

2020 Budget Notes:

Toronto Water

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What we do

Toronto Water manages one of the largest water and wastewater systems in North America, 24 hours a day, seven days a week. Toronto Water's services ensure that over 3.6 million residents and businesses in Toronto, and portions of York and Peel have access to high quality, safe drinking water and that they can trust that their wastewater is collected, treated and responsibly managed. Toronto Water delivers the following services:

- Water Treatment & Supply
- Wastewater Collection & Treatment
- Stormwater Management

Toronto Water has stewardship of an inventory of depreciated capital assets valued at \$28.6 billion. Toronto Water maintains two categories of assets: linear infrastructure, such as distribution (5,547 km) and transmission (544 km) watermains, sanitary (3,726 km), combined (1,517 km) and storm (4,983 km) sewers; and facilities/plant assets such as water filtration (4) and waste water treatment (4) plants, pumping stations (105), as well as a variety of reservoirs, storage and detention tanks. Current replacement value is being reviewed as part of asset management work to comply with provincial regulations (deadline April 2021).

Why we do it

Toronto Water provides water services through supplying drinking water and treatment of wastewater and stormwater to residents, businesses and visitors in order to protect public health, safety and property in an environmentally and a fiscally responsible manner.

Who we serve

Water Treatment & Supply

- Water Account Holders
- Water Consumers

Beneficiaries

- Industrial, Commercial & Institutions
- Residents
- City & Agency Staff
- Visitors

Wastewater Collection & Treatment

- Wastewater Account Holders
- Wastewater producers
- Public & Private Landowners

Beneficiaries

- Industrial, Commercial & Institutions
- Residents
- City & Agency Staff
- Visitors

Stormwater Management

- Public & Private Landowners

Beneficiaries

- Industrial, Commercial & Institutions
- Residents
- City & Agency Staff
- Visitors







Budget at a glance

STAFF RECOMMENDED OPERATING BUDGET				STAFF RECOMMENDED 10-YEAR CAPITAL PLAN			
\$Million	2020	2021	2022	\$Million	2020	2021-2029	Total
Revenues	\$1,390.4	\$1,424.2	\$1,456.6	Gross Expenditures	\$1,217.8	\$13,269.7	\$14,487.6
Gross Expenditures	\$469.2	\$488.9	\$501.8	Debt	\$0.0	\$0.0	\$0.0
Capital Contribution	\$921.2	\$935.3	\$954.8	<i>Note: Includes 2019 carry forward funding to 2020</i>			
Approved Positions	1,820.3	1,837.3	1,843.3				

Key service outcomes

	Outcomes	Description
Water Treatment & Supply	Supply +435 billion litres annually of safe potable water to Toronto Water customers (including Region of York).	Treat drinking water in a safe, responsible manner in accordance with all legislated requirements.
	Continuous distribution of potable water through +6,100 km of watermains and City-owned water services.	Inspect, maintain, operate and rehabilitate water distribution system across the city.
Water Treatment & Supply	Return to Lake Ontario +400 billion litres annually of treated wastewater (including Region of Peel) without endangerment to human health or the environment.	Treat wastewater in a safe, responsible manner in accordance with all legislated requirements.
	Continuous conveyance of wastewater through +5,100 km of sanitary and combined sewers.	Inspect, maintain, operate and rehabilitate the wastewater collection across the city.
Stormwater Management	Continuous conveyance of stormwater (rainwater and melted snow) through +4,900 km of storm sewers.	Significant investment has been approved by Toronto City Council to reduce runoff from rainwater and melted snow flowing into streams, rivers and Lake Ontario and manage basement flooding.

Goals and metrics

Planned Activities to Achieve Outcomes		2018 Actual	2019 Proj Actual	2020 Target	Status
	Non-compliance of Water Treatment Incidents	0	0	0	
	Non-compliance of Wastewater Treatment Incidents	0	0	0	
	# of Watercourse Inlet/Outlet Inspections	3,526	3,000	3,000	

Our experience and success

- Long-term \$2.5 billion Don River and Central Waterfront projects now actively underway. Phase 1, the Coxwell Bypass Tunnel, at 10.5 km long and 6.3 m in diameter, will intercept combined sewer overflows and stormwater discharges from 23 sewer outfalls improving beach, river and lake water quality.
- Replaced and rehabilitated 75 km of aging watermains to help reduce watermain breaks and ensure customers have reliable safe drinking water.
- Invested \$26.078 million in upgrades to aging water reservoirs and water pumping stations to ensure safe and reliable storage and distribution of drinking water.
- Replaced and rehabilitated 52 km of aging sewers to address state of good repair needs.
- Invested of \$143.260 million in critical upgrades to the Ashbridges Bay Wastewater Treatment Plant the second largest treatment plant in Canada serving more than 1.5 million people.
- Launched the Tier 2 Toronto Water Customer Care Centre (CCC) to help ensure customers receive prompt and effective customer service response. Enterprise Customer Relationship Management (eCRM) online tools launched including water turn on/turn off and low water pressure. CCC allows for the management of a surge in call volumes including the ability to make outbound calls during complex and lengthy severe weather incidents or emergencies.

Key challenges and risks

- **Planning for growth:** Rapid growth in the city core and mid-town are putting pressure on existing linear infrastructure. Long-term strategies are needed to keep up with growth. Significant groundwater issues have occurred over the past three years as deeper parking structures are being built. As a result of City Council development charge exemptions, \$483.610 million is drawn from Toronto Water's capital reserves to accommodate development growth over the next 10 years.
- **Modernization:** An aging suite of information technology tools and databases require significant investment. There is critical need to keep pace with upgraded technology requirements especially Geographic Information Systems, enhanced data management tools and artificial intelligence.
- **Managing Reserve Balances:** Critical need to maintain adequate capital reserves to fund the state of good repair 10-year capital program. 10-year capital plan relies primarily on 3% water rate increases.
- **Aging Infrastructure:** Significant state of good repair (SOGR) for underground assets/water and wastewater treatment plants and facilities.
- **Basement Flooding:** Significant investment is required to manage basement flooding across the city. There are complex program challenges including coordination, uncertainty of timing of rain events, acceleration of Environmental Assessments, and a council approved \$32K per property funding criteria.

Priority actions

- **Customer Service:** Ensure efficient and effective response times for customer service demands including improved customer service culture, technology and infrastructure.
 - **Workforce Strategies:** Ongoing development of hiring strategies for critical, vulnerable and hard to fill positions including on-the-job training programs and planning for demographic changes.
 - **Growth:** Development of strategy to manage pressure on linear infrastructure in growth areas.
 - **Resiliency:** Long-term significant investment in Council approved Wet Weather Flow Master Plan projects to protect the environment and lake, river and stream water quality including \$2.113 billion for the Basement Flooding Protection Program, completion of Environmental Assessments for all Basement Flooding Studies Areas by 2024 and investing \$1.367 billion over the 10 years to implement the Don River and Central Waterfront project, with all project phases forecasted for completion in 2038.
 - **SOGR:** Continued long-term investment in SOGR projects and reducing the backlog to \$83.794 million by 2029, effectively eliminating the backlog.
 - **Modernization:** Planning for resources to implement, support and maintain new technologies.
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Our key service levels

Water Treatment & Supply



22 mainbreaks per 100 km of pipe

Wastewater Collection & Treatment



4 sewer mainline backups per 100km of pipe

Stormwater Management



1,248 ML of dedicated (designed) stormwater storage capacity

Key service deliverables

- Provide over 1 billion litres of safe drinking water daily to homeowners and businesses (industrial, commercial and institutional) in the city of Toronto and parts of York Region.
- Over 1.5 billion litres of wastewater from toilets, sinks and drains of wastewater is collected and treated per day, from residents and businesses in Toronto and a portion of Peel Region.
- Rain and melted snow is conveyed and managed, improving the health of our waterways and reducing basement flooding.

RECOMMENDATIONS

The City Manager and Chief Financial Officer & Treasurer recommend that:

1. City Council approve the 2020 Staff Recommended Operating Budget for Toronto Water of \$469.217 million gross, \$1.390 billion revenue, and \$921.210 million net capital-from-current contribution for the following services:

Service:	Gross	Revenue	Capital-from-current Contribution
	(\$000s)	(\$000s)	(\$000s)
Water Treatment & Supply	203,086.79	614,536.56	411,449.77
Wastewater Collection & Treatment	233,866.05	770,138.43	536,252.38
Stormwater Management	32,244.18	5,752.09	-26,492.09
Total Program Budget	469,217.02	1,390,427.08	921,210.06

2. City Council approve the 2020 staff complement of 1,820.3 positions, comprising of 95 capital positions and 1,725.3 operating positions
3. City Council approve 2020 Staff Recommended Capital Budget for Toronto Water with cash flows and future year commitments totaling \$7.611 billion as detailed by project in [Appendix 5a](#).
4. City Council approve the 2021-2029 Staff Recommended Capital Plan for Toronto Water totalling \$6.877 billion in project estimates as detailed by project in [Appendix 5b](#).
5. City Council request that all sub-projects with third party financing be approved conditionally, subject to the receipt of such financing in 2020 and if such funding is not forthcoming, their priority and funding be reassessed by City Council relative to other City-financed priorities and needs.

