CITY OF HAMILTON

CORPORATE SERVICES DEPARTMENT
Financial Planning and Policy Division

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	November 27, 2015
SUBJECT/REPORT NO:	2016 Recommended Water, Wastewater and Stormwater Budget (FCS15073) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Charlie Elliott (905) 546-2424 x2162 John Savoia (905) 546-2424 x7298
SUBMITTED BY: **SIGNATURE:**	Mike Zegarac General Manager Finance and Corporate Services

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 1, 2016:

Monthly Water Consumption (m3)	Rate ($/m3)
0 – 10	0.69
10 +	1.38

(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 $1.38 per cubic metre, as of January 1, 2016;

(c) That daily water fixed charges for all properties in the City of Hamilton be imposed at the following rates, as of January 1, 2016:

Meter Size	Daily Water Rate
15 mm	$ 0.31
16 mm	$ 0.31
20 mm	$ 0.31
25 mm	$ 0.78
38 mm	$ 1.55
50 mm	$ 2.48
75 mm	$ 4.96
100 mm	$ 7.75
150 mm	$ 15.50
200 mm	$ 24.80
250 mm	$ 35.65
300 mm	$ 52.70

(d) That the wastewater/storm treatment charges for residential properties in the City of Hamilton be imposed at the following rates, effective January 1, 2016:

Monthly Water Consumption (m3)	Rate ($/m3)
0 – 10	0.74
10 +	1.48

(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 $1.48 per cubic metre, effective January 1, 2016;

(f) That daily wastewater/storm fixed charges for all properties in the City of Hamilton be imposed at the following rates, effective January 1, 2016:

Meter Size	Daily Wastewater/Storm Rate
15 mm	$ 0.32
16 mm	$ 0.32
20 mm	$ 0.32
25 mm	$ 0.80
38 mm	$ 1.60
50 mm	$ 2.56
75 mm	$ 5.12
100 mm	$ 8.00
150 mm	$ 16.00
200 mm	$ 25.60
250 mm	$ 36.80
300 mm	$ 54.40

(g) That the residential non-metered annual water rate be imposed at the flat rate of $503.70 per annum, effective January 1, 2016;

(h) That the residential non-metered annual wastewater/storm rate be imposed at the flat rate of $540.20 per annum, effective January 1, 2016;

(i) That the residential combined non-metered annual water and wastewater/storm rate be imposed at the flat rate of $1,043.90 per annum, effective January 1, 2016;

(j) That the Private Fire Line rates be imposed at the following rates, effective January 1, 2016:

Connection Size		Monthly Rate	
(mm)	inches		
25	1.0	$	3.15
38	1.5	$	7.25
50	2.0	$	12.60
75	3.0	$	28.35
100	4.0	$	50.40
150	6.0	$	113.40
200	8.0	$	201.60
250	10.0	$	201.60
300	12.0	$	201.60

(k) That the 2016 Water, Wastewater & Storm Proposed User Fees and Charges be imposed as per Appendix “G” to Report FCS15073, effective January 1, 2016;

(l) That the 2016 Water, Wastewater and Stormwater Management Rate Supported Operating Budget in the amount of $ 192,345,510 be approved as per Appendix “A” to Report FCS15073;

(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 2016-2025 Water, Wastewater and Stormwater Management Rate Supported Operating Budget forecast (Appendix “A” to Report FCS15073) be approved in principle;

(n) That the 2016 Water, Wastewater and Stormwater Management Rate Supported Capital Budget and Financing Plan in the amount of $ 192,922,000 be approved as per Appendix “H” to Report FCS15073;

(o) That the 2016-2025 Water, Wastewater and Stormwater Management Rate Supported Capital Budget forecast and financing plan (Appendix "I" to Report FCS15073) be approved in principle;

(p) That the additional 4.73 Full Time Equivalent Rate Supported Staffing be approved as per Appendix "F" to Report FCS15073;

(q) That, in accordance with the "Budget Control Policy", the 2015 budget restatements as outlined in Appendix "S" to Report FCS15073, be approved;

(r) That the City Solicitor be authorized and directed to prepare, for Council approval, all necessary by-laws respecting the 2016 water and wastewater/storm user fees, charges and rates set out in recommendations (a) through (k) of Report FCS15073.

EXECUTIVE SUMMARY

The 2016 Rate Budget is submitted for Council's consideration. The 2016 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 2016 to 2025, water, wastewater and stormwater capital investment is forecast at $1.7 billion which represents an increase of $0.13 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 2016 requested operating budget for water, wastewater and storm is approximately $192 million, which represents an increase over the 2015 Budget of approximately $8.6 million, or 4.7%.

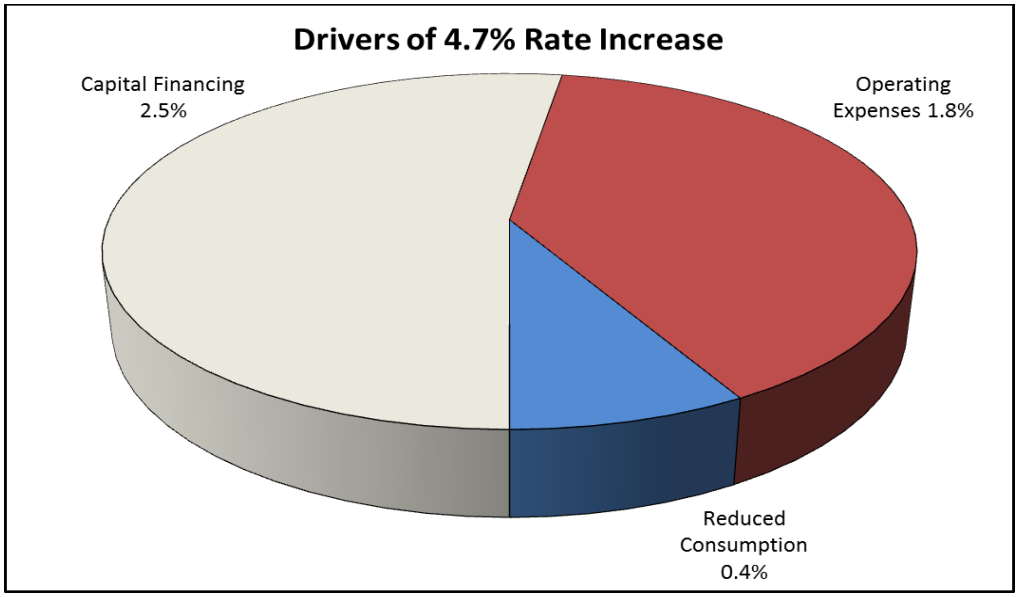
2016 operating expenditures reflect an increase of $3.7 million or 4.6% over 2015 budget with the following major cost drivers:

- Biosolids new contract includes increase of $1 million related to increase haulage costs driven by fuel price increases and lack of storage
- Other contractual services increases include the Sewer Lateral Management Program ($500,000), Locates contract ($235,000), Service Thawing ($150,000)
- Electricity increase of nearly $700,000 based on estimated electric rate increases of 6% in 2016
- Employee related expenditures reflecting the additional 4.73 full time equivalent employees incorporated into the 2016 budget at a gross cost of $500,800

The following table summarizes the budget changes for the 2016 Requested Budget:

Summary of the 2016 Operating Budget				
($ millions)	**2015 Restated Budget**	**2016 Requested Budget**	**2016 Requested /2015 Restated Change**	
			$	%
Expenditures				
Program Expenditures	$ 80.7	$ 84.4	$ 3.7	4.6%
Capital/Debt Financing	$ 103.0	$ 107.9	$ 4.9	4.7%
Total Expenditures	**$ 183.7**	**$ 192.3**	**$ 8.6**	**4.7%**
Revenues				
Rate Revenue	$ 181.2	$ 189.8	$ 8.6	4.7%
Non-Rate Revenue	$ 2.5	$ 2.5	$ -	0%
Total Revenue	**$ 183.7**	**$ 192.3**	**$ 8.6**	**4.7%**
Average Residential Water/Wastewater/Storm Bill	**$ 601.80**	**$ 630.35**	**$ 28.55**	**4.7%**

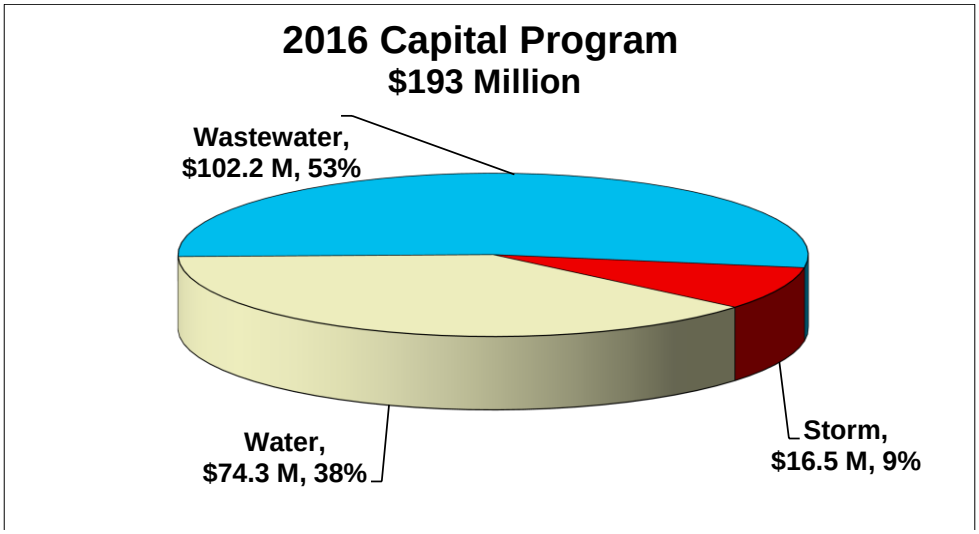
The following chart highlights that the proposed combined 4.7% rate increase is driven largely by increased operating and capital expenditures and to a much lower extent by lowered forecast consumption in 2016.



