



CITY OF HAMILTON
CORPORATE SERVICES DEPARTMENT
Financial Planning, Administration and Policy Division

TO:	Chair and Members General Issues Committee
COMMITTEE DATE:	November 23, 2020
SUBJECT/REPORT NO:	2021 Recommended Water, Wastewater and Stormwater Budget (FCS20073) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	John Savoia (905) 546-2424 Ext. 7298 Tran Trang (905) 546-2424 Ext. 4371
SUBMITTED BY:	Mike Zegarac General Manager, Finance and Corporate Services Corporate Services Department
SIGNATURE:	

RECOMMENDATIONS

- (a) That the metered water consumption charges for average residential properties (meters up to 21mm in size) in the City of Hamilton be imposed at the following rates, effective January 1, 2021:

Monthly Water Consumption (m3)	Rate (\$/m3)
0 – 10	0.85
10 +	1.70

- (b) That the metered water consumption charge for commercial, industrial, institutional and larger residential properties (meters = >25mm in size) in the City of Hamilton be imposed at the rate of \$1.70 per cubic metre, effective January 1, 2021;
- (c) That daily water fixed charges for all properties in the City of Hamilton be imposed at the following rates, effective January 1, 2021:

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Meter Size	Daily Water Rate
15 mm	\$0.38
16 mm	\$0.38
20 mm	\$0.38
21 mm	\$0.38
25 mm	\$0.95
38 mm	\$1.90
50 mm	\$3.04
75 mm	\$6.08
100 mm	\$9.50
150 mm	\$19.00
200 mm	\$30.40
250 mm	\$43.70
300 mm	\$64.60

- (d) That the wastewater / storm treatment charges for average residential properties (meters up to 21mm in size) in the City of Hamilton be imposed at the following rates, effective January 1, 2021:

Monthly Water Consumption (m3)	Rate (\$/m3)
0 – 10	0.91
10 +	1.82

- (e) That the wastewater / storm treatment charge for all commercial, industrial, institutional and larger residential properties (meters = >25mm in size) in the City of Hamilton be imposed at the rate of \$1.82 per cubic metre, effective January 1, 2021;
- (f) That daily wastewater /storm fixed charges for all properties in the City of Hamilton be imposed at the following rates, effective January 1, 2021:

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Meter Size	Daily Wastewater / Storm Rate
15 mm	\$0.42
16 mm	\$0.42
20 mm	\$0.42
21 mm	\$0.42
25 mm	\$1.05
38 mm	\$2.10
50 mm	\$3.36
75 mm	\$6.72
100 mm	\$10.50
150 mm	\$21.00
200 mm	\$33.60
250 mm	\$48.30
300 mm	\$71.40

- (g) That the residential non-metered annual water rate be imposed at the flat rate of \$620.50 per annum, effective January 1, 2021;
- (h) That the residential non-metered annual wastewater / storm rate be imposed at the flat rate of \$664.30 per annum, effective January 1, 2021;
- (i) That the residential combined non-metered annual water and wastewater / storm rate be imposed at the flat rate of \$1,284.80 per annum, effective January 1, 2021;
- (j) That the Private Fire Line rates be imposed at the following rates, effective January 1, 2021:

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Connection Size		Monthly Rate
mm	inches	
25	1	\$3.73
38	1.5	\$8.58
50	2	\$14.92
75	3	\$33.57
100	4	\$59.68
150	6	\$134.28
200	8	\$238.72
250	10	\$238.72
300	12	\$238.72

- (k) That the 2021 Water, Wastewater and Storm Proposed User Fees and Charges be imposed as per Appendix “G” to Report FCS20073, effective January 1, 2021;
- (l) That the 2021 Water, Wastewater and Stormwater Rate Supported Operating Budget in the amount of \$245,554,888 be approved as per Appendix “A” to Report FCS20073;
- (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 2021-2030 Water, Wastewater and Stormwater Rate Supported Operating Budget forecast (Appendix “A” to Report FCS20073) be approved, in principle;
- (n) That the 2021 Water, Wastewater and Stormwater Rate Supported Capital Budget and Financing Plan in the amount of \$299,911,000 be approved as per Appendices “K”, “N”, “Q” and “S” to Report FCS20073;
- (o) That the 2021-2030 Water, Wastewater and Stormwater Rate Supported Capital Budget forecast and financing plan (Appendix “I” to Report FCS20073) be approved, in principle;
- (p) That the City Solicitor be authorized and directed to prepare, for Council approval, all necessary by-laws respecting the 2021 water and wastewater / storm user fees, charges and rates set out in Recommendations (a) through (l) of Report FCS20073;
- (q) That the additional 14.0 Full Time Equivalent Rate Supported Staffing be approved as per Appendix “F” to Report FCS20073;

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- (r) That the General Manager, Finance and Corporate Services, be authorized to and directed to negotiate and confirm the terms, placement and issuance of all debenture issue(s), and / or private placement debenture issue(s), in either a public or private market and / or bank loan agreements and debenture issue(s) and / or variable interest rate bank loan agreements and debenture issue(s), in an amount not to exceed \$117,396,000 Canadian currency as attached in Appendices “K”, “N” and “Q” to Report FCS20073, which includes \$48,000,000 in Rate Supported municipal debt and \$69,396,000 Rate Supported Development Charges municipal debt;
- (s) i) That the General Manager, Finance and Corporate Services, be authorized to engage the services of all required professionals to secure the terms and issuance of the debenture issue(s) described in subsection (s) including, but not limited to, external legal counsel, fiscal agents and Infrastructure Ontario’s Loan Program;
- ii) That the General Manager, Finance and Corporate Services, Mayor and City Clerk are each authorized and directed to enter into and / or execute, on behalf of the City of Hamilton, all agreements and necessary ancillary documents requiring their respective signatures, to secure the terms and issuance of the debenture issue(s) described in subsections (s), and (t), in a form satisfactory to the City Solicitor;
- iii) That the Mayor and City Clerk are authorized and directed to enter into and / or execute, on behalf of the City of Hamilton, all agreements and necessary ancillary documents not requiring any specific signing authority, to secure the terms and issuance of the debenture issue(s) described in subsections (s) and (t), in a form satisfactory to the City Solicitor and with content acceptable to the General Manager, Finance and Corporate Services;
- (t) That all necessary By-Law(s) be passed to authorize the debenture issue(s) negotiated, placed and secured in accordance with subsections (r) and (s).

EXECUTIVE SUMMARY

The 2021 Recommended Water, Wastewater and Stormwater (Rate) Budget is submitted for Council’s consideration. The 2021 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 2021 to 2030, water, wastewater and stormwater capital investment is forecast at \$2.53 B which represents an increase of \$0.04B from last year’s 10-year forecast. This budget continues to focus on growing our economy, environmental stewardship, financial sustainability and effective inter-governmental relations.

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The Rate Capital Budget was prepared in accordance with the City of Hamilton's Strategic Asset Management Policy. The Ministry of Infrastructure filed Ontario Regulation 588/17 – Asset Management Planning for Municipal Infrastructure under Bill 6, *Infrastructure for Jobs and Prosperity Act* ("Act") on December 27, 2017. Regulation 588/17 went into force on January 1, 2018 and applies to all infrastructure assets directly owned by a municipality or consolidated on the municipality's financial statements.

The 2021 Rate Operating expenditures in the 2021 Requested Budget of \$90.7 M reflects an increase of \$3.9 M or 4.5% over than the 2020 budget. The majority of costs are fixed in nature at approximately 90% of total operating costs including employee related costs, property taxes, materials and operating supplies and corporate cost allocations. The remaining costs are variable related to production volumes (heating fuel – natural gas, hydro, fluid and chemicals, biosolids contract).

The 2021 Operating expenditures contains the request for 14 new full-time equivalent (FTE) employees. The net operating cost of the request is approximately \$0.3 M. The FTE requests are largely driven by 3 FTEs required to operate and maintain the Woodward Wastewater Treatment Plant, 4 FTEs requested to support the Substandard Water Service Replacement Program and 2 FTEs to ensure ongoing compliance to meet Storm Water Program standards. For the full FTE request details, please refer to Appendix "F" to Report FCS20073.

Beyond employee related costs there are increases in operating and maintenance expenditures (O&M). Employee related costs are increasing as a result of cost of living adjustments and FTE requests. Increases in O&M expenditures are largely driven by the storm operating and maintenance program to meet compliance standards, as well as, increases in hydro needs related to the new Biosolids Facility. Lastly, the price for fluid and chemicals used to treat water and wastewater at the Plants is increasing versus last year's budgeted price.

Capital financing costs, including reserve transfers in the 2021 Requested Budget of \$155 M, reflect an increase of \$8.6 M over the 2020 Budget. With non-rate revenues of \$2.9 M, rate revenues of \$242.7 M are required to meet operating (program and capital financing) expenditures.