Program / Agency:

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**2020 STAFF RECOMMENDED
OPERATING BUDGET**

2020 OPERATING BUDGET OVERVIEW

Table 1: 2020 Staff Recommended Operating Budget by Service

(In \$000s)	2018 Actual	2019 Projected Actual *	2020 Base Budget	2020 New / Enhanced	2020 Staff Rec'd Budget	Change v. 2019 Projected Actual	
						\$	%
By Service							
Revenues							
Water Treatment & Supply	574,230.4	590,705.9	614,385.4	151.2	614,536.6	23,830.7	4.0%
Wastewater Collection & Treatment	742,743.2	741,490.2	770,006.5	131.9	770,138.4	28,648.2	3.9%
Stormwater Management	5,115.8	4,733.4	5,748.7	3.4	5,752.1	1,018.7	21.5%
Total Revenues	1,322,089.4	1,336,929.5	1,390,140.6	286.5	1,390,427.1	53,497.6	4.0%
Expenses							
Water Treatment & Supply	187,909.3	190,172.7	202,882.6	204.2	203,086.8	12,914.1	6.8%
Wastewater Collection & Treatment	201,682.5	222,619.9	233,700.1	185.9	233,886.0	11,266.2	5.1%
Stormwater Management	25,484.5	28,106.3	32,239.8	4.4	32,244.2	4,137.8	14.7%
Subtotal Gross Expenditures	415,076.3	440,898.9	468,822.5	394.5	469,217.0	28,318.1	6.4%
Capital Contribution	907,013.1	896,030.6	921,318.1	(108.0)	921,210.1	25,179.5	2.8%
Total Gross Expenditures	1,322,089.4	1,336,929.5	1,390,140.6	286.5	1,390,427.1	53,497.6	4.0%
Approved Positions	1,764.7	1,805.7	1,816.3	4.0	1,820.3	14.6	0.8%

* Year-end Projection Based on Q2 2019 Variance Report

COSTS TO MAINTAIN EXISTING SERVICES

Total 2020 Base Budget expenditures of \$468.823 million gross (prior to capital contribution) reflecting an increase of \$28.318 million in spending above 2019 projected year-end actuals (prior to enhancements or efficiencies), predominantly arising from:

- Salary and benefit increases, and inflationary increases for utilities, chemicals and contract services contract cost.
- Operating costs for salaries and benefits from completed capital projects, including addition of 6 positions to operate new facilities and infrastructure, and 3 positions for delivery of capital projects.
- Annualised costs from the transfer of the Utility Cut Program from Transportation Services, requiring addition of 3 new positions and increased contract costs to align with expected volumes.
- Above pressures are partially offset by base expenditure savings arising from a line by line review, other operational savings, and higher revenues from sale of water to Region of York, increase in new water service connections and additional draws from capital financing to fund existing backlog of utility cut repairs.

The 2020 Operating Budget recommends a 3 per cent rate increase to maintain existing service levels and meet additional service demands. Approximately 66 per cent of the 2020 Operating Budget or 2.8 per cent above the 2019 projected year-end actuals will go towards the capital reserve contribution to fund the 10-year Capital Plan.

COSTS TO ENHANCE SERVICES

New and Enhanced Service expenditures of \$0.394 million gross, \$0.108 million net enabling:

- Enhancement to Toronto Water's Technology and Data Strategy, including addition of 3 new positions to support improvement of organization and governance of data, enterprise system integration and analytics.
- Improvement to Enterprise Customer Relationship Management, including the addition of 1 new position to support alignment between Toronto Water and Enterprise Work Management system and 311 Customer Relationship Management.
- The above expenditure increases are partially recovered from Toronto Water's capital projects.

EQUITY IMPACTS OF BUDGET CHANGES

No significant equity impacts: The changes in Toronto Water's 2020 Operating Budget do not have any significant equity impacts.

2020 STAFF RECOMMENDED OPERATING BUDGET KEY DRIVERS

The 2020 Staff Recommended Operating Budget for Toronto Water is \$468.823 million gross (prior to capital contribution) or 6.3 per cent higher than the 2019 Projects Actuals. Table 2a below summarizes the key cost drivers for the base budget, while Table 2b summarizes New and Enhanced requests.

Table 2a: 2020 Key Drivers – Base Budget

Key Cost Drivers (In \$000s)	2018 Actuals	2019 Proj. Actuals*	2020 Staff Rec'd Base Budget	YoY Changes	
				\$	%
Expenditures					
Salaries and Benefits	169,773.4	178,951.0	186,546.6	7,595.7	4.2%
Materials & Supplies	94,787.7	100,696.2	108,054.3	7,358.1	7.3%
Equipment	2,781.0	3,384.5	3,104.9	(279.7)	-8.3%
Service and Rent	52,015.1	63,828.9	75,179.4	11,350.5	17.8%
Contribution To Reserves	10,130.4	10,660.3	10,706.3	46.0	0.4%
Other Expenditures	85,588.7	83,378.0	85,231.0	1,853.1	2.2%
Subtotal Gross Expenditures	415,076.3	440,898.9	468,822.5	27,923.6	6.3%
Capital Contribution	907,013.1	896,030.6	921,318.1	25,287.5	2.8%
Total Gross Expenditures	1,322,089.4	1,336,929.5	1,390,140.6	53,211.1	4.0%
Revenues					
Sale of Water	1,213,071.6	1,232,487.9	1,277,211.4	44,723.5	3.6%
User Fees & Donations	61,285.5	56,986.6	56,741.8	(244.8)	-0.4%
Transfers From Capital	6,622.4	8,061.5	8,559.2	497.7	6.2%
Other Revenues	41,109.9	39,393.4	47,628.1	8,234.7	20.9%
	1,322,089.4	1,336,929.5	1,390,140.6	53,211.1	4.0%

* Year-end Projection Based on Q2 2019 Variance Report

- *Salaries and Benefits:* Includes inflationary increases on existing salaries and benefits, and additional positions as described on page 7. Certain positions were also repurposed to better align the re-distribution of work/change within Toronto Water, with no changes to existing services.
- *Materials and Supplies:* Includes energy and chemical inflationary increases higher than Consumer Price Index (CPI) and CPI increases on existing material contracts. The 2020 budget also includes provisions for contingencies and estimates based on fluctuating weather conditions.
- *Services and Rents:* Includes CPI inflationary increases on existing service contracts, in addition to annualised costs for the transfer of the Utility Cut Program from Transportation Services to align with expected volumes. The 2020 budget also includes provisions for contingencies and estimates based on fluctuating weather conditions.
- *Contribution to Capital:* Approximately 66 per cent of Toronto Water's 2020 Operating Budget will go towards the annual capital reserve contribution.
- *Revenues:* Includes rate increase of 3 per cent on sale of water, increase in volume and price of water sold to Region of York, increase in new water connections and additional draws from capital financing reserve funds to fund existing backlog of utility cut repairs.

Table 2b: Other Efficiencies / Savings

(In \$000s)								
Recommendation	Type	2020			2021		2022	
		Revenue	Gross	Net	Gross	Net	Gross	Net
Reduction in Base Expenditures/Realignment of Budget	Line by Line		(5,192.5)	(5,192.5)	(1,236.9)	(1,236.9)	(1,274.8)	(1,274.8)
Energy Efficiencies	Efficiencies		(4,776.9)	(4,776.9)				
Auditor General Recommendations - Region of York - Rate Change	Auditor General Recommendations	3,818.4		(3,818.4)		(1,556.5)		
Budget Increase/(Decrease)		3,818.4	(9,969.3)	(13,787.7)	(1,236.9)	(2,793.4)	(1,274.8)	(1,274.8)

The Recommended 2020 Operating Budget includes \$9.969 million in gross expenditures reductions and \$3.818 million in added revenue as follows:

Line-by-Line

- A reduction in base expenditures in materials and supplies and other non-salary costs contributes to Toronto Water's efforts to manage continuous cost increases from internal and external sources.

Efficiencies

- Ongoing hydro savings and efficiencies that Toronto Water has been able to achieve through implementation of various utility conservation oriented initiatives.

Auditor General Recommendations

- A recent review of the rate structure between Toronto Water and Region of York was completed in 2019. In accordance with the Water Supply Agreement between the City of Toronto and the Regional Municipality of York of January 1, 2019, the expected 2020 wholesale water rate has increased in accordance with the Agreement. The review of the Agreement considered recommendation from Auditor General Office.

Table 2c: 2020 Key Drivers – New / Enhanced

New / Enhanced (In \$000s)	2020				2021 Annualized Gross	Equity Impact
	Revenue	Gross	Net	Positions		
Technology Optimization Strategy	196.6	304.7	108.0	3.0	431.0	None
ECRM Salesforce implementation and integration	89.9	89.9		1.0	112.3	None
Total New / Enhanced	286.5	394.5	108.0	4.0	543.3	

Technology Optimization Strategy

The Technology Optimization Strategy was created by reviewing current practises and issues both within Toronto Water and other leading municipalities and provides a framework to more effectively manage technology and data moving forward. The recommendations support the following: organization and governance, enterprise system integration and enhanced data analytics. The additional resources will expand capability and capacity to support project and data governance and provide ongoing support to ensure application and data integrity. Additional positions are proposed in future outlook years (four in 2021 and four in 2022).