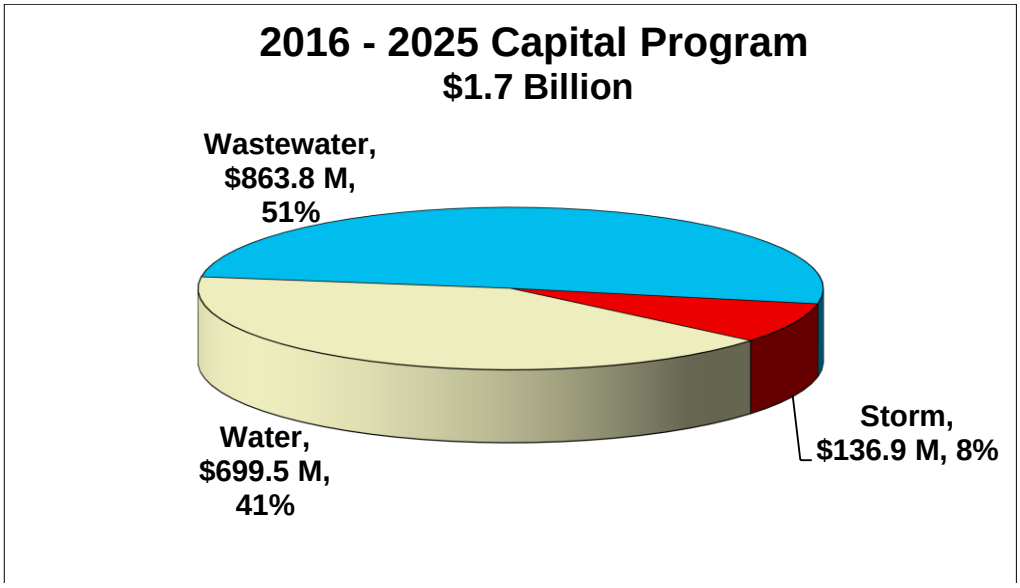
Other water and wastewater service user fees have been reviewed in accordance with the Water/Wastewater User Service Fee and Charges Policy approved by Council in

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 2016 Rate Capital Program totalling $193 million, by the three major program areas: Water, Wastewater and Storm.



The chart below illustrates the $1.7 billion capital program for the 2016 – 2025 water, wastewater and storm capital budget. Of this amount, $863.8 million or 51% is for wastewater, $699.5 million or 41% is for water and $136.9 million or 8% is for the storm program. A total of $668 million or 39% of the 10 year capital program is required in the first three years (2016 – 2018).



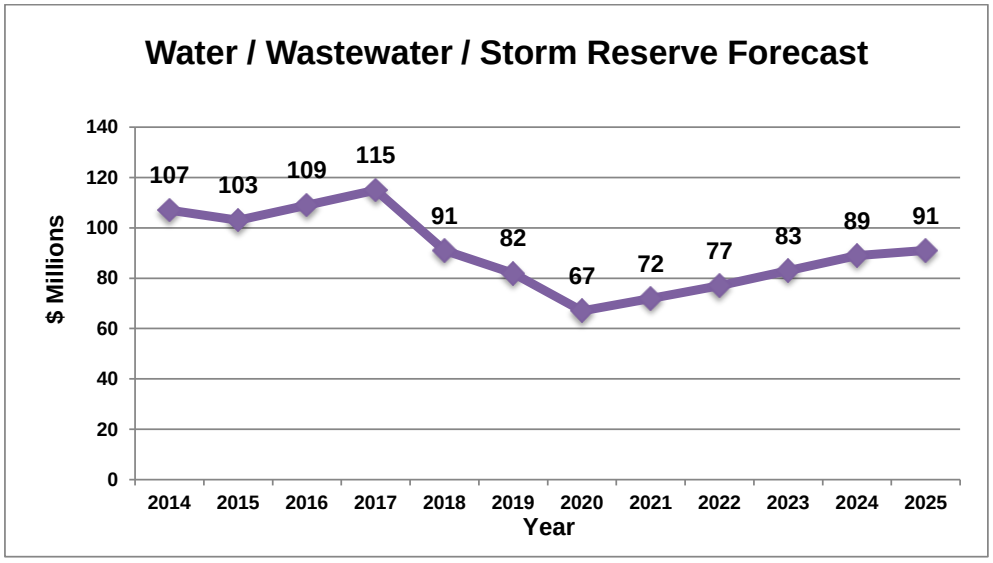
The 10 year capital program relies on a significant amount of debt financing, with the associated debt charges funded from both rates and development charges (DCs). The rate supported debt is projected to peak at $298 million in 2020, compared with the 2015 budget forecasted debt peak of $293 million in 2019. The debt funded from DC's is projected to peak at $317 million in 2021, whereas the 2015 forecast was $278 million in 2020. 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 2025. This will allow an opportunity to monitor growth and DC Revenues over the next 10 years (2016 – 2025) 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 2015 Budget forecast.

Projected Rate & DC Supported Outstanding Debt
($ Millions)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
2015 Rate Budget											
Funded from Rates	148	208	276	281	293	271	248	225	201	176	150
Funded from DC's	50	133	231	255	275	278	278	275	274	273	257
Total	198	341	507	536	568	549	526	500	475	449	407
2016 Rate Budget											
Funded from Rates	78	142	209	274	282	298	275	252	228	203	178
Funded from DC's	1	93	179	283	300	314	317	308	308	308	316
Total	79	235	388	557	582	612	592	560	536	512	494
Increase (Decrease)	(119)	(106)	(119)	21	14	63	66	60	61	63	87

The following graph provides the projected reserve balances for the Water, Wastewater and Storm programs. The 2016 Budget Forecast reflects utilizing $60.0 million in reserve funds to fund the WWTP – Clean Harbour project, a $20.0 million in increase from the $40.0 million utilized in the 2015 Rate Budget Forecast. The 2016 - 2025 Rate Financing Plan assumes funding from reserves in years 2018 ($25 million), 2019 ($15 million) and 2020 ($20 million) in order to reduce the reliance on debt to fund this project. It should be noted, the reserve forecast below does not include the Provincial Wastewater Improvement Subsidy reserve ($100 million Provincial subsidy) which is dedicated funding for the Clean Harbour project 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 $107 million at the end of 2014, to $67 million in 2020 and then increase over the years to $91 million in 2025.

The 2016 recommended water and wastewater/storm rate increases will result in an annual cost impact of approximately $29 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.

Impact of Recommended Rate Increases on Water and Wastewater/Storm Rates

	2015	2016	Increase
Water Fixed Charge (daily)[1]	$ 0.30	**$ 0.31**	$ 0.01
Consumption Charge Block 1 (0-10 cubic metres/month)	$ 0.66	**$ 0.69**	$ 0.03
Consumption Charge Block 2 (>10 cubic metres/month)	$ 1.32	**$ 1.38**	$ 0.06
Wastewater/Storm Fixed Charge (daily)[1]	$ 0.30	**$ 0.32**	$ 0.02
Treatment Charge Block 1 (0-10 cubic metres/month)	$ 0.71	**$ 0.74**	$ 0.03
Treatment Charge Block 2 (>10 cubic metres/month)	$ 1.41	**$ 1.48**	$ 0.07

[1] 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:

Impact of Recommended 2016 Water and Wastewater/Storm Rate Increases on a Typical Residential Bill	
(based on annual water consumption of *200m^3*)	
2015 Residential Bill	$ 601.80
2016 Residential Bill	**$ 630.35**
Recommended Change ($) ***Recommended Change (%)***	*$ 28.55* ***4.74%***

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 in later sections of this report include:

- Declining consumption
- Sustainability of grant/subsidy programs funded by water/wastewater rates
- Increased capital investment requirements

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 2016 Rate Supported Strategy endeavours to achieve a balance between capital investment, rate of growth and rate stability. The 2016 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 2016 – 2025 Strategy is a continuation of the Strategy which assumes combined annual rate increases ranging from 3.7 – 4.5% over the 10-year period.

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. The current Strategy calls for capital

funding in 2016 of approximately $193 million (2015$) and $1.7 billion (2015$) for the 2016 – 2025 timeframe.

The 2016 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 FCS15073, approval of the 2016 Water, Wastewater and Stormwater Management Rate Supported Operating Budget will support operating and capital financing expenditures of $192,345,510 for 2016.

Staffing: The 2016 Rate Supported staffing complement reflects a requested increase of 4.73 in total FTE headcount as reflected in Appendix “F” to Report FCS15073.

Legal: Recommendation (p) of Report FCS15073 relates to By-laws requiring Council approval, respecting the implementation of 2016 water and wastewater user fees and charges set out in the recommendations (a) through (k) of Report FCS15073.

HISTORICAL BACKGROUND (Chronology of events)

The 2016 Rate Budget continues to support the priority of investing in infrastructure as evidenced by the 2016 to 2025 forecast investment of approximately $1.7 billion in water, wastewater and stormwater capital infrastructure.