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Table 1 summarizes the budget changes for the 2021 Requested Budget:

Table 1

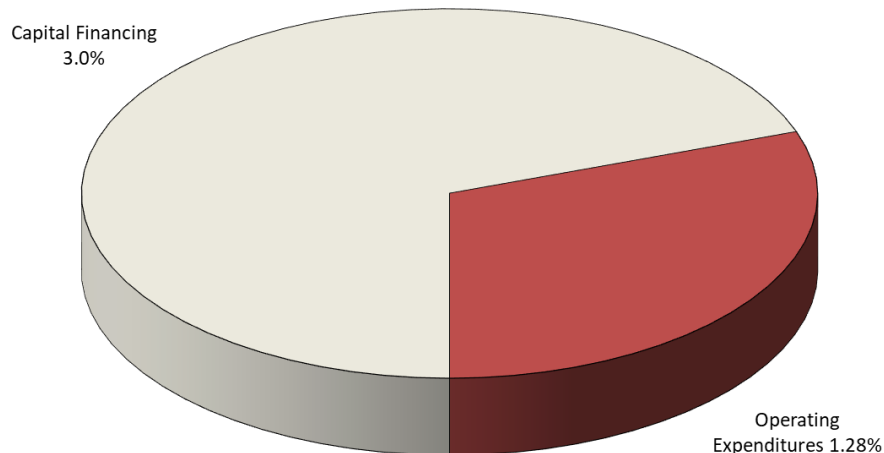
Summary of the 2021 Operating Budget				
(\$ millions)	2020 Restated Budget	2021 Requested Budget	2021 Requested / 2020 Restated Change	
			\$	%
Expenditures				
Program Expenditures	\$ 86.7	\$ 90.7	\$ 3.9	4.5%
Capital/Debt / Reserve Financing	\$ 146.3	\$ 154.9	\$ 8.6	5.9%
Total Expenditures	\$ 233.0	\$ 245.6	\$ 12.5	5.4%
Revenues				
Rate Revenue	\$ 230.0	\$ 242.7	\$ 12.7	5.5%
Non-Rate Revenue	\$ 3.0	\$ 2.9	(\$ 0.2)	(0.1%)
Total Revenue	\$ 233.0	\$ 245.6	\$ 12.5	5.4%
Average Residential Water / Wastewater / Storm Bill	\$ 752.60	\$ 784.80	\$ 32.20	4.28%

Note: Anomalies due to rounding.

Chart 1 highlights that the proposed combined 4.28% rate increase is driven almost entirely by increased capital financing expenditures in 2021.

Chart 1

Drivers of 4.28% Rate Increase



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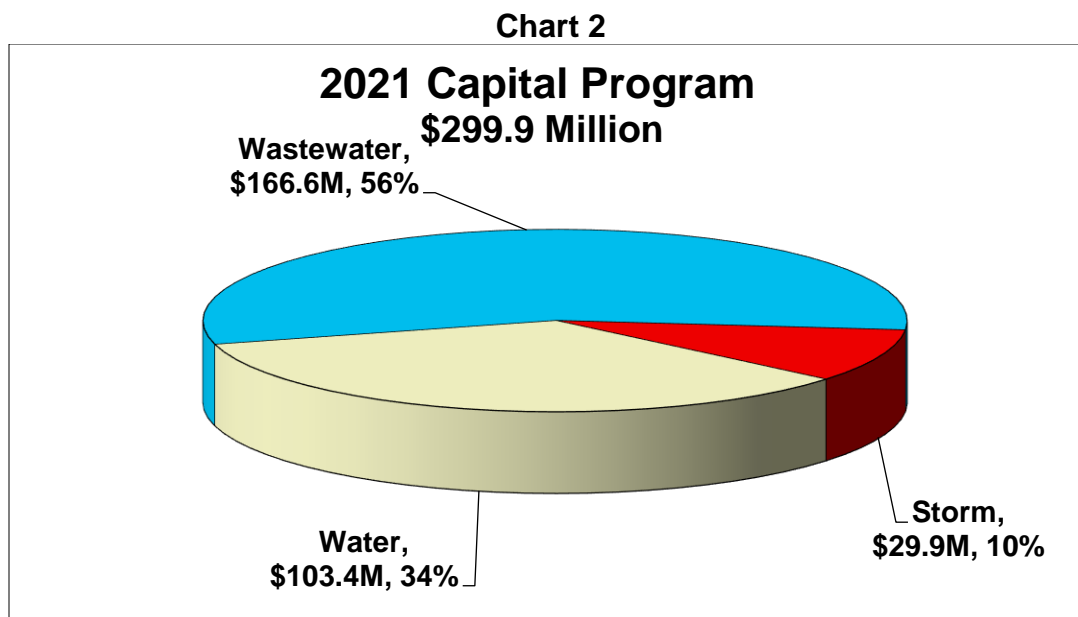
Table 2 identifies the proposed rate increase impact on the average residential customer.

Table 2
Impact of Recommended 2021 Water and Wastewater / Storm Rate Increases on a Typical Residential Bill
(Based on annual water consumption of 200 m³)

2020 Residential Bill	\$752.60
2021 Residential Bill	\$784.80
Recommended Change (\$)	\$32.20
Recommended Change (%)	4.28%

The recommended 2021 Rate Supported Financial Strategy endeavours to achieve a balance between capital investment, rate of growth and rate stability. The 2021 Rate Supported Strategy links the change in demand for water with a staged approach to necessary capital investments at the Woodward Wastewater Treatment Plant (WWTP). The current strategy calls for capital funding in 2021 of approximately \$299.9 M (2020\$) and \$2.53 B (2020\$) for the 2021– 2030 timeframe. The 2021 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.

Chart 2 provides a breakdown of the 2021 Rate Capital Program totalling \$299.9 M, by the three major program areas: Water, Wastewater and Storm.



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Report FCS20073 identifies significant risks related to a variety of conditions which may impact ratepayers and, in combination, may place significant financial pressures on ratepayers. These risk factors detailed in later sections of Report FCS20073 include increased operating and capital investment requirements. Staff pursued a variety of measures to control the impact of the above risks to maintain a safe and reliable service at a reasonable cost.

Alternatives for Consideration – See page 29

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: As per Recommendation (m) of Report FCS20073, approval of the 2021 Water, Wastewater and Stormwater Supported Operating Budget will support operating and capital financing expenditures of \$245,554,888 for 2021.

Staffing: The 2021 Rate Supported staffing complement reflects a requested increase of 14.0 in total FTE headcount as reflected in Appendix “F” to Report FCS20073.

Legal: Recommendation “(t)” of Report FCS20073 relates to By-laws requiring Council approval, respecting the implementation of 2021 water and wastewater user fees and charges set out in the Recommendations (a) through (l) of Report FCS20073.

HISTORICAL BACKGROUND

The 2021 Rate Budget continues to support the priority of investing in infrastructure as evidenced by the 2021 to 2030 forecast investment of approximately \$2.53B in water, wastewater and stormwater capital infrastructure.

Report FCS20073 outlines the various aspects and components that the recommended 2021 Rate Supported strategy incorporates:

- Sustainable Rate Strategy
- Proposed 2021 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. The Rate Reserve Policy has guided staff's recommended use of rate reserves as a funding source in the 2021 - 2030 financing plan.

RELEVANT CONSULTATION

Public Works, Hamilton Water Division, provided operating / capital expenditure and non-rate revenue forecasts as reflected in Report FCS20073.

ANALYSIS AND RATIONALE FOR RECOMMENDATIONS

Appendix "A" to Report FCS20073 summarizes the 2021 operating budget expenditures (program and capital financing) and revenues of \$245.6 M compared to the 2020 restated budget of \$233 M.

The 2021 Operating expenditures in the 2021 Requested Budget of \$90.7 M reflect an increase of \$3.9 M or 4.5% over the 2020 budget. The majority of costs are fixed in nature at approximately 90% of total operating costs including employee related costs, property taxes, materials and operating supplies and corporate cost allocations. The remaining costs are variable related to production volumes (heating fuel – natural gas, hydro, fluid and chemicals, biosolids contract).

The 2021 Operating expenditures contains the request for 14 new full-time equivalent (FTE) employees. The net operating cost of the request is approximately \$0.3 M. The FTE requests are largely driven by 3 FTEs required to operate and maintain the Woodward Wastewater Treatment Plant, 4 FTEs requested to support the Substandard Water Service Replacement Program and 2 FTEs to ensure ongoing compliance to meet Storm Water Program standards. For the full FTE request details, please refer to Appendix "F" to Report FCS20073.

Beyond employee related costs there are increases in operating and maintenance expenditures (O&M). Employee related costs are increasing as a result of cost of living adjustments and FTE requests. Increases in O&M expenditures are largely driven by the storm operating and maintenance program to meet compliance standards, as well as, increases in hydro needs related to the new Biosolids Facility. Lastly, the price for fluid and chemicals used to treat water and wastewater at the Plants is increasing versus last year's budgeted price.

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In preparation of the recommended combined rate increase for 2021 and considering the pandemic's impact on all ratepayers, an assessment of ratepayers' ability to pay current water and wastewater/storm billings during 2020 has been completed. To determine whether customers have been able to pay bills within the normal invoice due dates, staff reviewed the number of arrears notifications Alectra has issued when account arrears remain outstanding 30 days post the invoice due date. Alectra reports this metric within their annual service activity report (for details refer to Report FCS20072). Alectra is estimating that the total number of arrears letters issued by 2020 year-end will be approximately 2,000 fewer than were issued in 2019.

Per the City's Arrears Policy unpaid water and wastewater/storm arrears that remain unpaid 60 days past invoice due date are transferred to the property's tax roll. Alectra is forecasting there will be about 650 fewer tax roll arrears transfers in 2020 than in 2019. The dollar value transferred will be approximately \$400 K lower than the \$4.2 M transferred in 2019. Furthermore, the number of deferred payment arrangements is down significantly in 2020 versus 2019 – there are approximately 50% fewer active payment arrangements currently versus at the end of 2019. Optional payment arrangements typically arise at the request of customers who are having trouble in paying water and wastewater / storm bills.