ECRM Salesforce Implementation and Integration

Consistent with the goals of the Technology Optimization Strategy, Toronto Water and 311 are working together to align the Enterprise Work Management System and Customer Relationship Management Solutions. The additional resource would support Toronto Water's Enterprise Solution Management unit's activities and provide testing, impact analysis, design review, and sustainment.

Note:

1. For additional information on 2020 key cost drivers refer to [Appendix 1](#) as well as [Appendix 2](#) for a more detailed listing and descriptions of the 2020 Staff Recommended Service Changes and [Appendix 3](#) for the 2020 Staff Recommended & Pending New and Enhanced Service Priorities, respectively.

2021 & 2022 Outlooks

Table 3: 2021 and 2021 Outlooks

(In \$000s)	2019 Projected Actual	2020 Staff Rec'd Budget	2021 Outlook	2022 Outlook
Revenues	1,336,929.5	1,390,427.1	1,424,214.0	1,456,569.7
Gross Expenditures	440,898.9	469,217.0	488,943.3	501,805.1
Capital Contribution	896,030.6	921,210.1	935,270.7	954,764.6
Approved Positions	1,805.7	1,820.3	1,837.3	1,843.3

Key 2021 drivers

The 2021 Outlook with total gross expenditures of \$488.943 million reflects an anticipated \$19.726 million or 4.2 per cent increase in gross expenditures above the 2020 Recommended Budget based on the following:

- Inflationary increases for salaries and benefits.
- Operating impact of capital projects once completed and salaries and benefits for staff delivering capital projects.
- Anticipated inflationary increases for utilities, chemicals, other materials and supplies, contracted services, contributions to Toronto and Region Conservation Authority and payment in lieu of taxes.
- Anticipated volume increases for Permanent Surface Reinstatement Program as result of phasing in the implementation of the program.

These increases are partially offset by anticipated changes in volume and price of water sold in Toronto and Region of York.

Key 2022 drivers

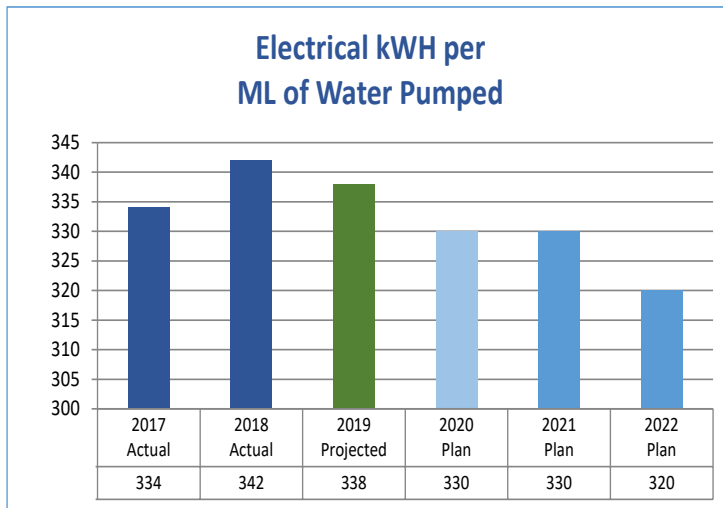
The 2022 Outlooks expects a further increase of \$12.861 million or 2.6 per cent above 2020 gross expenditures arising from the following:

- Inflationary increases for salaries and benefits.
- Operating impact of capital projects once completed and salaries and benefits for staff delivering capital projects.
- Anticipated inflationary increases for utilities, chemicals, other materials and supplies, contracted services, contributions to Toronto and Region Conservation Authority and payment in lieu of taxes.

These increases are partially offset by anticipated changes in volume and price of water sold in Toronto and Region of York.

How well we are doing

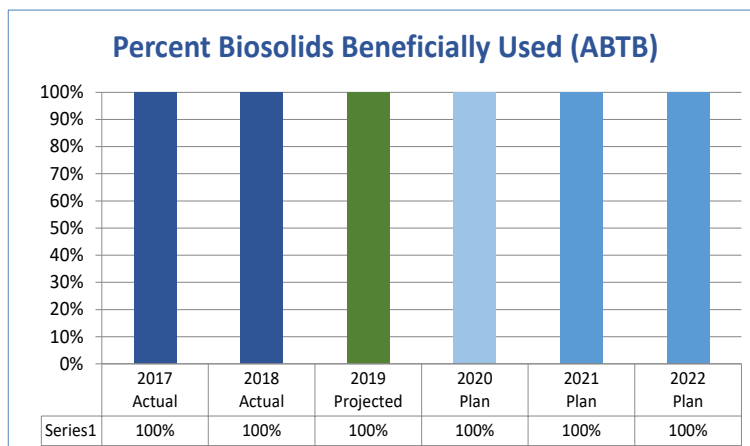
Water Treatment & Supply - Performance Measures



Behind the Numbers

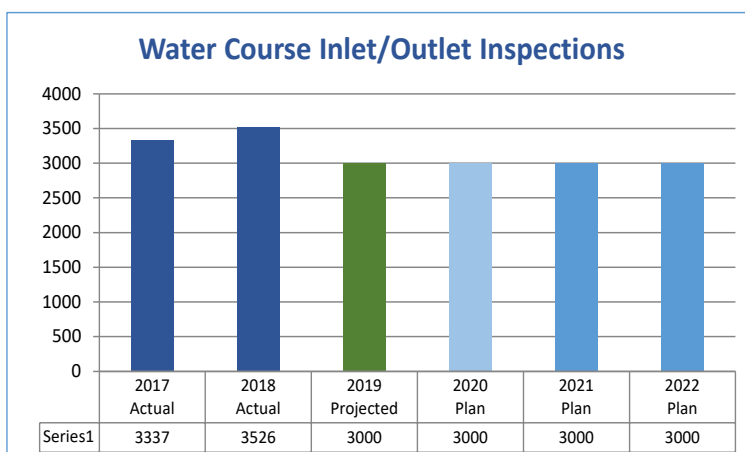
- **Energy Efficiency:** Energy is required in all aspects of water production, transmission as well as distribution and wastewater collection and treatment systems. More than 50 per cent of the City's electricity use is dedicated to treating and pumping water and wastewater.
- Electrical efficiency management is integral to meet ongoing kilowatt hour (kWh) reduction targets that include: maintaining the target of 330 kWh per mega liter of water in 2020 and 2021 and reducing to 320 kWh per mega liter of water in 2022.

Wastewater Collection & Treatment Performance Measures



- **Environmental Stewardship:** Biosolids management, including production and disposal, is critical operation of Wastewater Collection & Treatment.
- Continued efforts to increase beneficial use by pelletizing biosolids has resulted in an actual performance reaching 100 per cent in 2017 and 2018 and are projected to maintain beneficial use to 100 per cent target level.

Stormwater Management Performance Measures

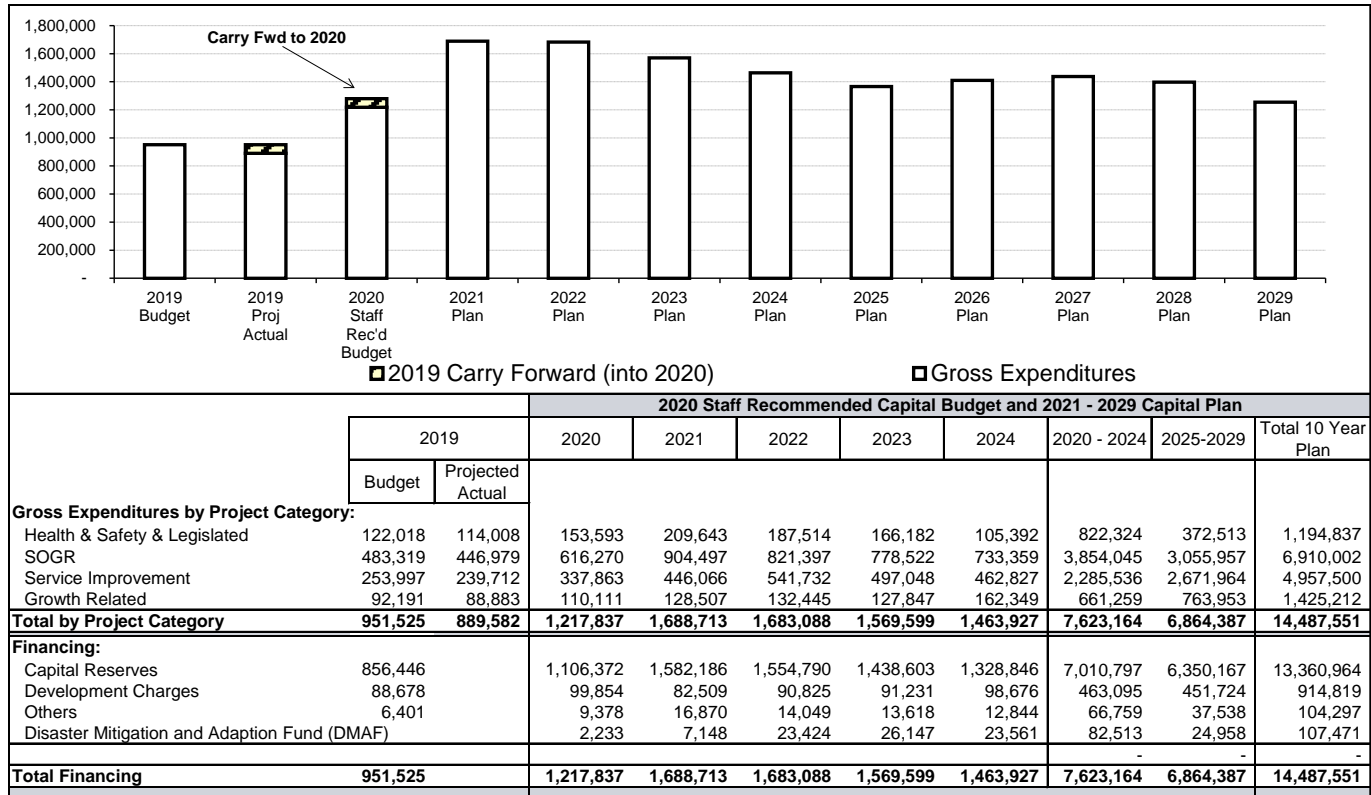


- **Environmental Stewardship:** Continuous investment to ensure the ongoing and regular inspection of water course inlets to improve stormwater management.
- Toronto Water continues to achieve inlet inspections at target levels.