Report FCS15073 outlines the various aspects and components that the recommended 2016 Rate Supported strategy incorporates:

- Sustainable Rate Strategy
- Proposed 2016 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.

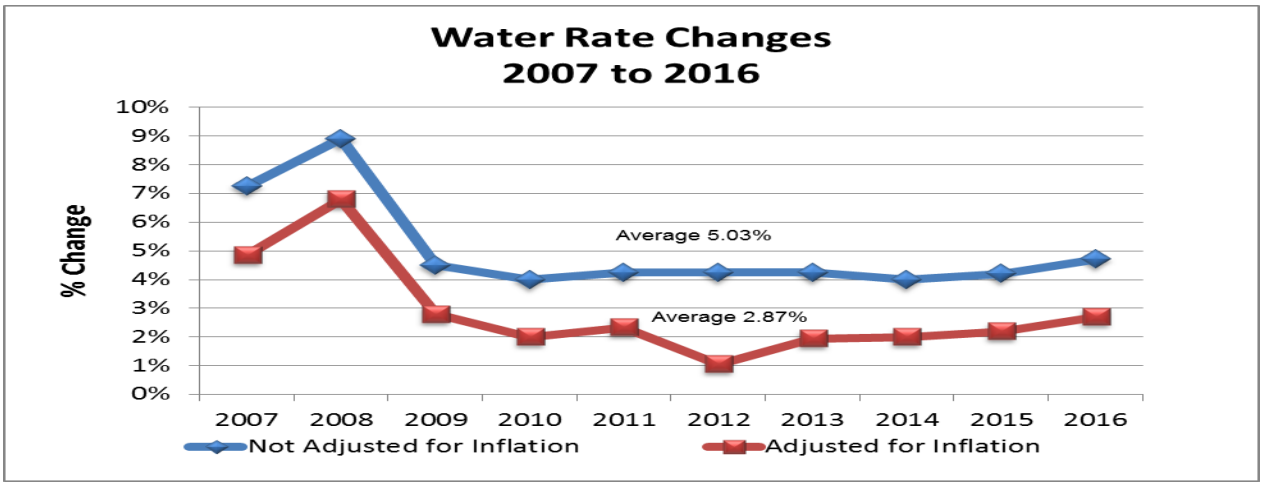
ANALYSIS AND RATIONALE FOR RECOMMENDATION
(Include Performance Measurement/Benchmarking Data if applicable)

Appendix "A" to Report FCS15073 summarizes the 2016 operating budget expenditures (program and capital) and revenues of $192 million compared to the 2015 projected actual and 2015 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 2007-2016

Hamilton's overall average annual water rate increase is 5.03% before adjusting for inflation during the 10 year period from 2007 to 2016. Accounting for inflation results in the overall average, the annual rate increase over the same period would be 2.87%.
The following chart shows the trend in Hamilton's water rates for the period 2007 to 2016.



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 5.03%, before adjusting for inflation.

An updated review of 2015 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/fixtures and more stringent water efficiency measures within Ontario Building Code updates.

Over the period 2002 to 2015, Hamilton's residential annual water and wastewater/storm bill has ranged from 8th to the current ranking of 14th. 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.

2015 COMBINED METERED WATER/WASTEWATER CHARGE COMPARISON WITH OTHER MUNICIPALITIES

MUNICIPALITY	AVERAGE RESIDENTIAL 200 M^3		SMALL COMM/IND 325 M^3	
	Annual Charge	Ranking	Annual Charge	Ranking
Norfolk	$1,265	1	$1,766	1
London**	$1,139	2	$1,663	2
Kitchener**	$1,074	3	$1,336	4
Haldimand	$1,000	4	$1,291	5
Waterloo**	$949	5	$1,257	7
Cambridge	$943	6	$1,428	3
West Lincoln	$915	7	$1,231	9
Guelph	$848	8	$1,245	8
St. Catharines	$842	9	$1,220	10
Brantford	$817	10	$1,259	6
Durham	$775	11	$1,093	11
Halton	$735	12	$1,004	13
Toronto*	$639	13	$1,038	12
Hamilton*	**$601**	**14**	**$942**	**14**
Peel	$379	15	$616	15

* Include stormwater management in their rates.
** Have dedicated stormwater management user fee that is included within residential rates 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.

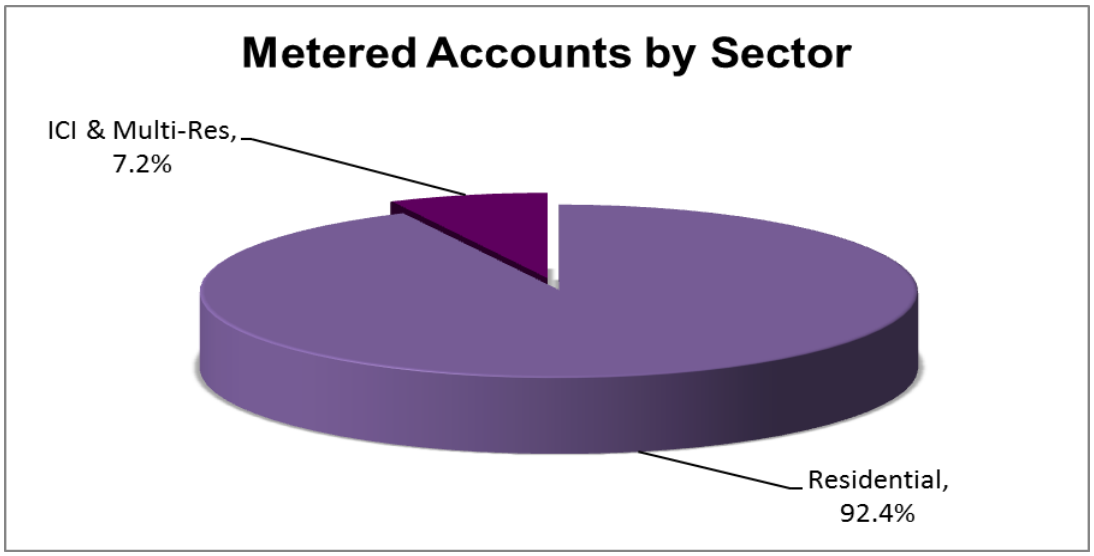
2015 COMBINED METERED WATER/WASTEWATER CHARGE COMPARISON WITH OTHER MUNICIPALITIES				
MUNICIPALITY	**MID-SIZE COMM/IND 2,272 M^3**		**LARGE COMM/IND 22,727 M^3**	
	Annual Charge	**Ranking**	**Annual Charge**	**Ranking**
Kitchener**	$9,343	1	$93,456	1
Cambridge	$9,241	2	$89,623	2
Waterloo**	$8,613	3	$85,866	3
Brantford	$8,136	4	$80,362	4
Norfolk	$7,863	5	$67,714	8
Guelph	$7,543	6	$74,126	5
Toronto*	$7,258	7	$72,601	7
St. Catharines	$7,205	8	$69,436	6
West Lincoln	$6,771	9	$60,771	9
London**	$6,283	10	$47,804	14
Halton	$6,271	11	$53,058	12
Hamilton*	**$6,259**	**12**	**$63,305**	**10**
Durham	$5,672	13	$52,471	13
Haldimand	$5,662	14	$57,352	11
Peel	$4,309	15	$43,104	15

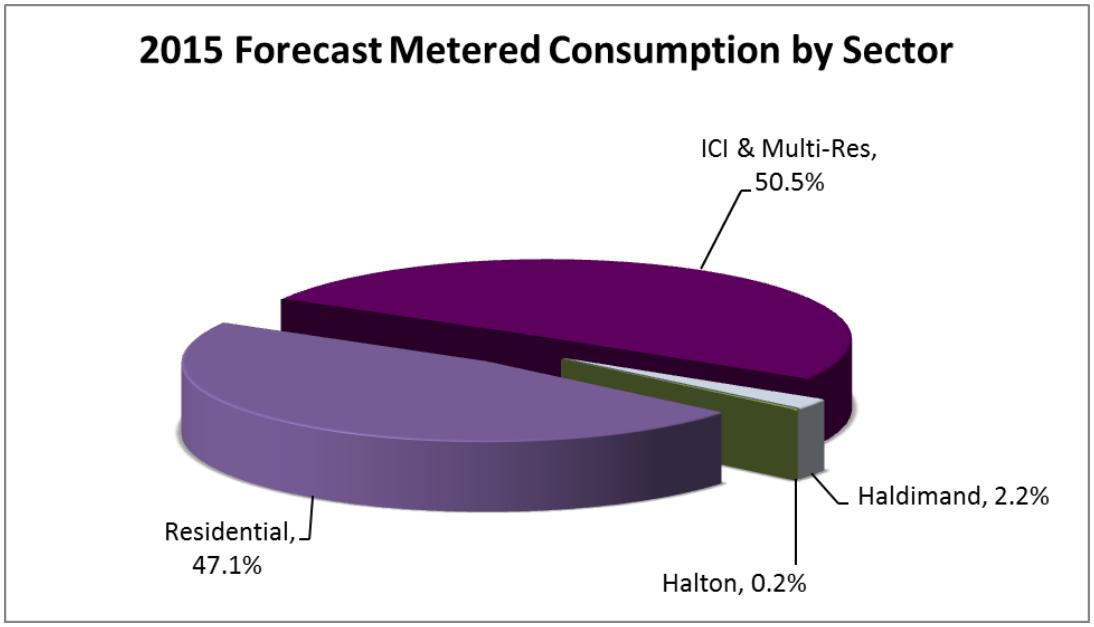
* Include stormwater management in their rates.
** Have dedicated stormwater management user fee that is excluded in above table.
Note: All other municipalities fund stormwater from property taxes.