Hamilton's relatively low water and wastewater/storm rates combined with the income support programs provided by the senior governments throughout the pandemic, has resulted in no significant changes with respect to ratepayers' ability to pay current water bills despite the ongoing impact of the pandemic.

As outlined in the Executive Summary section of Report FCS20073, the proposed rate impact for the average residential water, wastewater and storm annual bill would be \$32.20 (4.28%).

Water and wastewater service user fees have been reviewed in accordance with the User Service Fee and Charges Policy which require 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 are unchanged with full cost recovery currently being achieved with others undergoing varying fee increases to achieve full cost recovery.

The impact of the 2021 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 Table 3.

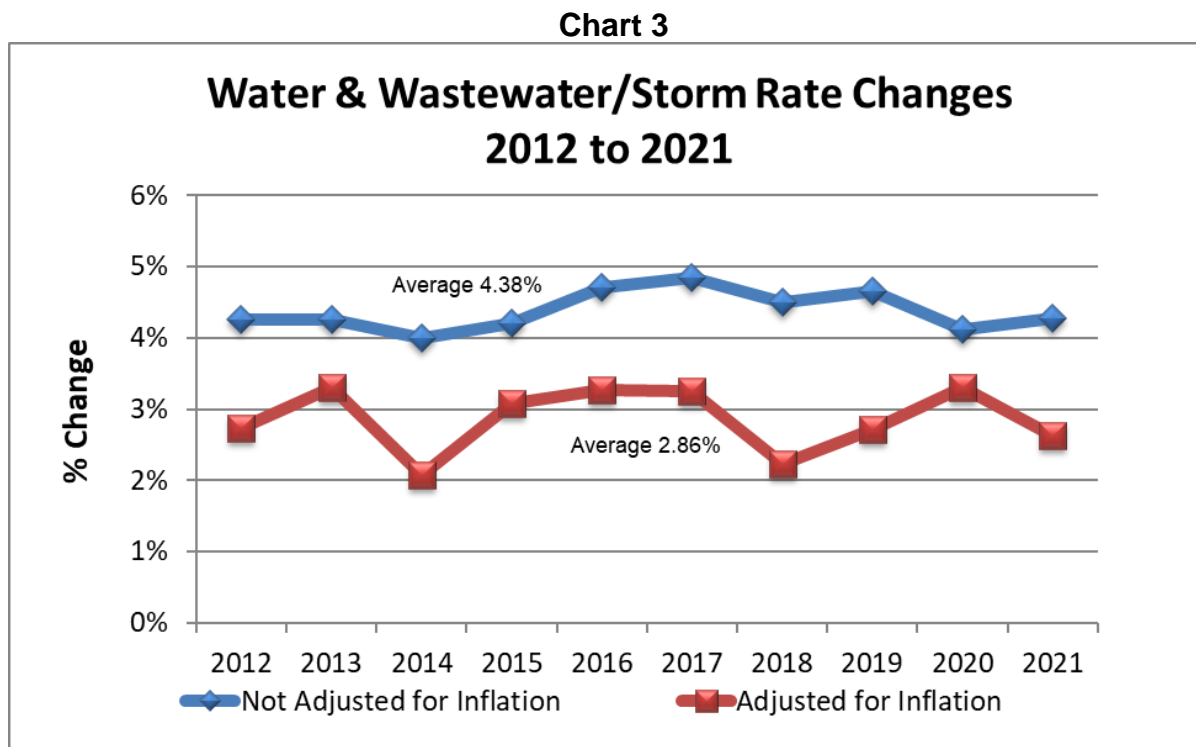
**Table 3
Impact of Recommended Rate Increases on
Water and Wastewater / Storm Rates**

	2020	2021	Increase
Water Fixed Charge (daily)¹	\$0.37	\$0.38	\$0.01
Consumption Charge Block 1 (0-10 cubic metres / month)	\$0.83	\$0.85	\$0.02
Consumption Charge Block 2 (>10 cubic metres / month)	\$1.64	\$1.70	\$0.06
Wastewater / Storm Fixed Charge (daily)¹	\$0.39	\$0.42	\$0.03
Treatment Charge Block 1 (0-10 cubic metres / month)	\$0.88	\$0.91	\$0.03
Treatment Charge Block 2 (>10 cubic metres / month)	\$1.75	\$1.82	\$0.07

¹ Rate for a 15-21 mm meter which are installed in most residential homes.

Trends in Combined Rate Changes 2012-2021

Hamilton’s overall average annual combined water and wastewater / storm rate increase is 4.38% before adjusting for inflation during the 10-year period from 2012 to 2021. Accounting for inflation results in the overall average, the annual rate increase over the same period would be 2.86%. Chart 3 shows the trend in Hamilton’s combined water and wastewater / storm rates for the period 2012 to 2021.



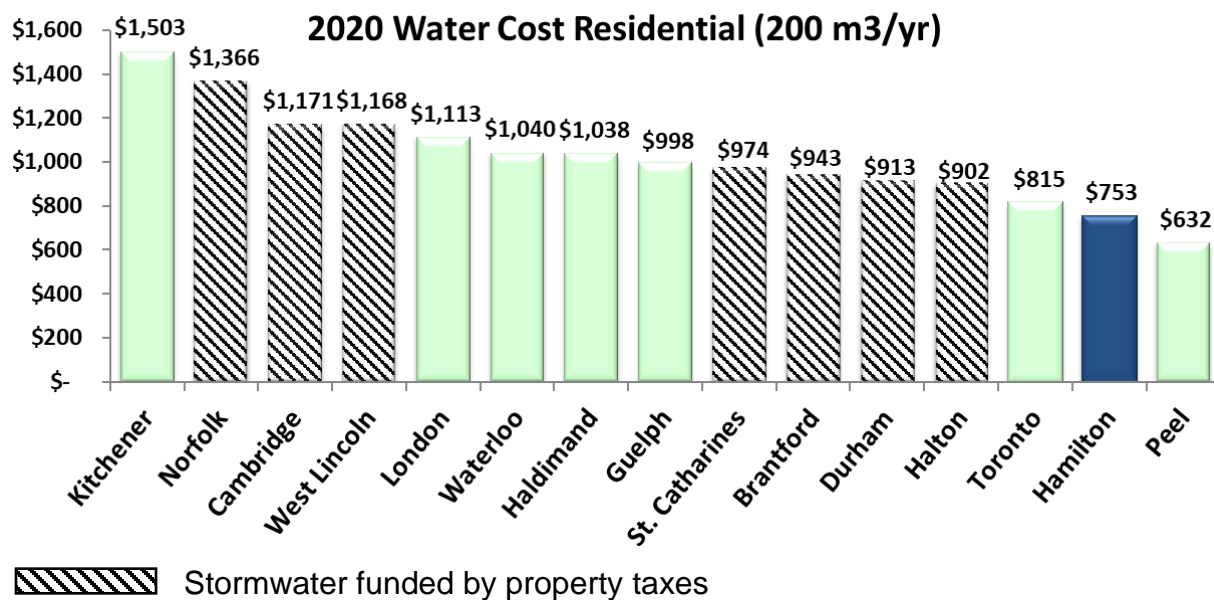
Comparative Rates

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 have averaged 4.38% before adjusting for inflation.

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, reflects the fact that, like Hamilton, other municipalities are addressing many of the same investment requirements as previously identified.

Hamilton’s residential annual water and wastewater / storm bill continues to be the second lowest within its local municipal comparator group. Though Hamilton largely funds its stormwater management program through its wastewater / storm fee, it still has been able to maintain competitive rates as reflected in Chart 4.