**2020 – 2029 STAFF RECOMMENDED
CAPITAL BUDGET AND PLAN**

2020 – 2029 CAPITAL BUDGET AND PLAN OVERVIEW

Chart 1: 10-Year Capital Plan Overview Chart 1: 10-Year Capital Plan Overview
(In \$ Thousands)



Changes to Existing Projects

- The 2020-2029 Capital Budget and Plan reflects an increase of \$578.989 million over the nine common years (2020-2028).
- Increased funding of \$311.284 million to implement the Basement Flooding Protection Program.
- Increased funding of \$193.559 million for the Don River and Central Waterfront project to reflect current cost estimates and accelerate the engineering phase for the Inner Harbour West in 2020.
- Net increase of \$74.146 million for multiple Toronto Water projects to reflect updated cost estimates, project scope changes, and project schedules.

New Projects

- The 2020-2029 Capital Budget and Plan does not include new programs. Some of the key investments are as follows:
- \$6.910 billion for SOGR projects to ensure the replacement or rehabilitation of aging watermains and sewers and investment in the aging water and wastewater facilities.
- \$4.958 billion for Service Improvement projects including \$2.113 billion in Basement Flooding Protection projects, and \$1.367 billion to support the Don River and Central Waterfront project.
- \$1.195 billion for Legislative and Health & Safety projects and \$1.425 billion for Growth Projects.

Capital Needs Constraints






- The 2020-2029 Recommended Capital Budget and Plan is based on the capacity to deliver (85 per cent spending rate included for planning purposes).
- Toronto Water does not have any unmet needs over the 10-year planning horizon.

Note:

For additional information, refer to [Appendix 5](#) for a more detailed listing of the 2020 and 2021-2029 Capital Budget & Plan by project; and [Appendix 6](#) for Reporting on Major Capital Projects – Status Update.

2020 – 2029 CAPITAL BUDGET AND PLAN

\$14.488 Billion 10-Year Gross Capital Program

				
Plant & Facilities	Underground Infrastructure	Stormwater Management	Basement Flooding Protection Program	Engineering, Yard & Network Improvements
\$4.077B 28%	\$5.349B 37%	\$2.045B 14%	\$2.113B 15%	\$0.904B 6%
Water Filtration Plants; Wastewater Treatment Plants; Pumping Stations; and Storage & Reservoirs	Watermain and Sewer Replacement/Rehabilitation; Water Service Replacement; and New Connections	Wet Weather Flow Projects (end of pipe, infrastructure erosion protection); Don River & Central Waterfront	Engineering Studies; Implementation Basement Flooding Protection; Subsidy Program	Engineering Support; Business & Technology; Yards & buildings; Water Efficiency & Metering

How the Capital Program is Funded

City of Toronto		Provincial Funding	Federal Funding	
\$ 14,380.1M 99.3%		\$0.0M 0%	\$107.5M 0.7%	
Debt	\$ 0.0M		DMAF	\$ 107.5M
Recoverable Debt	\$ 0.0M			
Reserve Draws	\$ 13,361.0M			
Development Charges	\$ 914.8M			
Other*	\$ 104.3M			

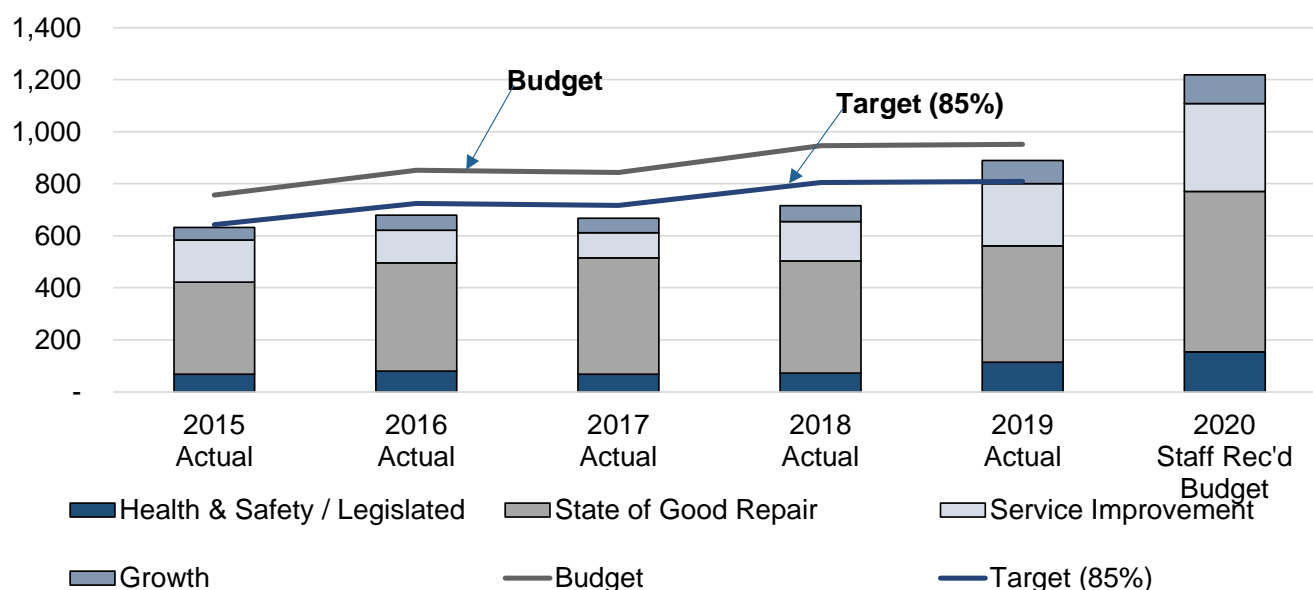
* Toronto Water's 10-Year Capital Plan includes forecasted funding of \$78.0 million for the expected Toronto Region & Conservation Authority (TRCA) Watercourse Erosion Control project, to be spent between 2021 and 2029. It is assumed that approximately 2/3 (\$51.5 million) will be funded by other orders of government. The funding has yet to be secured.

CAPACITY TO SPEND REVIEW

The Recommended 10-Year Capital Plan has been developed with consideration of historical demonstrated ability to spend within any given year of the ten year capital plan. A review was undertaken to ensure budgets align with the Toronto Water's ability to spend and the markets capacity to deliver.

Key component in determining an appropriate level of annual cash flows include historical capacity to spend reviews by project categories (Chart 2 below) as well as the level of projected 2019 underspending that will be carried forward into 2020 to complete capital work.

**Chart 2 – Capacity to Spend
(In Millions)**



	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Staff Rec'd Budget
Health & Safety / Legislated	68.653	80.243	67.903	72.075	114.008	153.593
State of Good Repair	353.400	415.635	447.156	431.163	446.979	616.270
Service Improvement	161.309	124.957	96.925	151.217	239.712	337.863
Growth	48.742	58.763	55.330	61.041	88.883	110.111
Total	632.104	679.598	667.314	715.496	889.582	1,217.837
% Spent	84%	80%	79%	76%	93%	

Note: 2020 Budget includes 2019 expected carry forward.

Capacity to Spend Review Impact on the Recommended 10-Year Plan

The 2020-2029 Staff Recommended Capital Budget and Plan represents Toronto Water's largest investment in infrastructure renewal totalling \$14.488 billion over 10 years. The 2020 Recommended Capital Budget of \$1.218 billion (including carry forward funding of \$41.544 million is higher than the historic 5-year average budget.

Toronto Water's actual spending over the previous five years, from 2014 to 2018, has averaged \$656.721 million per year. In 2019, Toronto Water is forecasting to spend \$889.582 million or 93.2 per cent of the Approved 2019 Capital Budget.

In recent years, Toronto Water has awarded a series of large scale multi-year projects, including over \$500 Million in projects awarded in 2019. In 2020, Toronto Water will be awarding approximately \$555 million works supporting

Ashbridges Bay Wastewater Treatment Plant (ABTP): Polymer Upgrade, Waste Activated Sludge Upgrades, Aeration Tank 12 & 13 Engineering; Western Beach Tunnel Phase 2; Basement Flooding Area 22 and Area 15 Construction; Pumping Station Group 6 Construction; and Program Management Engineering. The 2020 Recommended Capital Budget of \$1.218 billion supports the delivery of current large scale multi-year projects, as well as new projects forecasted for award in 2020.