CONSUMPTION AND RATE-GENERATED REVENUES

Metered Water Consumption

Currently, the City of Hamilton has approximately 147,000 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 50.5% of total consumption.

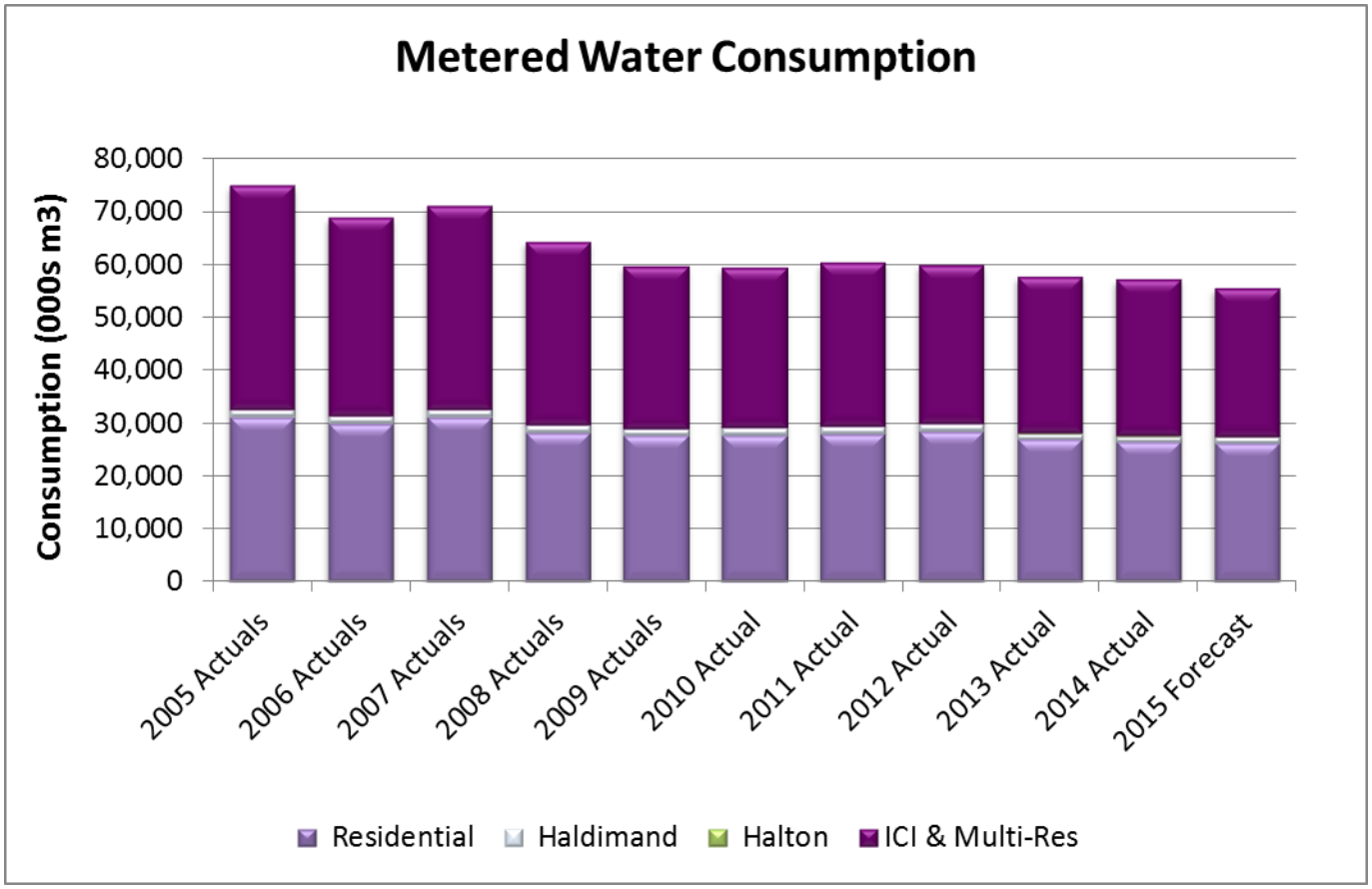




2015 Consumption Forecast

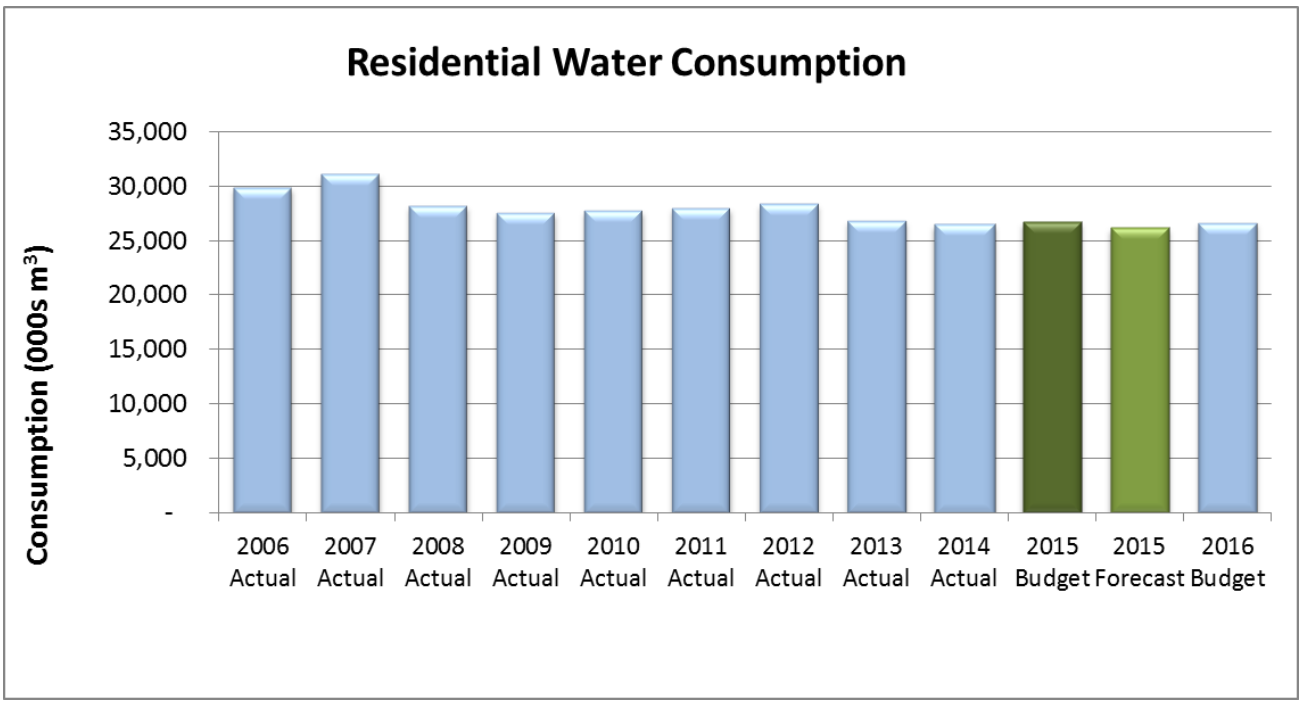
Environment Canada tracks municipal water usage and has observed a downward trend on water consumption across the country over the last decade.

For 2015, total water and wastewater/storm revenues are projected to amount to $172 million, based on metered sales of approximately 55.6 million cubic metres. The 2015 metered and non-metered water and wastewater/storm revenues are forecast to be approximately $0.7 million below budget.