Chart 4

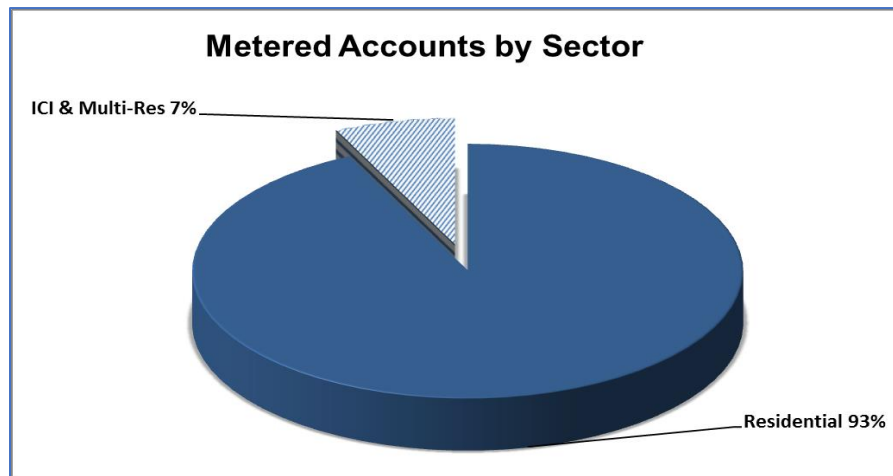


CONSUMPTION AND RATE-GENERATED REVENUES

Metered Water Consumption

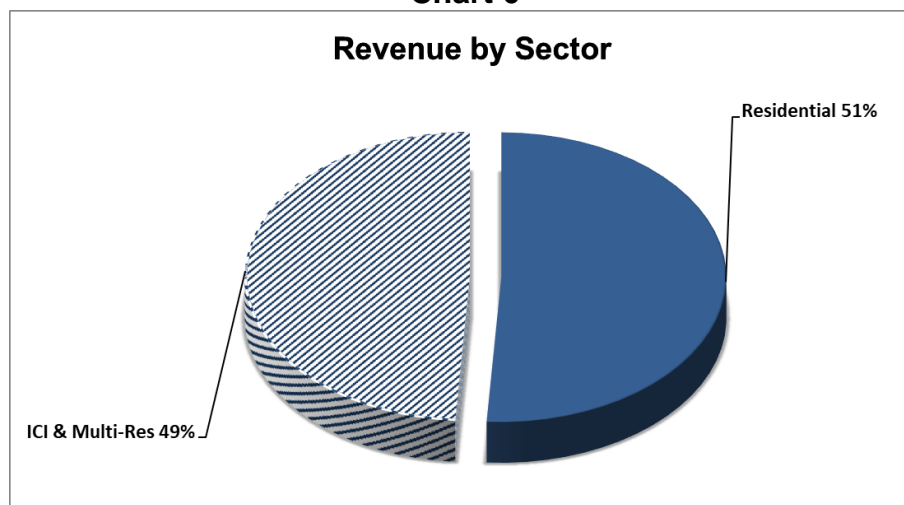
Currently, the City of Hamilton has over 154,000 metered water accounts (see Chart 5). Residential users account for 93% of total metered accounts and approximately 51% of total water consumption. While industrial, commercial, institutional and multi-residential accounts only make up 7% of total metered accounts, Industrial Commercial Institutional (ICI) and multi-residential (multi-res) water consumption accounts for 49% of total consumption (see Chart 6).

Chart 5



Revenues associated with consumption represents approximately 94% of the total budgeted Rate revenues of \$229.0 M for 2021.

Chart 6



Total Consumption – 2021 Budget \$229.0 M

Since 2016, Hamilton’s total metered annual water consumption (see Chart 7) has remained at approximately 56-59 million cubic metres. The 2020 projected total consumption is just over 58 million cubic metres. The 2021 Budget is approximately 0.2% above the consumption in the 2020 Budget and 2020 Forecast.

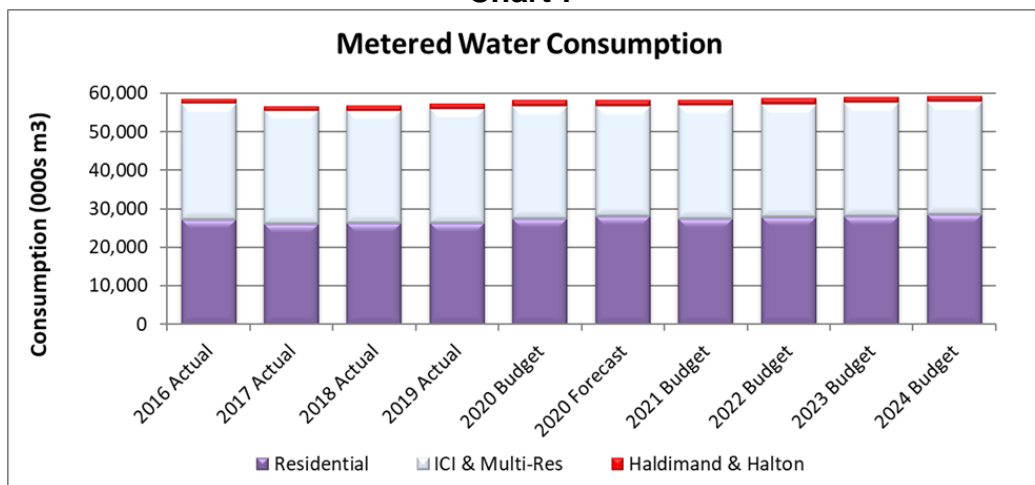
Total water consumption forecast over the 10-year period (2021 to 2030) reflects relatively flat consumption demand. This relatively conservative forecast reflects the following:

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- Continued uncertainty surrounding growth / decline of consumption
- Conservation impacts:
 - residential toilet consumption = 35% of indoor consumption
 - newer high-efficiency toilets and washers

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

Chart 7

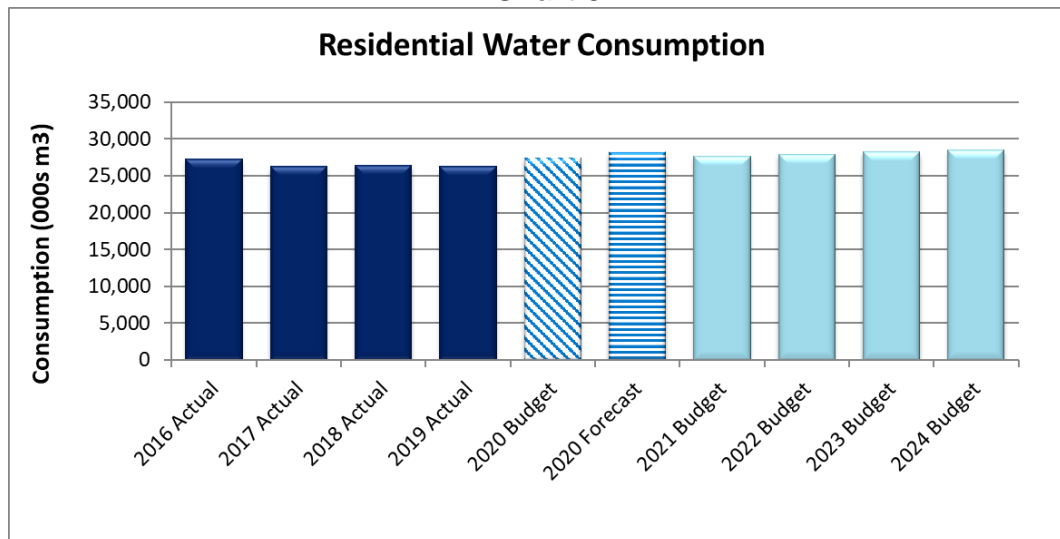


Residential Consumption - 2021 Budget \$107.7 M

Since 2016, residential consumption (see Chart 8) has remained relatively unchanged reflecting an observation that the growth of new customers' consumption has been offset by reduced consumption of existing customers' ongoing conservation efforts associated with fixture / appliance obsolescence such as the installation of water efficient toilets and washer machines. For 2021, staff is recommending that the forecast for average residential consumption remain at 200 m3 to reflect the past several years of consumption.

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 associated regulations. For example, in 2012, the Ontario Building Code changed requirements related to the installation of high-efficiency toilets (4.8L) and expanding the end uses of rainwater and other non-potable water.

Chart 8



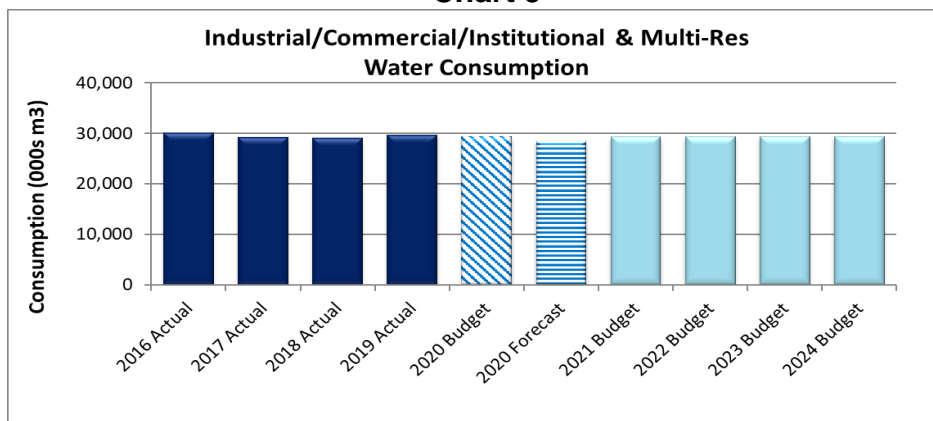
Industrial / Commercial / Institutional and Multi-Res Consumption – 2021 Budget \$118.4 M

Despite continuing growth, particularly in the multi-residential sector, there continues to be ongoing conservation efforts that offset any demand growth associated with new customers. Many larger multi-residential customers are implementing water conservation projects. For example, CityHousing Hamilton completed the installation of over 3,000 ultra-high efficiency 3.0 L toilets which yields annual savings of over \$450 K.

In sharp contrast to many neighbouring communities, Hamilton is unique in that significant portion of consumption and, in turn, revenues come from industrial and institutional customers. The top users of the ICI / Multi-res sector representing some 40 customers account for nearly a quarter of total consumption. This reliance on a relatively small number of large water users does pose a risk to revenue stability when these customers undertake water conservation projects or experience business failure.

As reflected in Chart 9, water consumption demand is forecast to remain relatively flat for the ICI / Multi-res sector.