Based on the review of historical capital spending constraints, \$372.249 million in capital spending originally cash flowed in 2020 has been deferred to 2021 or future years. Key adjustments to the Capital Plan are noted below:

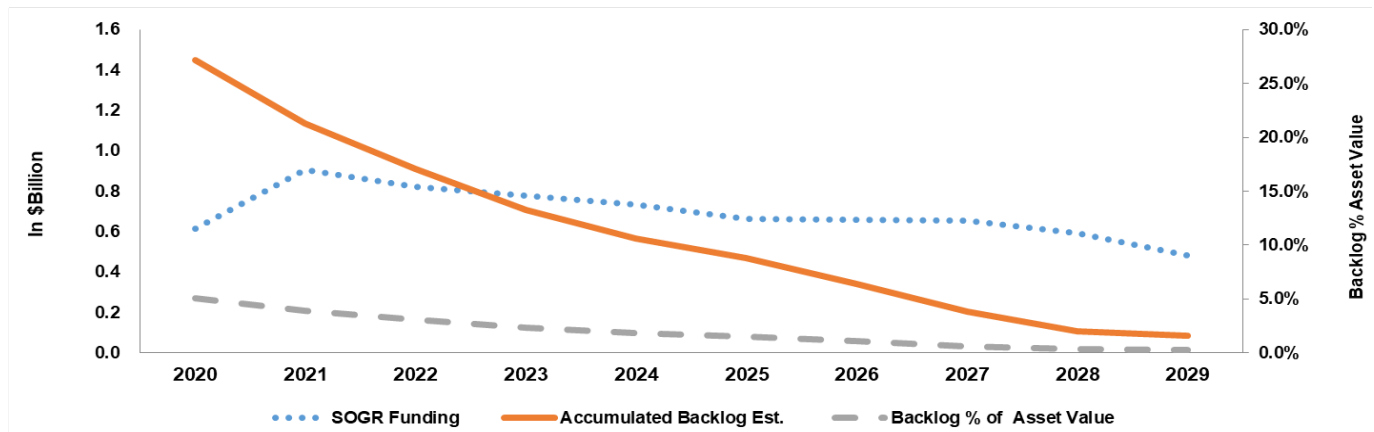
- The *Ashbridges Bay Wastewater Treatment Plant* 2020 cashflow has been reduced by \$133.466M to reflect updated project delivery schedules for several projects including the Polymer Upgrade, Disinfection System Construction, Outfall Construction, Integrated Pumping Station Construction, and Waste Activated Sludge Upgrade Construction projects.
- The *Watermain Replacement* 2020 cashflow has been reduced by \$27.523M to reflect updated project delivery timelines and project completions
- The *Trunk Sewers Program* 2020 cashflow has been reduced by \$41.726M to reflect estimated delivery timelines and priority.
- The *Sewer and Watermain Rehabilitation Programs* 2020 cashflow have been reduced by \$31.779M and \$25.427M respectively to realign the 2020 cashflow with historical program delivery rates.
- The *Highland Creek Wastewater Treatment Plant* 2020 cashflow has been reduced by \$23.184M to reflect updated project delivery schedules and project award costs

The 2020 Financial Model assumes that 85 per cent of the net Capital Budget and Plan will be drawn from Toronto Water's Capital Reserve, based on historical capital completion levels, so as not to overstate actual projected funding requirements.

STATE OF GOOD REPAIR* (SOGR) FUNDING AND BACKLOG

The chart below depicts the SOGR funding and accumulated backlog estimates for linear infrastructure and facilities in Toronto Water.

Chart 3: Total SOGR Funding & Backlog



\$ Billion	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
SOGR Funding	0.616	0.904	0.821	0.779	0.733	0.665	0.659	0.656	0.594	0.482
Accumulated Backlog Est.	1.450	1.135	0.911	0.707	0.566	0.469	0.342	0.206	0.105	0.084
Backlog % of Asset Value	5.0%	3.9%	3.1%	2.4%	1.8%	1.5%	1.1%	0.6%	0.3%	0.3%
Total Asset Value	28.722	29.018	29.270	29.706	30.668	31.327	32.115	32.411	32.793	33.364

Toronto Water’s infrastructure is aging with an accumulated SOGR backlog estimated at \$1.493 billion by the end of 2019, which includes both linear (watermains and sewers) and facility/plant infrastructure (water treatment plants, wastewater treatment plants, pumping stations). This represents 5.2 per cent of the total replacement value of Toronto Water’s assets, which at the end of 2019 are estimated to be \$28.6 billion. Approximately 56 per cent or \$0.838 billion of the backlog relates to linear infrastructure, with the remaining 44 per cent or \$0.654 billion representing facilities backlog.

The 2020-2029 Staff Recommended Budget and Capital Plan allocates a total of \$6.910 billion over 10 years, including \$616.270 million in 2020 (or 51 per cent of the 2020 Capital Budget) to address the renewal needs of Toronto Water’s aging infrastructure. This significant investment into Toronto Water infrastructure will ensure continued and reliable service to residents, businesses and visitors, reducing the SOGR backlog to \$83.794 million in 2029, effectively eliminating the backlog.

Over 56 per cent of Toronto Water’s infrastructure backlog is associated with aging linear watermain and sewer infrastructure. The 2020-2029 Staff Recommended Budget and Capital Plan allocates a total of \$4.527 billion to address deteriorated linear infrastructure.

The 2020-2029 Capital Budget and Plan allocates a further \$2.383 billion for infrastructure renewal projects at water and wastewater treatment facilities. SOGR works at the water and wastewater facilities may include renewal of existing buildings, and process equipment and machinery, etc.

Stormwater management facilities (stormwater ponds and underground storage tanks) are not included in the SOGR backlog analysis as they are relatively new assets, as well as stream restoration from erosion. Restoration of watercourses is planned on a priority basis to protect existing infrastructure and in coordination with the Toronto Region Conservation Authority based on site conditions resulting from extreme weather events.

OPERATING IMPACT OF COMPLETED CAPITAL PROJECTS

Approval of the 2020 Capital Budget will impact the 2020 Operating Budget by a total of \$0.493 million net for salaries and benefits from previously approved projects at the Ashbridges Bay Treatment Plant, Basement Flooding Protection Program and Waterfront Stormwater Infrastructure, as shown in Table 4 below.

Table 4: Net Operating Impact Summary

Projects	2020 Budget		2021 Plan		2022 Plan		2020 - 2024		2020 - 2029	
	\$000s	Positions	\$000s	Positions	\$000s	Positions	\$000s	Positions	\$000s	Positions
Previously Approved										
<i>Ashbridges Bay WWTP - Blower Building & Old North Substation Improvements</i>	97.666	1.0	24.263	-			121.929	1.0	121.929	1.0
<i>Ashbridges Bay WWTP - Effluent System - Disinfection System</i>			837.697	2.0	165.114		1,002.811	2.0	1,002.811	2.0
<i>Ashbridges Bay WWTP - Liquid Treatment & Handling - Integrated Pumping Station</i>			-		-		-	-	1,700.000	-
<i>Ashbridges Bay WWTP - Solids & Gas Handling -Waste Activated Sludge Upgrade</i>			(620.000)		1,500.000		880.000	-	880.000	-
<i>Ashbridges Bay WWTP - D Building Phase 2</i>					350.000		350.000	-	350.000	-
<i>Basement Flooding Relief - Group 2</i>	251.895	3.0	157.310		6.001		415.206	3.0	415.206	3.0
<i>Island WTP - Chemical & Residuals Management</i>	-				44.587	0.5	224.387	1.0	224.387	1.0
<i>Island WTP - Plantwide HVAC Upgrades</i>			-		-		(50.000)	-	(50.000)	-
<i>Island WTP - Island Photovoltaic System</i>							(484.000)	-	(484.000)	-
<i>North Toronto WTP Upgrades - Process Improvements</i>	-				639.633	1.0	639.633	1.0	639.633	1.0
<i>Waterfront Stormwater Infrastructure</i>	143.820	2.0	31.501		2.647		177.969	2.0	177.969	2.0
<i>Business System Infrastructure - Technology Improvements</i>			90.904	1.0	22.843		113.747	1.0	113.747	1.0
Sub-Total: Previously Approved	493.382	6.0	521.675	3.0	2,730.824	1.5	3,391.681	11.0	5,091.681	11.0
New Projects - Future Years										
<i>WTS Plantwide - UV Disinfection Construction</i>	-				44.587	0.5	749.587	1.0	964.587	1.0
Sub-Total: New Projects - Future Years	-	-	-	-	44.587	0.5	749.587	1.0	964.587	1.0
Total	493.382	6.0	521.675	3.0	2,775.411	2.0	4,141.268	12.0	6,056.268	12.0

The 10-year Recommended Capital Plan will impact the future years Operating Budget by \$6.056 million net over 2020-2029 period. The 2020 Operating Budget reflects an increase of six positions for the planned completion of building upgrades at Ashbridges Bay Treatment Plant and new basement flooding and stormwater infrastructure.