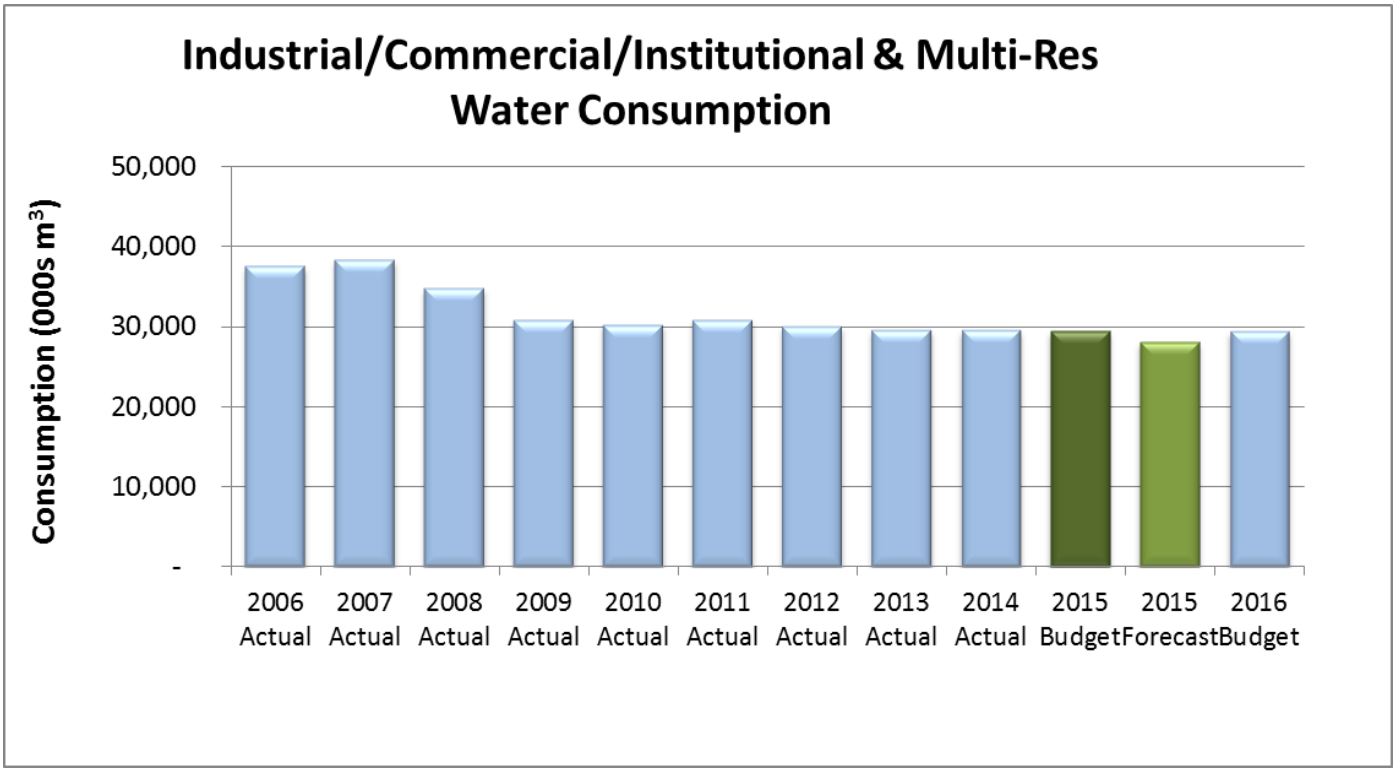


The following figure highlights consumption trends in the residential sector.

The average water consumption, per household, during the last three years was approximately 196m^3, and for the purpose of the 2015 forecast 195m^3 was assumed.



The residential sector is forecasting a minor budget variance for 2015, reflecting ongoing conservation efforts.



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

For 2015, the ICI & Multi-Res sector is expected to come in at a slight unfavourable variance to budget, reflecting consistent consumption levels seen in the ICI & Multi-Res sector since 2009.

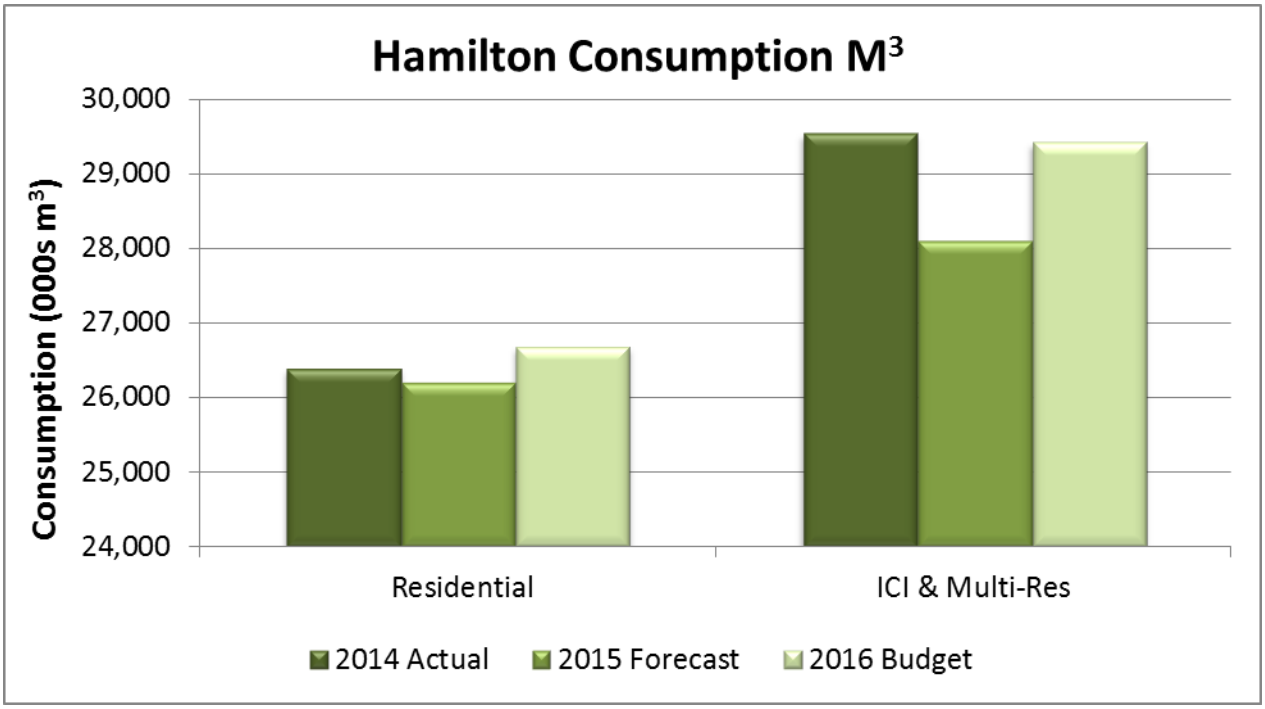
In the Annual Survey report of the Hamilton Industrial Environmental Association (HIEA), the City's largest manufacturers and other companies reported large reductions in water consumption. The report found that HIEA member companies have reduced potable water use by 53% since 2008 with City water use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

2016 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 2016, total metered water consumption is forecast at approximately 55.6 million cubic metres, a reduction of approximately 2.7% relative to 2015 budget. The following chart compares forecast budgeted consumption in the years 2015 and 2016.



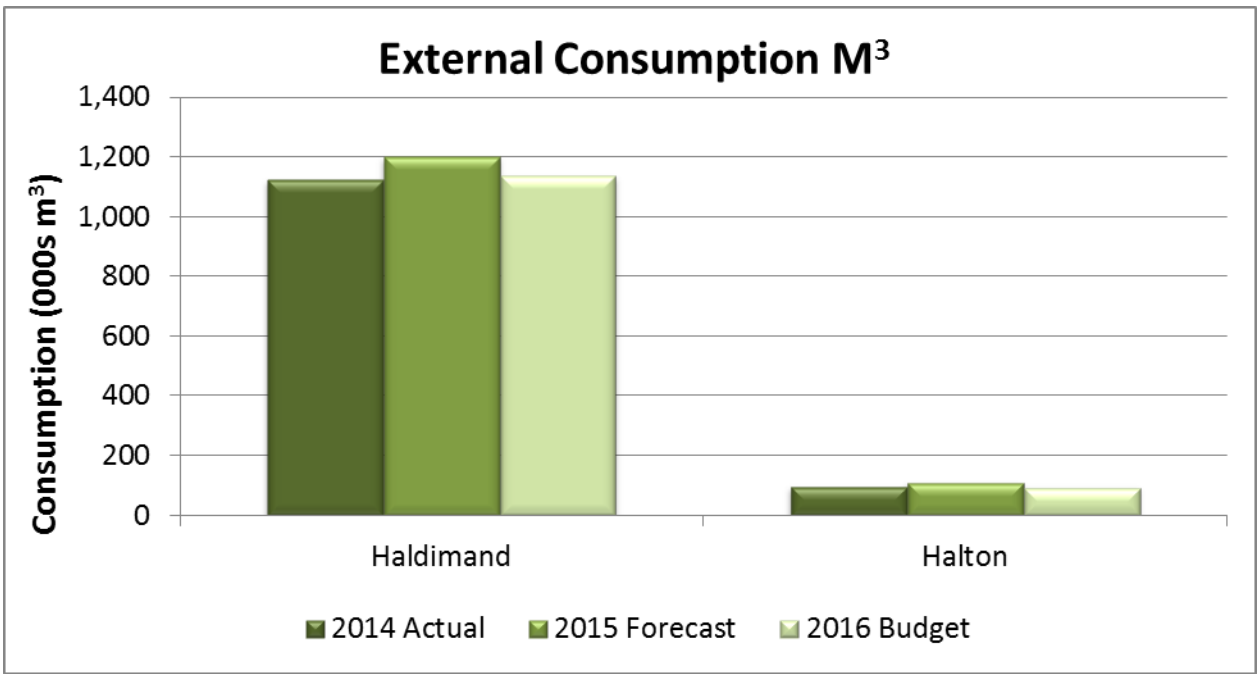
Based on the review of residential consumption patterns, residential consumption, on average, has been declining over the past decade. The declining consumption reflects ongoing conservation efforts associated with fixture/ appliance obsolescence such as the installation of water efficient toilets and washer machines. For 2016, staff is recommending that the forecast for average residential consumption remain at 200m^3 to reflect the declining consumption trends observed in 2012 – 2015.

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 (4.8L) 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 2016 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 2014-15.

It should be noted that the 2016 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 2015 to utilize upwards of 600,000m^3 of City water which would equate to approximately $1.6 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 approximately $750,000 annually. Therefore, the total Rate related revenues provided by US Steel's Hamilton's operations amount to nearly $2.3 million annually.