Chart 9



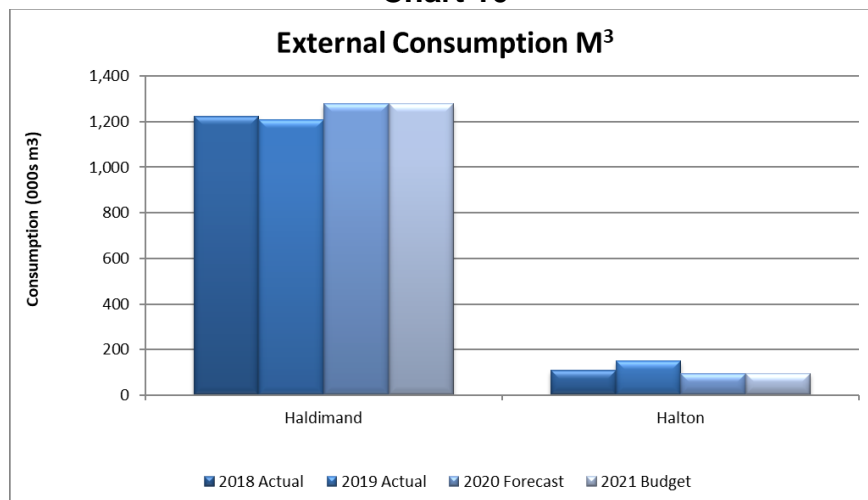
External Consumption – 2021 Budget \$2.9 M

Under long-term arrangements, Hamilton supplies Haldimand County and Halton Region potable water (see Chart 10) but does not provide wastewater / storm services to either community.

A renewed water supply agreement with Haldimand was executed in 2014 for an initial 20-year period with Hamilton supplying water to the communities of Caledonia and Cayuga. There has been some growth over the past few years with new housing developments in Caledonia.

The current water supply agreement for Halton was executed in 2011 for an initial ten-year period with Hamilton supplying water to the Aldershot and Snake Road communities. In September 2019, a renewal agreement was executed that will conclude on November 16, 2031.

Chart 10



OTHER REVENUE HIGHLIGHTS

Sewer Discharge Permits – 2021 Budget \$9.4 M

Surcharge Discharge Permits allow the City of Hamilton a mechanism to recover costs associated with:

- the costs of conveyance, treatment and monitoring of sewage that exceeds by-law limits for treatable parameters (Overstrength Discharge)
- the costs of conveyance, treatment and monitoring of sewage that was not originally purchased by the customer from the City's potable water supply (Sewer Surcharge)

Permits, General Fees and other Recoveries – 2021 Budget \$2.4 M

Service fees may be charged with the issuance of a permit or alternatively charged on the customer's water bill. Appendix "G" to Report FCS20073 provides details of the user fees charges that are applicable for various water / wastewater related services provided on an individual basis to customers such as new meter installations, water service turn on or off, laboratory services, etc.

Private Fire Lines – 2021 Budget \$1.9 M

The Private Fire Protection Charge applies to customers that have private fire protection systems which rely upon the public water system for their water supply via an unmetered fire water service line.

2021–2030 Rate Capital Budget

Table 4 summarizes the \$2.53 B capital program and the financing requirements for the 2021–2030 water, wastewater and storm capital budget. Of this amount, \$1.106 B (44%) is for water, \$1.090 B (43%) is for wastewater, and \$0.332 B (13%) is for the storm program. A total of \$789 M or 30% of the 10-year capital program is required in the first three years (2021–2023). Significant projects include the Woodward Wastewater Treatment Plant (WWTP) Upgrade, Airport Lands Trunk Sewer and Battlefield Trunk Sewer Twinning.

The capital program also includes \$674 M for growth infrastructure related to Growth Related Integrated Development Strategy (GRIDS) which will be funded from Development Charges, except for \$90 M in Development Charge (DC) 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. Funding of DC exemptions reduces the amount of dollar for dollar funding the City can invest in infrastructure.

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**Table 4
SOURCE OF CAPITAL FINANCING
2021 to 2030 RATE PROGRAM CAPITAL BUDGET
\$(000'S)**

	2021	2022	2023	2024	2025 to 2030	2021 to 2030
WATER						
Capital Program	103,408	121,980	128,281	103,993	647,809	1,105,471
Source of Funding						
Subsidy/Other Revenue	1,681	-	-	-	30	1,711
Development Charges	24,914	31,906	49,647	26,817	113,744	247,028
Reserves & Other Internal Sources	7,015	10,640	10,740	640	3,840	32,875
Contribution from Operating	50,498	62,234	67,894	68,136	516,095	764,857
External Debt	19,300	17,200	-	8,400	14,100	59,000
Total	103,408	121,980	128,281	103,993	647,809	1,105,471
WASTEWATER						
Capital Program	166,628	115,866	69,175	57,795	681,261	1,090,725
Source of Funding						
Subsidy/Other Revenue	22,092	-	-	-	-	22,092
Development Charges	43,863	30,642	14,802	3,817	287,880	381,004
Reserves & Other Internal Sources	14,735	11,000	10,500	10,000	-	46,235
Contribution from Operating	57,238	46,724	42,673	43,978	392,181	582,794
External Debt	28,700	27,500	1,200	-	1,200	58,600
Total	166,628	115,866	69,175	57,795	681,261	1,090,725
STORM SEWERS						
Capital Program	29,875	26,805	27,250	34,385	213,140	331,455
Source of Funding						
Subsidy/Other Revenue	473	75	75	75	450	1,148
Development Charges	8,185	4,000	4,000	4,920	24,920	46,025
Reserves & Other Internal Sources	3,584	3,646	-	-	-	7,230
Contribution from Operating	17,633	19,084	23,175	29,390	186,570	275,852
External Debt	-	-	-	-	1,200	1,200
Total	29,875	26,805	27,250	34,385	213,140	331,455
TOTAL RATE PROGRAM						
Capital Program	299,911	264,651	224,706	196,173	1,542,211	2,527,652
Source of Funding						
Subsidy/Other Revenue	24,246	75	75	75	480	24,951
Development Charges	76,962	66,548	68,449	35,554	426,544	674,057
Reserves & Other Internal Sources	25,334	25,286	21,240	10,640	3,840	86,340
Contribution from Operating	125,369	128,042	133,742	141,504	1,094,847	1,623,504
External Debt	48,000	44,700	1,200	8,400	16,500	118,800
Total	299,911	264,651	224,706	196,173	1,542,211	2,527,652

Chart 11 illustrates the \$2.53 B capital program for the 2021–2030 water, wastewater and storm capital budget.

OUR Vision: To be the best place to raise a child and age successfully.
 OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.
 OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

Chart 11

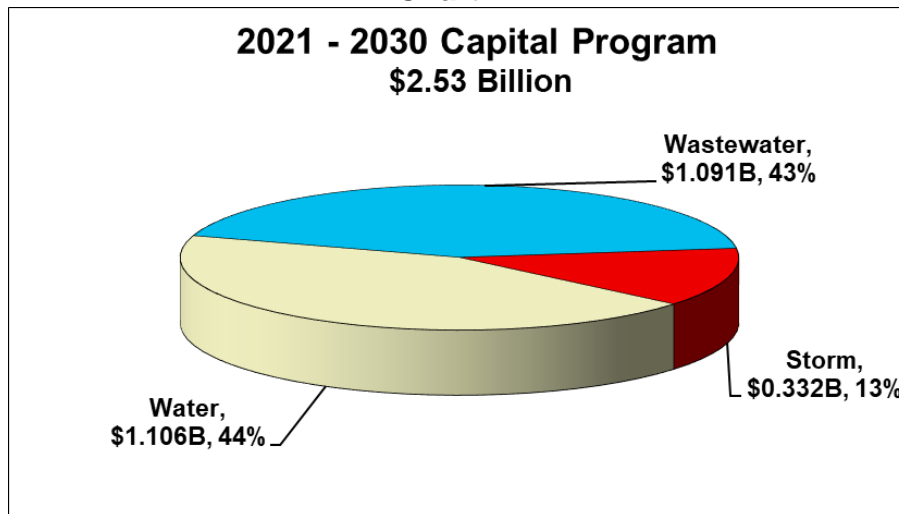
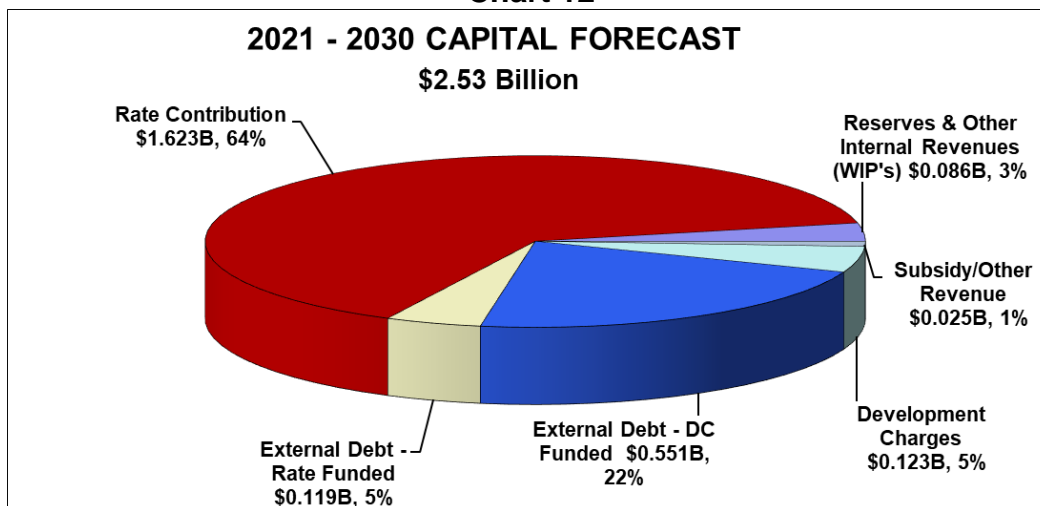


Chart 12 provides the sources of capital financing for the 2021–2030 forecast period. The growth-related infrastructure investment included in the 2021–2030 forecast to accommodate for growth is \$674 M, including \$551 M from DC funded external debt and \$123 M from development charges. Debt charges associated with DC funded debt will be recovered from development charges over the terms of issuance.