The operating costs of completed capital projects for 2021 and 2022 are projected to be \$0.522 million and \$2.775 million respectively, reflecting an increase of three positions in 2021 and two positions in 2021, for planned completion of new equipment and facilities at Ashbridges Bay and North Toronto Wastewater Treatment plants and Toronto Island Water Treatment Plant, as well as plant-wide construction of ultra-violet (UV) disinfection facilities.

APPENDICES

Appendix 1

2020 Staff Recommended Operating Budget by Expenditure Category Program Summary by Expenditure Category

(In \$000s)	2017 Actual	2018 Actual	2019 Budget	2019 Projected Actual *	2020	2020 Change from	
					Total Staff Recommended Budget	2019 Projected Actual	
Category						\$	%
Revenues							
Sale of Water	1,126,606.4	1,213,071.6	1,227,987.9	1,232,487.9	1,277,211.4	44,723.5	3.6%
User Fees & Donations	60,950.9	61,285.5	55,711.1	56,986.6	56,741.8	(244.8)	(0.4%)
Transfers From Capital	5,699.2	6,622.4	7,341.5	8,061.5	8,845.7	784.2	9.7%
Other Revenues (Inc. IDR's)	33,139.6	41,109.9	40,349.2	39,393.4	47,628.1	8,234.7	20.9%
Total Revenues	1,226,396.1	1,322,089.4	1,331,389.7	1,336,929.5	1,390,427.1	53,497.6	4.0%
Gross Expenditures							
Salaries and Benefits	168,482.7	169,773.4	186,451.0	178,951.0	186,941.2	7,990.2	4.5%
Materials & Supplies	96,317.6	94,787.7	109,196.2	100,696.2	108,054.3	7,358.1	7.3%
Equipment	2,737.8	2,781.0	3,684.5	3,384.5	3,104.9	(279.7)	(8.3%)
Service and Rent	51,147.0	52,015.1	69,228.9	63,828.9	75,179.4	11,350.5	17.8%
Contribution To Reserves/Reserve Funds	10,216.9	10,130.4	10,660.3	10,660.3	10,706.3	46.0	0.4%
Other Expenditures (Inc. IDC's)	82,171.3	85,588.7	85,178.0	83,378.0	85,231.0	1,853.1	2.2%
Subtotal Gross Expenditures	411,073.3	415,076.3	464,398.9	440,898.9	469,217.0	28,318.1	6.4%
Capital Contribution	815,322.8	907,013.1	866,990.8	896,030.6	921,210.1	25,179.5	2.8%
Total Gross Expenditures	1,226,396.1	1,322,089.4	1,331,389.7	1,336,929.5	1,390,427.1	53,497.6	4.0%
Approved Positions	1,752.7	1,764.7	1,805.7	1,805.7	1,820.3	14.6	0.8%

* Year-End Projection Based on Q2 2019 Variance Report

Appendix 2

Summary of 2020 Service Changes

Form ID		Infrastructure and Development Services Program - Toronto Water	Adjustments				2021 Plan Net Change	2022 Plan Net Change
Category	Equity Impact		Gross Expenditure	Revenue	Net	Approved Positions		
		2020 Staff Recommended Base Budget Before Service Changes:	1,340,590.2	1,390,140.6	(49,550.4)	1,816.30	(14,295.5)	(19,920.2)
19320	Efficiencies - Water & Wastewater							
51	No Impact	Description:						
Toronto Water has adjusted hydro and water budgets.								
Service Level Impact:								
The recommended reduction will have no impact on the level of service delivered by Toronto Water. It recognized the savings and efficiencies that Toronto Water has been able to achieve through implementation of various conservation oriented initiatives.								
Equity Statement:								
The proposal is unlikely to have an equity impact.								
Service: Wastewater Collection & Treatment								
		Total Staff Recommended Changes:	(1,386.9)	0.0	(1,386.9)	0.00	(0.0)	0.0
Service: Water Treatment & Supply								
		Total Staff Recommended Changes:	(3,390.0)	0.0	(3,390.0)	0.00	(0.0)	0.0
		Staff Recommended Service Changes:	(4,776.9) 	0.0	(4,776.9) 	0.00	(0.0)	0.0
<hr/>								
Summary:								
		Staff Recommended Service Changes:	(4,776.9) 	0.0	(4,776.9) 	0.00	(0.0)	0.0
		Staff Recommended Base Budget:	1,335,813.3	1,390,140.6	(54,327.3)	1,816.30	(14,295.5)	(19,920.2)

Appendix 3

Summary of 2020 New / Enhanced Service Priorities Included in Budget

Form ID		Infrastructure and Development Services Program - Toronto Water	Adjustments				2021 Plan Net Change	2022 Plan Net Change
Category	Equity Impact		Gross Expenditure	Revenue	Net	Approved Positions		
19318		Technology Optimization Strategy						
71	No Impact	<p>Description:</p> <p>Western Management Consultants was engaged by Toronto Water in October 2017 to review Toronto Water's current data and technology environment, facilitate a strategic planning process and develop a Technology and Data Strategy, which lead to the roll out of the Technology Optimization Strategy (TOS). TOS was created by reviewing current practices and issues both within Toronto Water and other leading municipalities. The TOS provides a framework to more effectively manage technology and data moving forward. Recommendations are divided into three transformational programs:</p> <ul style="list-style-type: none"> • Organization/Governance: Includes the establishment of a steering committee to move the recommendations forward and a clear engagement model with the Information & Technology Division. • Enterprise System Integration: Includes the recommendation to establish Maximo as the Divisional enterprise system of record and to refocus efforts on integrating the current asset management system, GIS and other projects with Maximo. • Data and Information: Includes recommendations to launch a divisional data governance program and program to enhance analytics, as well as to establish enterprise-wide document standards. <p>The strategy also outlines a series of recommendations to ensure the resources needed to manage the transformation are in place, including two temporary capital funded Business Systems Analysts, one temporary capital funded System Integrator 1, one permanent Senior Database Administrator and one permanent Business Management Analyst. Two existing positions will be deleted to accommodate the new position requests, resulting in 3 net new additional positions. Additional positions are proposed in future outlook years (4 in 2021 and 4 in 2022).</p> <p>Service Level Impact:</p> <p>There are a number of traditional Information and Technology roles that are missing from Toronto Water's Information Technology Management team, including business/system analysts, data analysts, data stewards (the technical role complementing that of data business owner), software specialists, application developer and enterprise architects. The future service level would allow Toronto Water to effectively manage technology and data moving forward and improve customer service.</p> <p>Equity Statement:</p> <p>The proposal is unlikely to have an equity impact.</p> <p>Service: Stormwater Management Total Staff Recommended Changes: 2.6 1.6 1.0 0.05 8.5 9.1</p> <p>Service: Wastewater Collection & Treatment Total Staff Recommended Changes: 144.6 90.6 54.0 1.42 107.6 196.1</p> <p>Service: Water Treatment & Supply Total Staff Recommended Changes: 157.4 104.4 53.0 1.53 118.8 221.1</p> <p>Staff Recommended New/Enhanced Services: 304.7 196.6 108.0 3.00 234.9 426.3</p>						

Appendix 3 (Continued)

Summary of 2020 New / Enhanced Service Priorities Included in Budget

Form ID		Infrastructure and Development Services Program - Toronto Water	Adjustments				2021 Plan Net Change	2022 Plan Net Change
Category	Equity Impact		Gross Expenditure	Revenue	Net	Approved Positions		
20275		ECRM Salesforce implementation and integration						
71	No Impact	Description: Consistent with the goals of the Technology Optimization Strategy, Toronto Water and 311 are working together to align the Enterprise Work Management System (EWMS) and Customer Relationship Management (CRM) Solutions. Toronto Water has been selected to pilot the ECRM Salesforce "Booking and Scheduling" design and implementation and has been requested to accelerate resource allocations for the EWMS and ECRM integration work (scheduled to Pilot in Q3 of 2019 and to conclude in 2021 Q4). The key outcomes would increase online service offerings, reducing call volumes to the call centre and improving water specific customer experiences through improved integrations with the existing systems and allowing for more "close-the-loop" communications with Toronto Water customers. This will enable Toronto Water to build on its existing customer service policies and procedures to offer more value added 'business concierge' services to its customers. One System Integrator 1 position is proposed to support Toronto Water's Enterprise Solution Management unit's activities in SALESFORCE and eventually MAXIMO integration. Service Level Impact: As a result of the ECRM - EWMS integration, better and more accurate information will flow between the work management solution and the customer service solution. At present, legacy work management solutions and databases are being mined for customer service information. In the future, an integrated instance of Salesforce should provide Toronto Water with a single case management tool to manage and coordinate responses to customer inquiries based on their historical records. The presence of this resource on the Toronto Water infrastructure team will also ensure that any AODA compliance risks are mitigated. Equity Statement: The proposal is unlikely to have equity impacts. Service: Stormwater Management Total Staff Recommended Changes: 1.8 1.8 0.0 0.02 0.0 0.0 Service: Wastewater Collection & Treatment Total Staff Recommended Changes: 41.3 41.3 0.0 0.46 0.0 0.0 Service: Water Treatment & Supply Total Staff Recommended Changes: 46.7 46.7 0.0 0.52 0.0 0.0 Staff Recommended New/Enhanced Services: <hr/> 89.9 89.9 0.0 1.00 0.0 0.0						
Summary:								
Staff Recommended New / Enhanced Services:			394.5	286.5	108.0	4.00	234.9	
							426.3	

Appendix 4

Summary of 2020 New / Enhanced Service Priorities Not Included in Budget

- Toronto Water does not have any new/enhanced service priorities that have not been included in the 2020 budget.