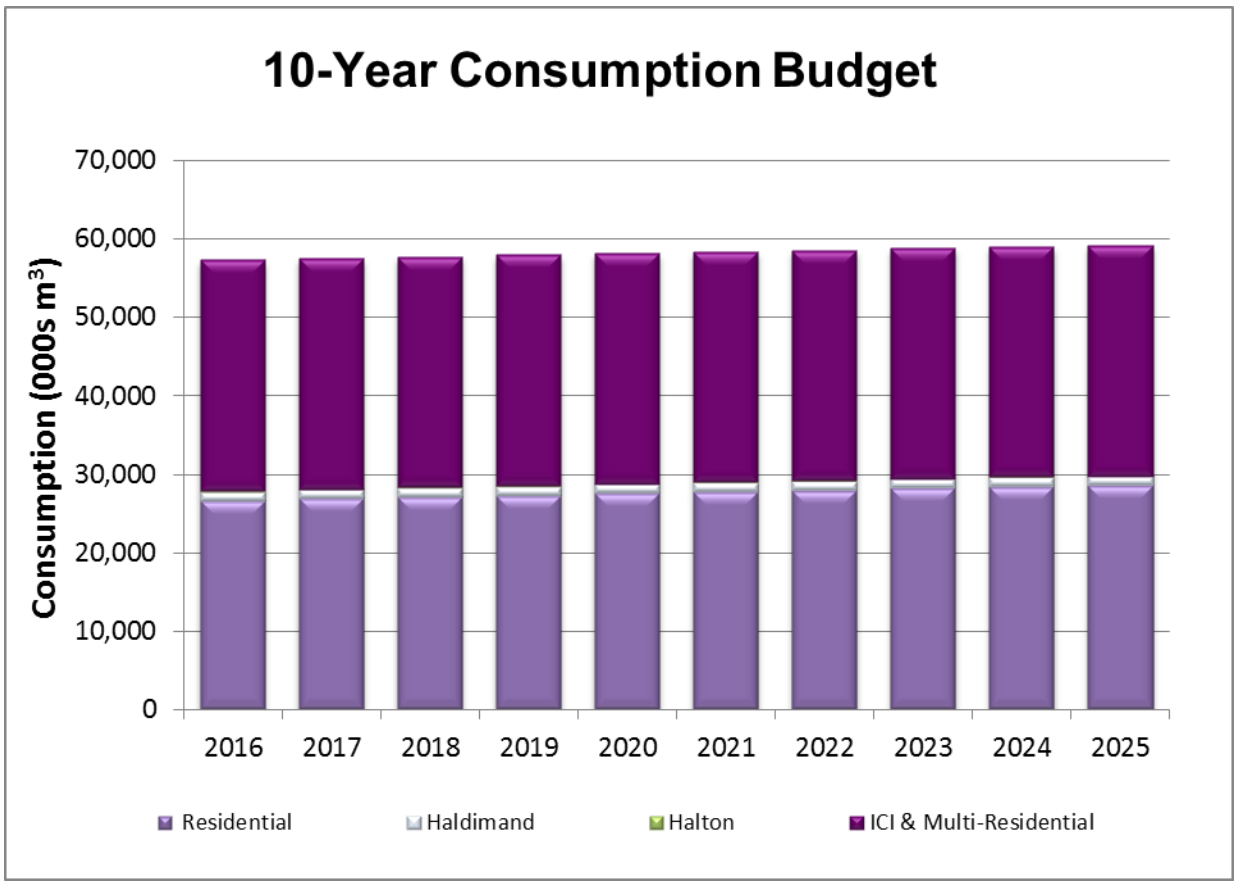
Under long-term arrangements, Hamilton supplies Haldimand County and Halton Region potable water but does not provide wastewater/storm services to either community. The following chart compares consumption in the years 2014 to 2016.



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
    - 5% reduction in residential use = reduction of 1.6M m^3
    - 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



2016-2025 Rate Capital Budget

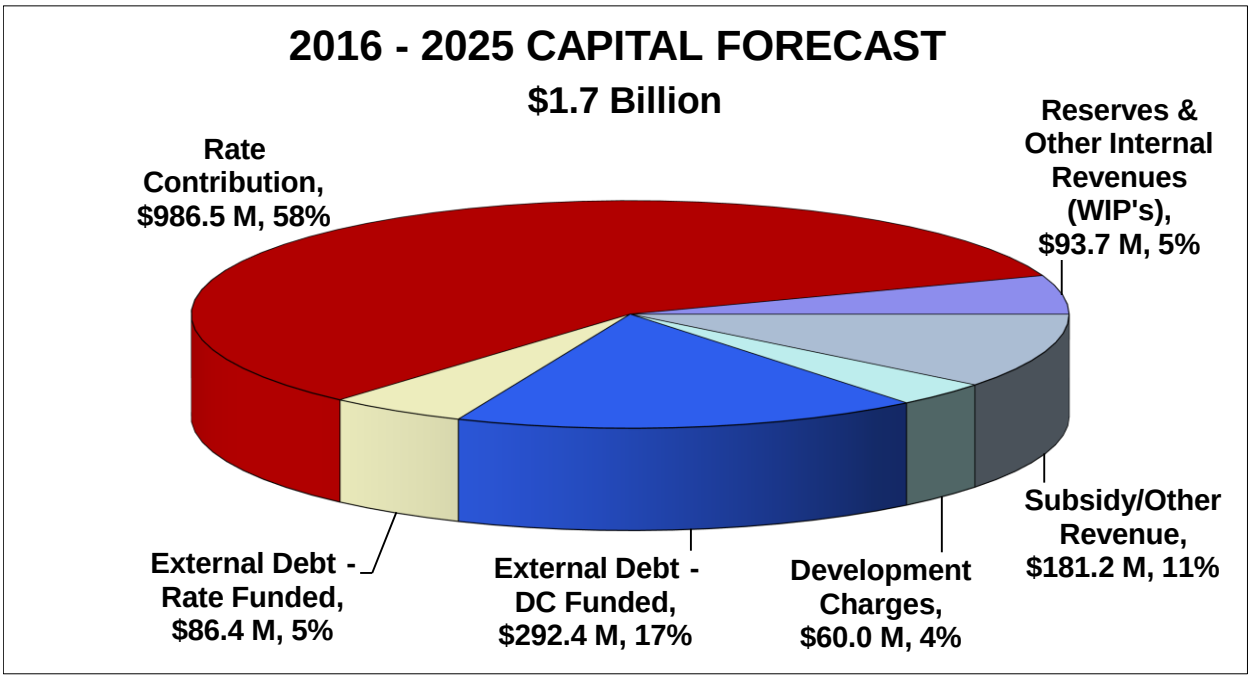
The following table summarizes the $1.7 billion capital program and the financing requirements for the 2016 – 2025 water, wastewater and storm capital budget. Of this amount, $863.8 million or 51% is for wastewater, $699.5 million or 41% is for water and $136.9 million or 8% is for the storm program. A total of $667.5 million or 39% of the 10 year capital program is required in the first three years (2016 – 2018). The capital program also includes $352 million for growth infrastructure related to GRIDS which will be funded from Development Charges, except for $70 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.

SOURCE OF CAPITAL FINANCING
2016 to 2025 RATE PROGRAM CAPITAL BUDGET
$(000'S)

	2016	2017	2018	2019 to 2025	Total 2016 to 2025
WATERWORKS					
Capital Program	**74,292**	**91,814**	**81,516**	**451,855**	**699,477**
Source of Funding					
Subsidy/Other Revenue	-	-	-	1,734	1,734
Development Charges	25,993	35,415	20,254	68,717	150,379
Reserves & Other Internal Sources	9,602	-	-	-	9,602
Contribution from Operating	38,697	47,284	49,949	360,667	496,597
External Debt	-	9,115	11,313	20,737	41,165
Total	**74,292**	**91,814**	**81,516**	**451,855**	**699,477**
WASTEWATER					
Capital Program	**102,160**	**111,595**	**163,779**	**486,332**	**863,866**
Source of Funding					
Subsidy/Other Revenue	4,606	36,494	63,362	74,270	178,732
Development Charges	48,500	35,621	41,887	33,397	159,405
Reserves & Other Internal Sources	4,285	9,000	29,150	37,000	79,435
Contribution from Operating	41,695	30,480	29,380	301,596	403,151
External Debt	3,074	-	-	40,069	43,143
Total	**102,160**	**111,595**	**163,779**	**486,332**	**863,866**
STORM SEWERS					
Capital Program	**16,470**	**13,784**	**12,100**	**94,520**	**136,874**
Source of Funding					
Subsidy/Other Revenue	75	75	75	525	750
Development Charges	4,300	4,530	5,100	28,660	42,590
Reserves & Other Internal Sources	4,680	-	-	-	4,680
Contribution from Operating	7,415	9,179	6,925	63,285	86,804
External Debt	-	-	-	2,050	2,050
Total	**16,470**	**13,784**	**12,100**	**94,520**	**136,874**
TOTAL RATE PROGRAM					
Capital Program	**192,922**	**217,193**	**257,395**	**1,032,707**	**1,700,217**
Source of Funding					
Subsidy/Other Revenue	4,681	36,569	63,437	76,529	181,216
Development Charges	78,793	75,566	67,241	130,774	352,374
Reserves & Other Internal Sources	18,567	9,000	29,150	37,000	93,717
Contribution from Operating	87,807	86,943	86,254	725,548	986,552
External Debt	3,074	9,115	11,313	62,856	86,358
Total	**192,922**	**217,193**	**257,395**	**1,032,707**	**1,700,217**

The chart below provides the sources of capital financing for the 2016 – 2025 forecast period. The growth related infrastructure investment included in the 2016 – 2025 forecast to accommodate for growth is $352.4 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 that DC collections of $60 million each year in 2016 and 2017 will be utilized to fund growth capital in those years, reducing the amount of debt required to fund growth capital.

