funded by water / sewer rates and by Development Charges.

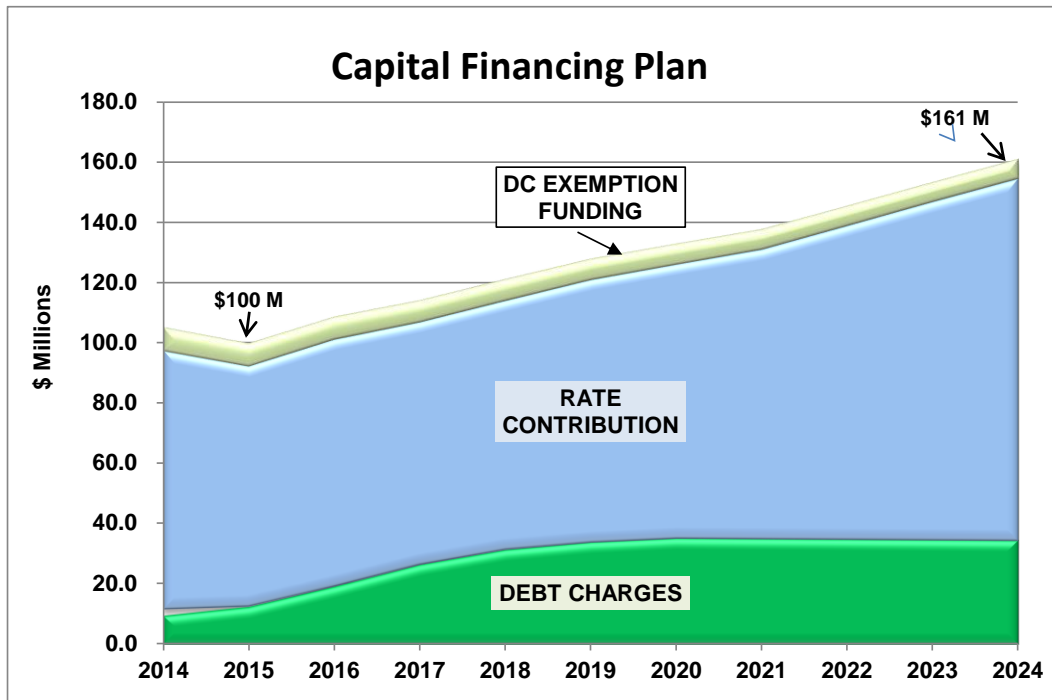


### Impact of Capital Budget on Operating Budget

As summarized below, the 2015 Rate Budget incorporates \$100.1 million capital financing costs which is a decrease of \$3.3 million from the 2014 budgeted financing costs. The 2015 budgeted debt charges increase of \$2.9 million from 2014 are more than offset by a decrease in Contribution to Capital of \$6.0 million from 2014 and a decrease in DC Exemption Funding of \$0.25 million.

<b>WATER, WASTEWATER &amp; STORM</b>					
<b>IMPACT OF CAPITAL ON OPERATING BUDGET</b>					
<b>(000's)</b>					
	<u>2014</u>	<u>2015</u>	<u>CHANGE</u>		<u>2015 - 2024</u>
	<u>APPROVED</u>	<u>PROPOSED</u>	<u>\$</u>	<u>%</u>	<u>FORECAST</u>
Debt to be Issued	22,097	-	(22,097)	0.0%	67,196
Debt Charges (Net)	9,419	12,320	2,901	30.8%	294,684
Contribution to Capital	86,005	80,037	(5,968)	-6.9%	937,991
DC Exemption Funding	8,000	7,750	(250)	-3.1%	71,080
<b>Impact on Operating Budget</b>	<b>103,424</b>	<b>100,107</b>	<b>(3,317)</b>	<b>-3.2%</b>	<b>1,303,755</b>

The following graph highlights the annual requirement required to pay for the Rate Supported Capital program. Capital financing costs are projected to increase from \$100 million in 2015 to \$161 million in 2024. Rate supported debt charges are expected to increase from 5.3% of total water/wastewater revenues in 2014 to 15.3% in 2019, and decline to 12.5% in 2024.



**ALTERNATIVES FOR CONSIDERATION**

**(Include Financial, Staffing, Legal and Policy Implications and Pros and Cons for each alternative)**

Beyond the recommended rate increase, staff can direct changes to this budget submission albeit any changes, in all likelihood, would require a review of the 2015 Capital Budget submissions

**ALIGNMENT TO THE 2012 – 2015 STRATEGIC PLAN**

**Strategic Priority #1**

A Prosperous & Healthy Community

*WE enhance our image, economy and well-being by demonstrating that Hamilton is a great place to live, work, play and learn.*

**Strategic Objective**

- 1.1 Continue to grow the non-residential tax base.

- 1.2 Continue to prioritize capital infrastructure projects to support managed growth and optimize community benefit.
- 1.3 Promote economic opportunities with a focus on Hamilton's downtown core, all downtown areas and waterfronts.
- 1.6 Enhance Overall Sustainability (financial, economic, social and environmental).

### **Strategic Priority #2**

#### Valued & Sustainable Services

*WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.*

#### **Strategic Objective**

- 2.1 Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.
- 2.3 Enhance customer service satisfaction.

### **APPENDICES AND SCHEDULES ATTACHED**

Appendix "A" to Report FCS15002 - Total Combined Water, Wastewater & Storm 1, 3, & 10 Year Operating Budget Forecast

Appendix "B" to Report FCS15002 - Water 1, 3 & 10 Year Operating Budget Forecast

Appendix "C" to Report FCS15002 – Wastewater and Storm 1, 3 & 10 Year Operating Budget Forecast

Appendix "D" to Report FCS15002 - Wastewater 1, 3, & 10 Year Expenditure Forecast

Appendix "E" to Report FCS15002 - Storm 1, 3, & 10 Year Expenditure Forecast

Appendix "F" to Report FCS15002 - Water, Wastewater & Storm 2015 Rate Supported Staff Complement

Appendix "G" to Report FCS15002 - Water, Wastewater & Storm 2015 Proposed User Fees & Charges Rate Supported

Appendix "H" to Report FCS15002 - Water, Wastewater & Storm 2015-2024 Capital Forecast Summary

Appendix "I" to Report FCS15002 - Water, Wastewater & Storm 2015-2024 Capital Financing Plan

Appendix "J" to Report FCS15002 - Water System 2014-2023 Capital Forecast Summary

Appendix “K” to Report FCS15002 - Water System 2015 Capital Project List

Appendix “L” to Report FCS15002 - Water System 2015-2024 Capital Project List

Appendix “M” to Report FCS15002 - Wastewater System 2015-2024 Capital Forecast Summary

Appendix “N” to Report FCS15002 - Wastewater System 2015 Capital Project List

Appendix “O” to Report FCS15002 - Wastewater System 2015-2024 Capital Project List

Appendix “P” to Report FCS15002 - Storm Water Management 2015-2024 Capital Forecast Summary

Appendix “Q” to Report FCS15002 - Storm Water Management 2015 Capital Project List

Appendix “R” to Report FCS15002 - Storm Water Management 2015-2024 Capital Project List