Appendix 5

2020 Capital Budget; 2021 - 2029 Capital Plan Including Carry Forward Funding

(In \$000s)	2020 Budget	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	2020 - 2029 Total	Total Project Cost	Health & Safety & Legislated	SOGR	Growth & Improved Service
ASHBRIDGES BAY T.P. YR2006	1	-	-	-	-	-	-	-	-	-	1	1	-	1	-
ASHBRIDGES BAY WWTP - BUILDING SERVICES & SITE DEV	4,202	4,400	3,775	13	-	-	-	-	-	1,300	13,690	13,690	2	-	13,688
ASHBRIDGES BAY WWTP - EFFLUENT SYSTEM	96,189	114,345	101,370	75,576	26,886	16,911	65	-	-	-	431,342	431,342	423,072	-	8,270
ASHBRIDGES BAY WWTP - LIQUID TREATMENT & HANDLING	51,885	67,816	48,350	89,200	94,200	136,120	140,619	142,400	134,300	87,405	992,295	992,295	-	754,245	238,050
ASHBRIDGES BAY WWTP - O&M UPGRADES	3,411	3,080	2,560	2,630	2,710	2,790	2,880	2,960	3,005	3,140	29,166	29,166	-	29,166	-
ASHBRIDGES BAY WWTP - ODOUR CONTROL	2,292	2,000	-	-	-	-	-	-	-	-	4,292	4,292	-	4,292	-
ASHBRIDGES BAY WWTP - SOLIDS & GAS HANDLING	31,866	61,814	71,517	50,210	48,865	27,619	27,400	23,875	8,775	400	352,341	352,341	-	346,101	6,240
ASHBRIDGES BAY WWTP REHAB	17,652	44,983	50,659	59,187	57,226	50,442	39,527	38,200	11,960	17,200	387,036	387,036	100,380	271,084	15,572
ASHRIDGES BAY TP YR2005	265	515	10	-	-	-	-	-	-	-	790	790	-	790	-
BASEMENT FLOODING RELIEF	133,518	203,152	277,538	224,616	211,615	209,530	252,905	218,022	191,471	191,040	2,113,407	2,113,407	-	-	2,113,407
BUSINESS IT PROJECTS	862	1,100	1,900	1,425	-	-	-	-	-	-	5,287	5,287	-	-	5,287
BUSINESS SYSTEM INFRASTRUCTURE - PW	7,931	12,703	12,177	8,309	6,804	3,514	2,529	2,529	3,489	2,669	62,654	62,654	-	253	62,401
CLARK RESIDUE MGMT. FACILITIES	239	226	-	-	-	-	-	-	-	-	465	465	465	-	-
DIST SEWER REHAB OPS YR2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST W/M REHABILITATION	60,744	74,314	96,686	83,581	70,360	70,360	70,260	65,460	65,360	65,260	722,385	722,385	-	722,385	-
DIST W/M REPLACEMENT	119,982	164,643	119,276	128,442	136,901	113,500	113,500	113,500	113,500	113,500	1,236,744	1,236,744	-	1,029,593	207,151
DIST WATER SERVICE REPAIR	46,928	59,436	45,855	48,670	47,246	45,746	44,246	44,246	44,246	47,246	473,865	473,865	451,709	22,156	-
DISTRICT WATERMANS - NEW	10	500	500	500	500	500	500	500	500	500	4,510	4,510	-	-	4,510
DON & WATERFRONT TRUNK CSO	78,244	76,630	79,109	95,982	89,814	73,505	140,715	221,872	269,900	240,800	1,366,571	1,366,571	-	-	1,366,571
EMERY CREEK POND	115	490	-	-	-	-	-	-	-	-	605	605	-	-	605
ENGINEERING	68,872	81,043	83,927	68,316	57,583	58,308	64,474	60,582	59,402	60,249	662,756	662,756	-	662,756	-
ENGINEERING STUDIES	400	400	150	150	50	50	50	50	50	50	1,400	1,400	400	300	700
EQUIPMENT REPLACEMENT & REHABILITATION	4,316	2,773	3,565	40	55	-	-	-	-	-	10,749	10,749	-	10,749	-
FJ HORGAN W.T.P. R&R	1,425	4,670	4,177	2,897	1,880	890	810	225	200	200	17,374	17,374	-	11,527	5,847
GEORGETOWN SOUTH CITY INFRASTRUCTURE UPGRADES	565	-	-	-	-	-	-	-	-	-	565	565	-	-	565
HARRIS W.T.P. R&R	14,381	12,635	11,685	5,171	11,550	11,500	11,500	12,550	500	500	91,972	91,972	-	82,165	9,807
HIGHLAND CREEK WWTP - BUILDING SERV & SITE DEV	791	1,332	5,300	5,300	5,300	5,250	5,150	150	-	-	28,573	28,573	-	28,573	-
HIGHLAND CREEK WWTP - ODOUR CONTROL	6,454	7,178	114	50	30	400	1,000	6,500	11,300	10,500	43,526	43,526	42,459	-	1,067
HIGHLAND CREEK WWTP - SOLIDS & GAS HANDLING	5,600	4,787	14,510	30,550	32,650	32,690	21,880	150	40	-	142,857	142,857	-	22,105	120,752
HIGHLAND CREEK WWTP UPGRADES	20,930	43,244	39,338	34,551	20,295	35,403	38,501	37,593	36,243	37,943	344,041	344,041	28,774	175,036	140,231
HORGAN TRUNK MAIN EXPANSION	1,000	2,448	16,650	16,650	17,700	10,264	37	-	-	-	64,749	64,749	-	-	64,749
HORGAN W.T.P. EXPANSION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix 5 (Continued)

2020 Capital Budget; 2021 - 2029 Capital Plan Including Carry Forward Funding

(In \$000s)	2020 Budget	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	2020 - 2029 Total	Total Project Cost	Health & Safety & Legislated	SOGR	Growth & Improved Service
HUMBER TP YR2005	241	100	-	-	-	-	-	-	-	-	341	341	-	-	341
HUMBER WWTP - LIQUID TREATMENT & HANDLING	28,568	28,102	12,701	17,468	13,975	1,500	5,150	32,265	35,000	32,000	206,729	206,729	-	206,729	-
HUMBER WWTP - O&M UPGRADES	189	410	-	-	-	-	-	-	-	-	599	599	-	599	-
HUMBER WWTP - ODOUR CONTROL	1,787	2,320	1,210	565	-	-	-	550	-	-	6,432	6,432	6,432	-	-
HUMBER WWTP UPGRADES	20,040	28,460	25,482	19,654	35,997	29,325	13,325	7,525	75	-	179,883	179,883	6,593	105,341	67,949
ISLAND W.T.P. R&R	15,339	30,643	22,967	32,578	14,555	4,017	1,515	705	4,680	375	127,374	127,374	48,088	60,493	18,793
LAND ACQUISITION FOR SOURCE WATER PROTECT	9,500	9,500	9,500	11,000	11,000	11,000	11,000	11,000	11,000	11,000	105,500	105,500	-	-	105,500
LAWRENCE ALLAN REVITALIZATION PLAN	2,480	1,490	3,091	3,592	3,842	-	-	-	-	-	14,495	14,495	-	-	14,495
METERING & METER READING SYS	4,899	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	-	16,899	16,899	-	-	16,899
NEW SERVICE CONNECTIONS	52,924	58,354	55,142	45,223	48,223	48,223	48,223	48,223	48,223	48,223	500,981	500,981	-	-	500,981
NEW SEWER CONSTRUCTION	4,012	14,075	18,094	14,799	12,550	8,447	1,776	1,715	1,525	1,131	78,124	78,124	-	-	78,124
NORTH TORONTO WTP UPGRADES	5,165	10,423	10,342	8,612	43	-	-	-	-	-	34,585	34,585	11,474	-	23,111
OPERATIONAL SUPPORT	4,890	7,917	9,297	3,405	1,880	1,880	1,880	1,880	1,880	1,880	36,789	36,789	-	5,610	31,179
PW ENGINEERING	5,514	8,113	6,791	5,616	4,675	2,875	2,645	1,975	975	975	40,154	40,154	-	21,400	18,754
REGENT PARK CAPITAL CONTRIBUTION	30	736	740	35	1,067	1,088	-	52	53	-	3,801	3,801	-	-	3,801
RL CLARK W.T.P. R&R	1,528	1,041	3,238	1,030	255	255	250	250	250	250	8,347	8,347	-	8,347	-
SEWAGE PUMPING STATION UPGRADES	4,434	11,491	18,085	27,549	22,265	13,835	5,865	1,640	-	-	105,164	105,164	74,989	25,565	4,610
SEWER ASSET PLANNING	21,006	25,967	25,988	23,619	23,150	22,650	22,550	22,150	22,150	22,150	231,380	231,380	-	182,315	49,065
SEWER REPLACEMENT PROGRAM	20,877	52,263	39,383	27,678	28,665	20,850	20,475	20,375	24,000	20,500	275,066	275,066	-	271,636	3,430
SEWER SYSTEM REHABILITATION	68,669	100,672	93,959	74,489	70,339	71,739	72,339	69,889	72,839	70,439	765,373	765,373	-	755,835	9,538
STREAM RESTORATION & EROSION CONTROL	11,645	14,815	12,315	12,727	11,964	14,195	16,705	14,590	14,405	7,805	131,166	131,166	-	131,166	-
SWITCH GEAR TRANSFORMER	480	3,385	5,400	5,400	5,400	5,400	76	-	-	-	25,541	25,541	-	25,541	-
SWM END OF PIPE FACILITIES	1,216	8,129	14,750	15,707	4,253	2,123	19,580	30,600	45,800	59,500	201,658	201,658	-	90	201,568
SWM SOURCE CONTROL PROG	35	20	20	-	-	-	-	-	-	-	75	75	-	-	75
SWM TRCA FUNDING	4,604	4,719	4,837	4,958	5,082	5,209	5,339	5,473	5,610	5,610	51,441	51,441	-	-	51,441
TRANSMISSION R&R	24,204	32,212	29,138	20,462	20,151	27,680	36,540	17,630	5,985	3,325	217,327	217,327	-	211,327	6,000
TRUNK SEWER SYSTEM	39,625	71,584	79,509	67,053	92,582	108,800	112,295	98,295	90,906	57,380	818,029	818,029	-	488,366	329,663
TRUNK WATERMAIN	3,067	5,360	1,651	14,591	23,667	15,004	5,579	34,080	36,002	26,250	165,251	165,251	-	158,182	7,069
TRUNK WATERMAIN EXPANSION	16,435	12,652	11	-	-	-	-	-	-	-	29,098	29,098	-	-	29,098
W&WW LABORATORIES	4,600	4,088	5,200	5,460	4,750	4,235	4,210	210	210	210	33,173	33,173	-	2,737	30,436
WATER EFFICIENCY PROGRAM	736	633	637	687	520	520	520	520	520	520	5,813	5,813	-	-	5,813
WATER SUSTAINABILITY PROGRAM	10,046	5,634	24	10	-	-	-	-	-	-	15,714	15,714	-	-	15,714
WESTERN BEACHES RETROFIT	9,955	21,056	11,936	50	-	-	-	-	-	-	42,997	42,997	-	42,997	-
WET WEATHER FLOW MP	29,535	30,982	24,855	23,271	7,771	7,707	4,610	6,610	5,110	4,810	145,261	145,261	-	32,449	112,812
WT&S PLANTWIDE	8,492	27,210	44,597	48,795	53,586	31,013	16,710	16,515	13,815	250	260,983	260,983	-	-	260,983
Total Expenditures (including carry forward from 2019)	1,217,837	1,688,713	1,683,088	1,569,599	1,463,927	1,366,362	1,409,205	1,437,581	1,396,754	1,254,485	14,487,551	14,487,551	1,194,837	6,910,002	6,382,712