The 2016 – 2025 Capital Forecast includes $18.3 million in funding from capital work-in-progress (WIP's) in 2016. Capital funding from reserves in years 2016 through 2020 totals $75.2 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 2015 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 ($202.5 million) are forecast beyond the 10 year period (2016 – 2025) in the 2016 Budget.

The total budget for the Wastewater Treatment Plant upgrade and expansion has decreased by $11.8 million in the 2016 budget forecast compared to the 2015 budget forecast, as reflected in the following table. The budget decrease is attributable to a

$20.0 million decrease in the Phase 2 – Plant Expansion component, partially offset by a $8.2 million increase in Phase 1. Also, some of the costs forecast in the 2015 budget for years 2016 and 2017 have been deferred to 2018 - 2021 in the 2016 budget.
The following table provides a comparison of the budgeted costs in the 2015 and 2016 Rate Budgets for the Wastewater Treatment Plant upgrade and expansion.

Woodward Wastewater Treatment Plant Project - Gross Capital Forecasts
($ Millions)

	Total	pre 2016	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	post 2025
2016 Budget													
Phase 1 - Clean Harbour	411.2	61.9	6.5	49.7	94.3	119.5	72.6	6.7	-	-	-	-	-
Phase 2 - Expansion	217.5	-	-	-	-	-	-	-	-	5.0	5.0	5.0	202.5
Total WWTP	628.7	61.9	6.5	49.7	94.3	119.5	72.6	6.7	-	5.0	5.0	5.0	202.5
2015 Budget													
Phase 1 - Clean Harbour	403.0	61.9	16.8	115.4	87.6	98.3	22.8	0.2	-	-	-	-	-
Phase 2 - Expansion	237.5	-	-	-	-	-	-	-	5.0	5.0	5.0	5.0	217.5
Total WWTP	640.5	61.9	16.8	115.4	87.6	98.3	22.8	0.2	5.0	5.0	5.0	5.0	217.5
Increase (Decrease)	(11.8)	-	(10.3)	(65.7)	6.7	21.2	49.8	6.5	(5.0)	-	-	-	(15.0)

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.

The 2016 – 2025 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 Federal governments 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 – 2019.

Projected Water / Wastewater / Storm Debt

The 2016 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 2016 – 2025 has increased by $19.2 million from the 2015 Rate Budget. The DC supported debt financing has increased approximately $31.5 M over the same period, resulting in an overall net increase in debt financing of $50.7 million from what was forecast in the

2015 Rate Budget. The increased reliance on debt is attributable to an increase in the Growth Capital forecast in the 2016 Rate Budget compared to the 2015 Rate Budget of approximately $61.5 million and an increase in the Rate supported Capital forecast of $22.6 million. The increase in Growth Capital is partially offset with a $30 million contribution from DC reserves in 2017 in the 2016 Rate Budget.

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 $298 million in 2020, compared with the 2015 budget forecasted debt peak of $293 million in 2019. The debt funded from DC's is projected to peak at $317 million in 2021, whereas the 2015 forecast was $278 million in 2020. 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 2025. This will allow an opportunity to monitor growth and DC Revenues over the next 10 years (2016 – 2025) and make adjustments to the plant expansion project and associated financing plan to align with growth requirements.

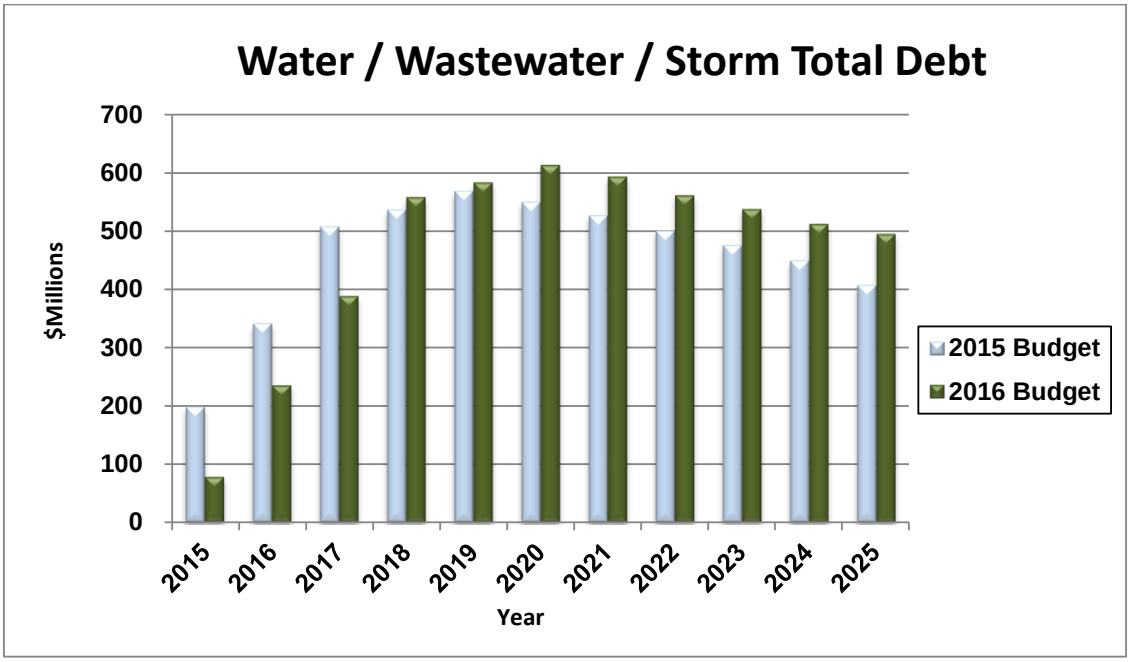
The table below provides the ten year debt forecast compared to the 2015 Budget forecast.

Projected Rate & DC Supported Outstanding Debt
($ Millions)

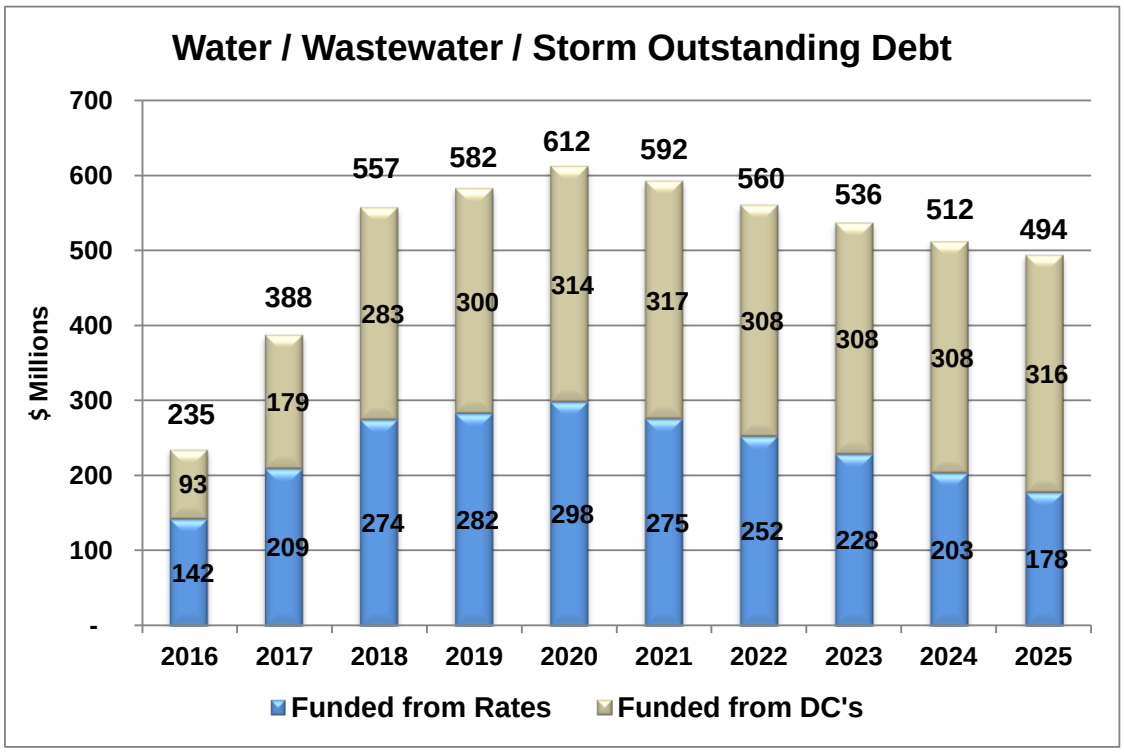
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
2015 Rate Budget											
Funded from Rates	148	208	276	281	293	271	248	225	201	176	150
Funded from DC's	50	133	231	255	275	278	278	275	274	273	257
Total	198	341	507	536	568	549	526	500	475	449	407
2016 Rate Budget											
Funded from Rates	78	142	209	274	282	298	275	252	228	203	178
Funded from DC's	1	93	179	283	300	314	317	308	308	308	316
Total	79	235	388	557	582	612	592	560	536	512	494
Increase (Decrease)	(119)	(106)	(119)	21	14	63	66	60	61	63	87

Consistent with the 2015 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 2016 Rate Capital Budget, versus full commitment based budgeting.