The 2021–2030 Capital Forecast includes \$10.1 M in funding from capital work-in-progress (WIP's). The Financing Plan for the 2021-2030 water, wastewater and storm capital program requires a net draw from reserves of \$70.3M, helping to mitigate reliance on rate supported debt for the delivery of capital works.

Chart 12



OUR Vision: To be the best place to raise a child and age successfully.

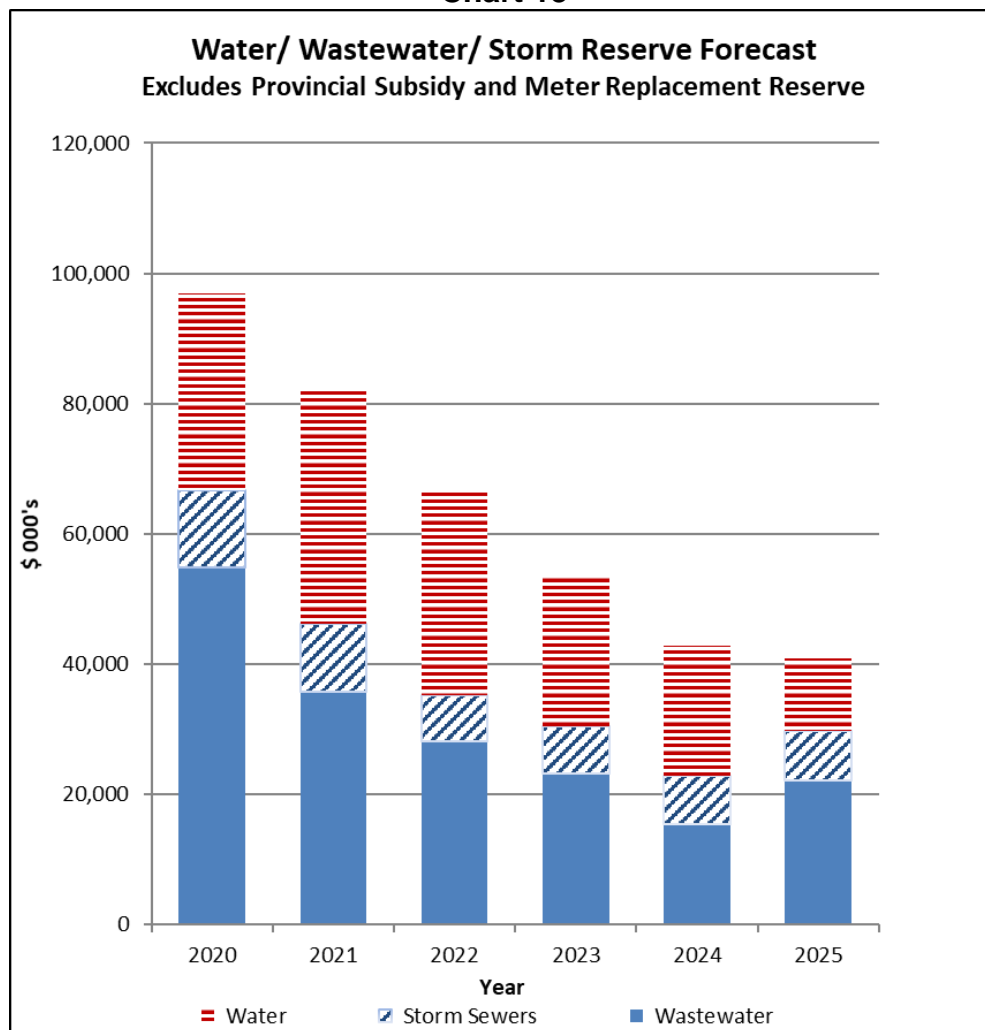
OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

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Rate Reserves

Chart 13 provides the projected reserve balances for the Water, Wastewater and Storm programs. The 2021 Budget Forecast reflects utilizing \$12.2 M in reserve funds to fund the WWTP project and \$0.6 M for the Water Program. It should be noted, the reserve forecast below does not include the Provincial Wastewater Improvement Subsidy Reserve (\$100 M Provincial subsidy dedicated for the WWTP Clean Harbour project) or the Meter Replacement Reserve.

Chart 13



Reserves are essential to assist the City in mitigating unanticipated events such as consumption fluctuations, unforeseen increase in capital costs and potentially to provide rate stability or to decrease future debt needs. The current Financial Plan leverages the available capacity in the water, wastewater and storm reserves and draws down the reserves to their minimum required balances over the next few years.

The combined reserve balance will decrease from \$97 M at the end of 2020 to \$40 M in 2025 and then stabilize over the remaining years in the 2026 to 2030 forecast under today's capital project forecasts. The decrease in reserves coincides with construction of the Clean Harbour Projects at the WWTP plant of which the City is funding over \$60 M from the Wastewater Reserve from 2018 to 2021. All three system Reserves are within the target balances relative to the Rate Reserve Policy approved by Council in June 2016.

Woodward Wastewater Treatment Upgrade and Expansion Project

The implementation plan for the Upgrade and Expansion of the WWTP is consistent with the 2020 Rate Budget, in that the plant improvements are forecast using a phased approach. Phase One is for effluent quality improvements and Phase Two is for expansion of the treatment plant to accommodate growth. The full \$296 M of the total growth component related to Phase Two is in the 2021-2030 Financing Plan. Construction for Phase Two related to expansion is proposed to start in 2026 and be completed in 2028.

The total budget for the Wastewater Treatment Plant upgrade and expansion has not changed in the 2021 budget forecast compared to the 2020 budget forecast. Table 5 provides a summary.

The WWTP expansion project implementation plan has remained unchanged when compared to the 2020 forecast. It is scheduled to begin construction in 2026 with 100% of the cost funded by development charge debt. The levels of debt supported by development charges represent a significant risk if future growth does not materialize as planned. Staff will continue to monitor growth forecasts and DC Revenues over the next four years (2021 – 2024) and adjust the plant expansion project and associated financing plan to align with growth requirements. Staff in both Corporate Services (Finance) and Public Works will closely monitor the need for plant expansion, as well as, the forecasted DC Revenue streams needed to pay for such an expansion to mitigate the risk to the ratepayer.

Table 5

Woodward Wastewater Treatment Plant Project - Gross Capital Forecasts												
(\$ Millions)												
		pre										
	Total	2021	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2021 Budget												
Phase 1 - Clean Harbour	412.0	317.4	69.4	25.2								-
Phase 2 - Expansion	296.4	3.3	1.8	2.5	2.5	3.1	3.1	94.3	92.9	92.9		-
Total WWTP	708.4	320.7	71.2	27.7	2.5	3.1	3.1	94.3	92.9	92.9	-	-

Provincial / Federal Subsidy Programs

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

The 2021–2030 Rate Capital Financing Plan incorporates both the Federal and Provincial Subsidies to fund the Clean Harbour project. Of the \$200 M of the Provincial and Federal funding, \$178.1 M has been committed as a funding source in previous years’ budgets, leaving \$21.9 M in funding for the Clean Harbour project to be applied in 2021.

In May 2017, the City received approval for 16 projects funded under the Clean Water and Wastewater Fund (CWWF). The CWWF provided communities with vital infrastructure funding to help accelerate short-term investments to support the rehabilitation and modernization of drinking water, wastewater and stormwater infrastructure and the planning and design of future facilities and upgrades to existing systems. The federal and provincial governments provided a maximum of 50% and 25%, respectively, toward the total eligible costs of projects totalling \$43,890,763.

The City received a total CWWF government funding allocation of \$32,918,072 with the City share amounting to \$10,972,691. The CWWF Program project substantial completion timeline has been further extended to September 30, 2021 from an initial extension of March 31, 2020. The original deadline was March 2018.

On April 4, 2019, Infrastructure Canada announced the approval of the \$1.05 M Combined Sewer Overflow Backflow Prevention Project with 40% federal funding of \$420 K from the Disaster Mitigation and Adaptation Fund (DMAF) and the City to fund \$630 K (refer to Report FCS19038). This project to install back-flow devices at four Combined Sewer Overflow (CSO) outlets is to be completed between 2020 to 2025.

In March 2018, the Federal government with the Ontario government announced the signing of a bilateral agreement that will provide more than \$11.8 B through the Investing in Canada Plan. The Investing in Canada Infrastructure Fund Program (ICIP) is a Federal infrastructure program designed to create long-term economic growth, build inclusive, sustainable and resilient communities and support a low-carbon economy.

There are a number of funding streams to be delivered nationally over the next number of years including \$2.3 B for Green Infrastructure for Ontario. Among the green infrastructure objectives is to ensure communities can provide safe drinking water for their citizens. The 2021–2030 Rate Capital Financing Plan makes no assumptions as to potential funding the City may receive under a future green infrastructure intake.