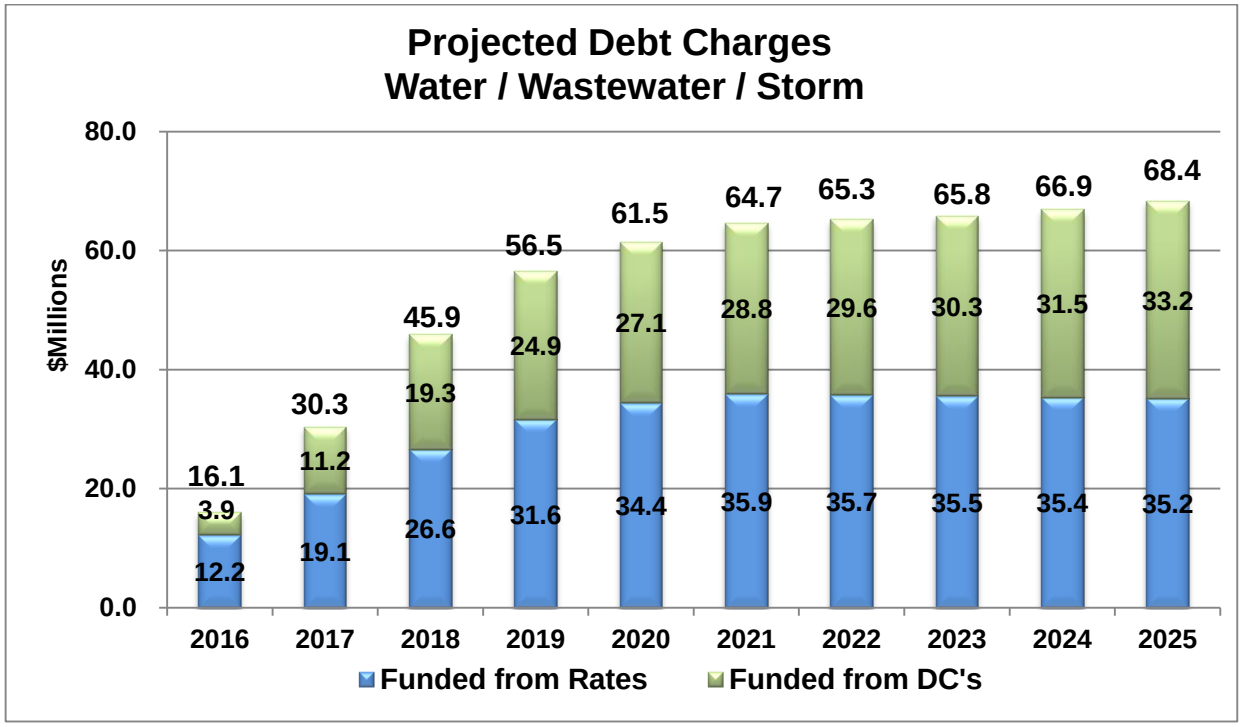
The following graph compares the total outstanding debt (Rate & DC Funded) from the 2015 Budget forecast to the 2016 Budget forecast. The graph illustrates the lower debt requirements in 2016 and 2017, and higher debt levels in 2018 – 2025 from the 2015 forecast for the 10 year period 2016 - 2025.



The following graph illustrates the projected outstanding debt for the 10 year period (2016 – 2025) 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.



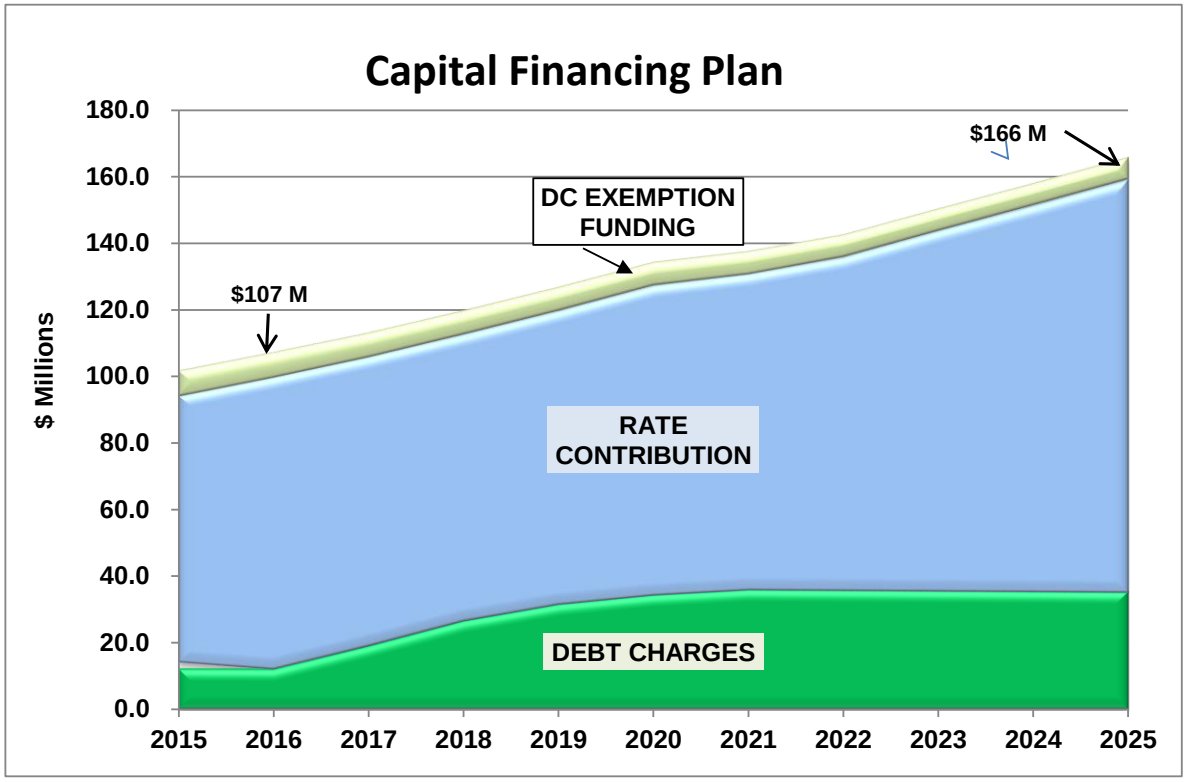
Impact of Capital Budget on Operating Budget

As summarized below, the 2016 Rate Budget incorporates $107.6 million capital financing costs which is an increase of $7.5 million from the 2015 budgeted financing costs. The 2016 budgeted debt charges decrease of $0.136 million, and the $0.11 million decrease in DC Exemption Funding, are offset by an increase in Contribution to Capital of $7.77 million from 2015.

WATER, WASTEWATER & STORM
IMPACT OF CAPITAL ON OPERATING BUDGET
$(000's)

	2015 APPROVED	2016 PROPOSED	CHANGE $	CHANGE %	2016 - 2025 FORECAST
Debt to be Issued	-	3,074	3,074	0.0%	86,358
Debt Charges (Net)	12,320	12,184	(136)	-1.1%	301,583
Contribution to Capital	80,037	87,807	7,770	9.7%	986,552
DC Exemption Funding	7,750	7,640	(110)	-1.4%	69,950
Impact on Operating Budget	100,107	107,631	7,524	7.5%	1,358,085

The following graph highlights the annual requirement required to pay for the Rate Supported Capital program. Capital financing costs are projected to increase from $107 million in 2016 to $166 million in 2025. Rate supported debt charges are expected to increase from 6.3% of total water/wastewater revenues in 2016 to 15% in 2020, and then decline to 12.4% in 2025.



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 2016 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 FCS15073 - Total Combined Water, Wastewater & Storm 1, 3, & 10 Year Operating Budget Forecast

Appendix “B” to Report FCS15073 - Water 1, 3 & 10 Year Operating Budget Forecast

Appendix “C” to Report FCS15073 – Wastewater and Storm 1, 3 & 10 Year Operating Budget Forecast

Appendix “D” to Report FCS15073 - Wastewater 1, 3, & 10 Year Expenditure Forecast

Appendix “E” to Report FCS15073 - Storm 1, 3, & 10 Year Expenditure Forecast

Appendix “F” to Report FCS15073 - Water, Wastewater & Storm 2016 Rate Supported Staff Complement

Appendix “G” to Report FCS15073 - Water, Wastewater & Storm 2016 Proposed User Fees & Charges Rate Supported

Appendix “H” to Report FCS15073 - Water, Wastewater & Storm 2016-2025 Capital Forecast Summary

Appendix “I” to Report FCS15073 - Water, Wastewater & Storm 2016-2025 Capital Financing Plan

Appendix “J” to Report FCS15073 - Water System 2016-2025 Capital Forecast Summary

Appendix “K” to Report FCS15073 - Water System 2016 Capital Project List

Appendix “L” to Report FCS15073 - Water System 2016-2025 Capital Project List

Appendix “M” to Report FCS15073 - Wastewater System 2016-2025 Capital Forecast Summary

Appendix “N” to Report FCS15073 - Wastewater System 2016 Capital Project List

Appendix “O” to Report FCS15073 - Wastewater System 2016-2025 Capital Project List

Appendix “P” to Report FCS15073 - Storm Water Management 2016-2025 Capital Forecast Summary

Appendix “Q” to Report FCS15073 - Storm Water Management 2016 Capital Project List

Appendix “R” to Report FCS15073 - Storm Water Management 2016-2025 Capital Project List

Appendix “S” to Report FCS15073 - 2015 Budget Restatements