Addressing Climate Change

In March 2019, Council approved a declaration that “a climate emergency exists that threatens the city, region, province, nation, civilization, humanity and the natural world.”

Prior to the climate change announcement, the Hamilton Water Division had identified approximately \$380M of projects that contribute in a positive way to fighting climate change. In addition, as part of the 2021–2030 Rate Capital Plan, Hamilton Water is requesting approval of projects totaling approximately \$294M that aim to address energy efficiencies and mitigate flooding risks. This brings the total investment in climate change projects to \$674M and includes major projects and studies such as the Greenhill and Summercrest Water Pumping Station Ultimate Upgrades of \$60M and the Flooding and Drainage Master Plan Wastewater and Storm System study budgeted at \$92M.

Projected Water / Wastewater / Storm Debt

The 2021 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 forecast period. The forecasted rate supported debt financing for the 10-year period 2021–2030 has not changed from the 2020 Rate Budget.

The forecasted DC supported debt financing has increased by approximately \$18.1 M over the same period, resulting in an overall net increase in forecasted debt financing of \$18.1 M from the forecast in the 2020 Rate Budget. The increase in reliance on DC supported debt is attributable to the increased cost estimate of the Greenhill Pumping Station. The Growth Capital is partially offset with a \$15 M contribution from DC reserves in the 2021 Rate Budget.

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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 \$288 M in 2024, compared with the 2020 budget forecasted debt peak of \$297 M in 2023. The debt funded from DC's is projected to peak at \$641 M in 2028, whereas the 2020 budget was \$564 M in 2028.

Table 6 provides the multi-year debt forecast compared to the 2020 Budget forecast.

Table 6

Projected Rate & DC Supported Outstanding Debt											
(\$ Millions)											
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
2020 Rate Budget											
Funded from Rates	177	237	291	297	280	266	240	216	191	165	140
Funded from DC's	85	176	235	259	261	286	396	494	564	539	512
Total	262	413	526	556	541	552	636	710	755	704	652
2021 Rate Budget											
Funded from Rates	132	199	258	271	288	273	246	220	194	167	143
Funded from DC's	4	115	227	338	402	403	493	578	641	609	575
Total	136	314	485	609	690	676	739	798	835	776	718
Increase (Decrease)	(126)	(99)	(41)	53	149	124	103	88	80	72	66

Consistent with the 2020 Rate Budget and 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 2021 Rate Capital Budget, versus full commitment-based budgeting.

Chart 14 compares the total outstanding debt (Rate and DC Funded) from the 2020 Budget forecast to the 2021 Budget forecast. The graph illustrates the lower debt requirements for 2020-2022 when compared to the prior year budget forecast. The decrease in debt is due to deferral of major capital growth projects such as the Water Treatment Plant, as well as, funding dollar for dollar growth projects from DC Reserves. The higher debt levels in the later years can be attributed to the timeline of the Wastewater Treatment Plant expansion project which is to be 100% DC debt funded.

Chart 14

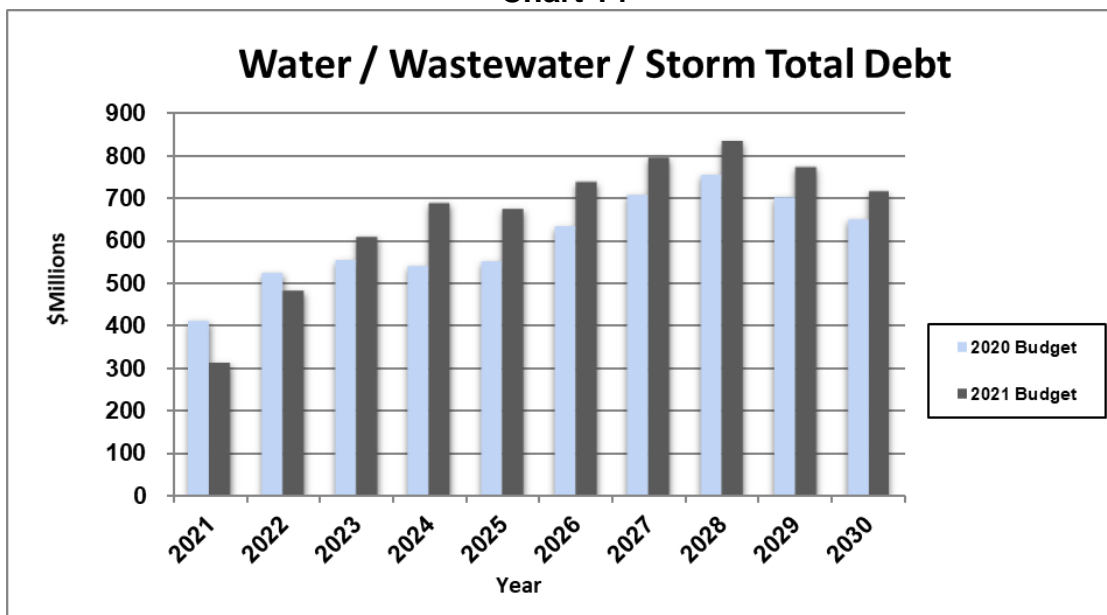


Chart 15 illustrates the projected outstanding debt for the 10-year period (2021–2030) and the funding source of the associated debt charges.

Chart 15

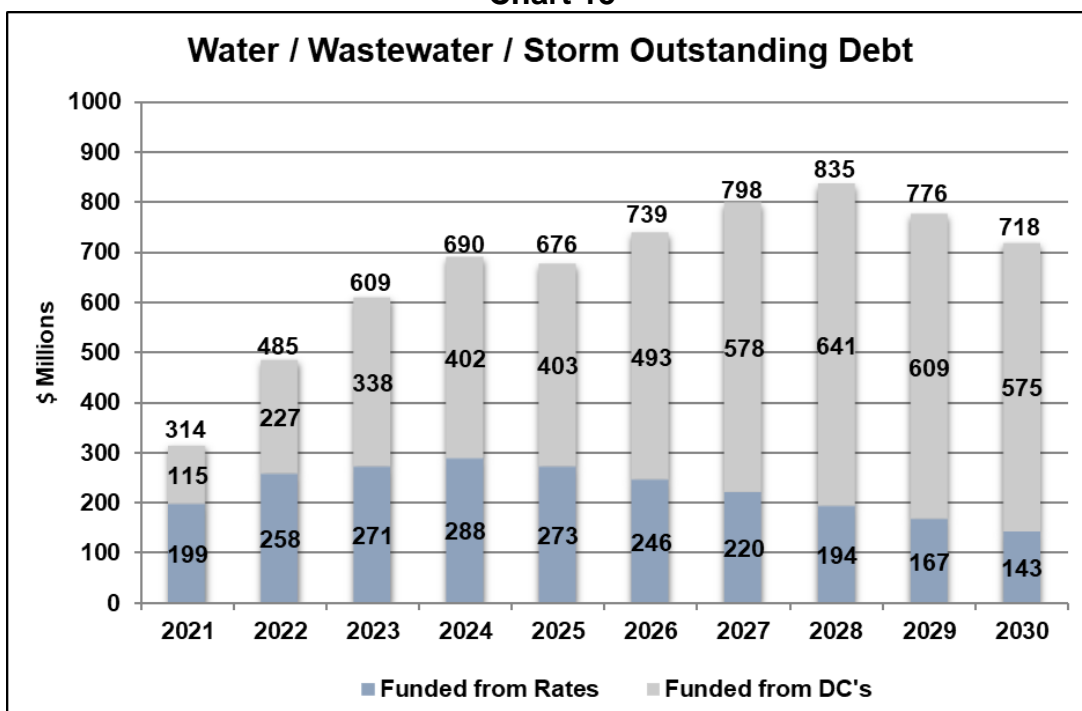
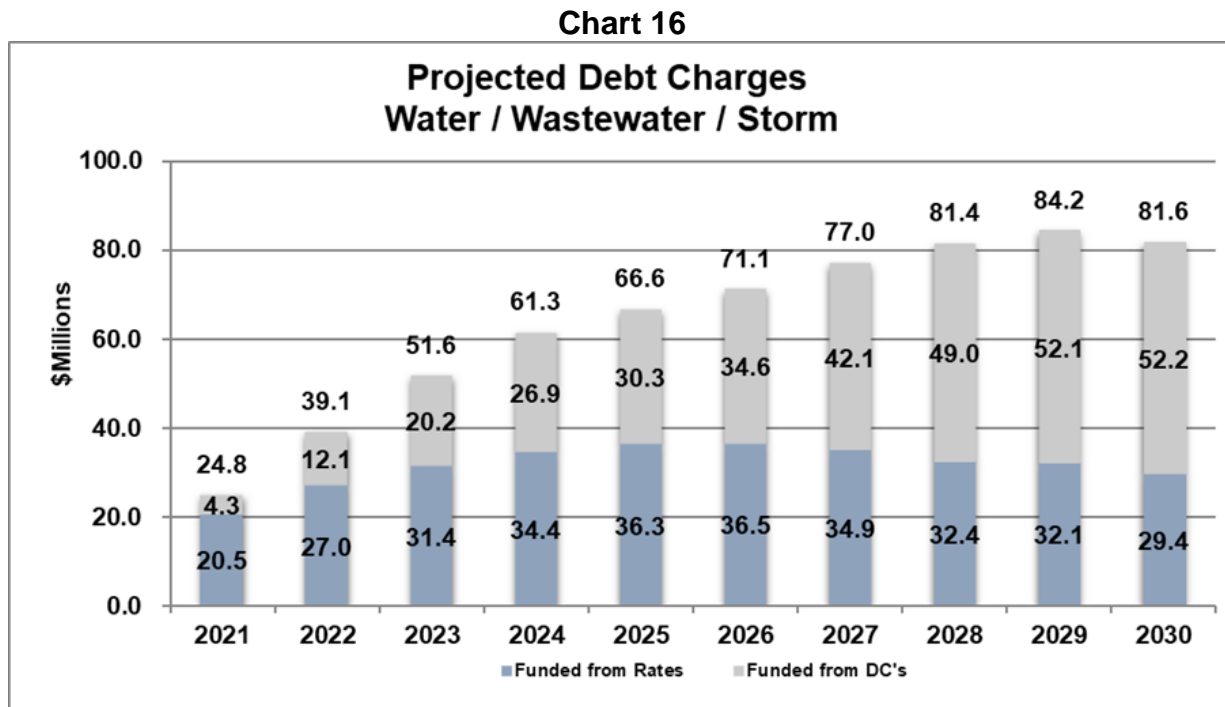


Chart 16 shows the forecasted debt charges funded by water / sewer rates and by Development Charges. In the upcoming years, staff in Corporate Services and in conjunction with staff in Public Works will monitor the forecasted DC Debt charges in comparison to DC Revenue, to mitigate potential risks to the rate payer. Much of this risk lies with the implementation plan of the WWTP expansion project, currently forecasted for construction in years 2026-2028.



Impact of Capital Budget on Operating Budget

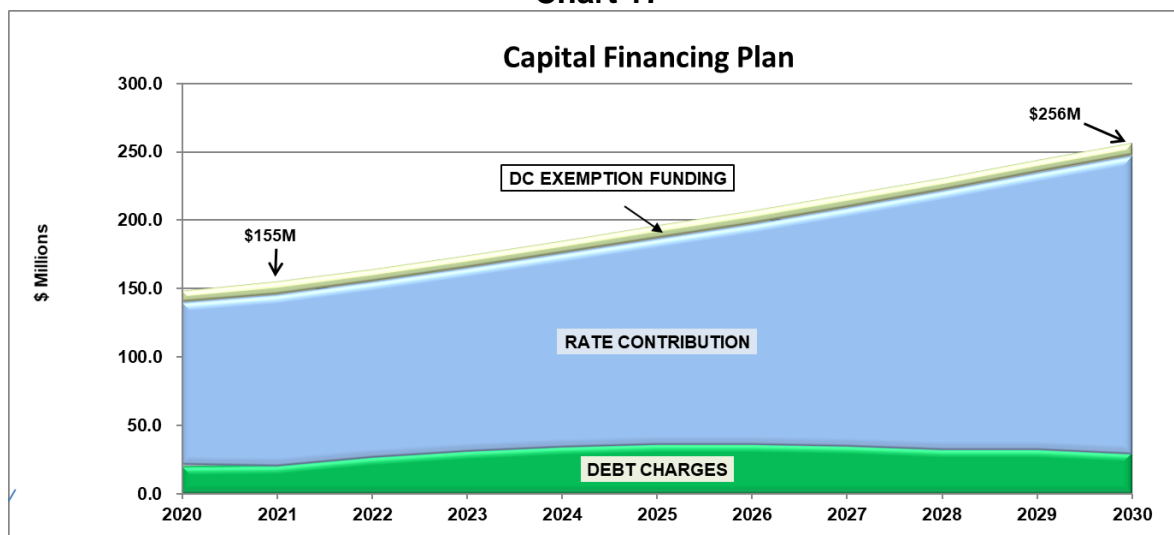
As summarized in Table 7, the 2021 Rate Budget incorporates \$155.0 M capital financing costs which is an increase of \$8.6 M from the 2020 Rate budget. The 2021 budgeted debt charges increase by \$0.9 M, while contribution to capital increased by \$6.7 M when compared to the 2020 budget. DC exemption funding increased by \$1.0 M. The increase in contribution to capital is a result of directing the majority of rate increases to capital investment, as well as, adjustments to the operating budget, freeing up capital investment capacity.

Table 7

WATER, WASTEWATER & STORM IMPACT OF CAPITAL ON OPERATING BUDGET (000's)					
	2020	2021	CHANGE		2021 - 2030
	APPROVED	PROPOSED	\$	%	FORECAST
Debt to be Issued	16,900	48,000	31,100	184.0%	118,800
Debt Charges (Net of DCs)	19,682	20,534	852	4.3%	314,905
Contribution to Capital	118,654	125,369	6,715	5.7%	1,623,504
DC Exemption Funding	8,000	9,000	1,000	12.5%	90,000
Impact on Operating Budget	126,170	154,903	8,567	6.8%	2,028,409

Chart 17 highlights the impact on the operating budget from the Rate Supported Capital program. These impacts are projected to increase from \$155 M in 2021 to \$256 M in 2030. Rate supported debt charges are expected to increase from 8.4% of total revenues in 2021 to 12.4% in 2025 and then decline to 8.1% in 2030.

Chart 17



Debt Management

According to Ontario Regulation 403/02, Council shall, before giving authorization for capital work that would require a long-term debt or financial obligation, have the City Treasurer calculate an updated Annual Repayment Limit (ARL) using the most recent Annual Repayment Limit determined by the Ministry. The most recent ARL, determined and sent in writing by the Ministry to the City Treasurer, is the 2020 ARL in the amount of \$275,795,317 and is based on 2018 Financial Information Returns.

Using this 2020 ARL, the City Treasurer has calculated an updated ARL of \$202,330,748, shown in Appendix “T” to Report FCS20073. The 2020 ARL was adjusted for possible debt service charges of \$63,749,201 corresponding to approximately \$684.8 M of debt (including City Housing Hamilton), which has been approved by Council in 2020 and prior years but not yet issued. Further adjustments were made to reflect debt service charges both for prior issued debt discharged since 2018 and for new debt assumed in 2018 and 2020.

According to this calculation, the updated ARL of \$202,330,748, represents a maximum annual amount that the City has available to commit to payments related to debt and financial obligations before the statutory limit is breached and corresponds to approximately \$2.1 B of additional borrowing which the City could undertake (assuming a 15-year term and 5% interest rate). The related tax and rate impacts would be considered before approving debt within these limits.

ALTERNATIVES FOR CONSIDERATION

Beyond the recommended rate increase, staff can submit for Council consideration changes to this budget submission that would require a review of the 2021 Capital Budget submissions.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Healthy and Safe Communities

Hamilton is a safe and supportive city where people are active, healthy, and have a high quality of life.

Clean and Green

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

Built Environment and Infrastructure

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

Our People and Performance

Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report FCS20073 – 2021 Hamilton Water, Wastewater and St Operating Budget – Combined Water, Wastewater and Storm

Appendix “B” to Report FCS20073 – 2021 Hamilton Water Operating Budget – Water

Appendix “C” to Report FCS20073 – 2021 Hamilton Wastewater and Storm Operating Budget – Combined Wastewater and Storm

Appendix “D” to Report FCS20073 – 2021 Hamilton Wastewater and Storm Operating Budget – Wastewater

Appendix “E” to Report FCS20073 – 2021 Hamilton Wastewater and Storm Operating Budget – Storm

Appendix “F” to Report FCS20073 – 2021 Rate Supported Staffing Summary and 2021 Rate Budget – Business Case Summary

Appendix “G” to Report FCS20073 – 2021 Water and Wastewater / Storm Fees and Charges Effective January 1, 2021 – 2021 Private Fire Line Rates – 2021 Proposed User Fees and Charges

Appendix “H” to Report FCS20073 – Source of Capital Financing – 2021 to 2030 Rate Program Capital Budget

Appendix “I” to Report FCS20073 – 2021 to 2030 Water / Wastewater / Storm Capital Financing Plan

Appendix “J” to Report FCS20073 – Source of Capital Financing – 2021 to 2030 Rate Program Capital Budget

Appendix “K” to Report FCS20073 – Water System – 2021 Capital Budget Project List

Appendix “L” to Report FCS20073 – Water System – 2021 to 2030 Capital Budget List

Appendix “M” to Report FCS20073 – Source of Capital Financing – 2021 to 2030 Rate Program Capital Budget

Appendix “N” to Report FCS20073 – Wastewater System – 2021 Capital Budget Project List

Appendix “O” to Report FCS20073 – Wastewater System – 2021 – 2030 Capital Budget List

**SUBJECT: 2021 Recommended Water, Wastewater and Stormwater Budget
(FCS20073) (City Wide) – Page 31 of 31**

Appendix “P” to Report FCS20073 – Source of Capital Financing – 2021 to 2030 Rate Program Capital Budget

Appendix “Q” to Report FCS20073 – Storm Water Management – 2021 Capital Budget Project List

Appendix “R” to Report FCS20073 – Storm Water Management – 2021 to 2030 Capital Budget List

Appendix “S” to Report FCS20073 – 2021 Rate Program Capital Budget Summary

Appendix “T” to Report FCS20073 – City of Hamilton Treasurer’s Updated 2020 Annual Repayment Limit

JS/TT/dt