The 2020 Capital Budget and 2021 – 2029 Capital Plan reflects the full Recommended Capital Program for Toronto Water that supports their objectives of providing water, wastewater and stormwater services for residents, businesses and visitors in a safe and environmentally and fiscally responsible manner.

Appendix 5a

2020 Cash Flow and Future Year Commitments Including Carry Forward Funding

(In \$000s)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total 2020 Cash Flow & FY Commits	Previously Approved	Change in Scope	New with Future Year
ASHBRIDGES BAY T.P. YR2006	1										1		1	
ASHBRIDGES BAY WWTP - BUILDING	4,202	4,400	3,775	13							12,390	19,455	(7,065)	
ASHBRIDGES BAY WWTP - EFFLUENT	96,189	113,695	100,770	71,876	23,586	16,891	65				423,072	419,303	1,069	2,700
ASHBRIDGES BAY WWTP - LIQUID	51,885	67,816	48,350	89,200	94,200	121,120	115,519	116,400	104,300	47,405	856,195	834,921	21,274	
ASHBRIDGES BAY WWTP - O&M UPGR	3,411	3,080	2,560	2,630	2,710						14,391	14,101	290	
ASHBRIDGES BAY WWTP - ODOUR	2,292	2,000									4,292	3,276	1,016	
ASHBRIDGES BAY WWTP - SOLIDS	31,866	61,814	71,517	50,210	48,865	27,619	27,400	23,875	8,775	400	352,341	328,588	23,753	
ASHBRIDGES BAY WWTP REHAB	17,652	44,883	49,259	53,587	48,426	42,992	34,127	32,850	1,060		324,836	291,099	22,137	11,600
ASHRIDGES BAY TP YR2005	265	515	10								790	1,800	(1,010)	
BASEMENT FLOODING RELIEF	133,518	201,866	270,449	214,225	187,994	178,879	146,973	27,059	470		1,361,433	1,032,696	(180,733)	509,470
BUSINESS IT PROJECTS	862	1,100	1,900	1,425							5,287	3,864	1,423	
BUSINESS SYSTEM INFRASTRUCTURE	7,931	12,122	9,853	5,600	2,900						38,406	26,031	12,375	
CLARK RESIDUE MGMT. FACILITIES	239	226									465	674	(209)	
DIST SEWER REHAB OPS YR2005												21	(21)	
DIST W/M REHABILITATION	60,744	74,118	47,475	16,821	100	100					199,358	121,680	77,678	
DIST W/M REPLACEMENT	119,982	164,643	49,501	18,072	1,324						353,522	322,912	30,610	
DIST WATER SERVICE REPAIR	46,928	58,328	30,757	7,424							143,437	139,403	4,034	
DISTRICT WATERMANS - NEW	10	500	500								1,010	1,000	10	
DON & WATERFRONT TRUNK CSO	78,244	76,480	70,109	77,132	48,964	10,305	15	22			361,271	327,596	(325)	34,000
EMERY CREEK POND	115	490									605	692	(87)	
ENGINEERING	68,872	44,123	45,130	19,127	1,886	1,506					180,644	148,621	32,023	
ENGINEERING STUDIES	400	400	150	150							1,100	637	463	
EQUIPMENT REPLACEMENT & REHAB	4,316	2,773	3,565	40	55						10,749	10,726	23	
FJ HORGAN W.T.P. R&R	1,425	4,670	4,177	2,897	1,680	690	610	25			16,174	8,725	(256)	7,705
GEORGETOWN SOUTH CITY INFRASTRUCTURE	565										565		565	
HARRIS W.T.P. R&R	14,381	12,485	11,235	4,521	550						43,172	35,671	7,501	
HIGHLAND CREEK WWTP - BUILDING	791	1,332	5,300	5,300	5,300	5,250	5,150	150			28,573	350	28,223	
HIGHLAND CREEK WWTP - ODOUR	6,454	7,178	114	50	30						13,826	7,772	6,054	
HIGHLAND CREEK WWTP - SOLIDS	5,600	4,782	14,410	25,550	27,650	27,690	14,880	150	40		120,752	118,650	2,102	
HIGHLAND CREEK WWTP UPGRADING	20,930	43,244	39,338	34,551	19,095	17,903	4,001	4,093	3,743	3,543	190,441	229,888	(39,447)	
HORGAN TRUNK MAIN EXPANSION	1,000	1,448	650	650	700	264	37				4,749	5,880	(1,131)	
HORGAN W.T.P. EXPANSION												41	(41)	
HUMBER TP YR2005	241	100									341	519	(178)	
HUMBER WWTP - LIQUID TREATMENT	28,568	28,102	12,701	17,318	12,975	150	150	265			100,229	100,893	(664)	
HUMBER WWTP - O&M UPGRADES	189	410									599	730	(131)	
HUMBER WWTP - ODOUR CONTROL	1,787	2,320	1,210	565				550			6,432	4,471	1,961	
HUMBER WWTP UPGRADES	20,040	28,460	25,482	18,404	34,697	28,025	12,025	6,175	75		173,383	108,840	64,543	

Appendix 5a (Continued)

2020 Cash Flow and Future Year Commitments Including Carry Forward Funding

(In \$000s)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	Total 2020 Cash Flow & FY Commits	Previously Approved	Change in Scope	New with Future Year
ISLAND W.T.P. R&R	15,339	30,443	20,417	27,278	11,430	317	150		150		105,524	94,530	8,994	2,000
LAND ACQUISITION FOR SOURCE	9,500										9,500		9,500	
LAWRENCE ALLAN REVITALIZATIO	2,480	1,490	3,091	3,592	3,842						14,495	15,778	(1,283)	
METERING & METER READING SYS	4,899	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500		16,899	16,534	365	
NEW SERVICE CONNECTIONS	52,924	56,119	20,907								129,950	108,273	21,677	
NEW SEWER CONSTRUCTION	4,012	13,925	16,424	6,044	3,850	747	95				45,097	72,177	(27,080)	
NORTH TORONTO WTP UPGRADE	5,165	10,423	10,342	8,612	43						34,585	33,499	1,086	
OPERATIONAL SUPPORT	4,890	6,787	7,687	1,645							21,009	20,070	939	
PW ENGINEERING	5,514	7,663	5,931	4,091	3,400	1,900	1,670	1,000			31,169	28,872	2,297	
REGENT PARK CAPITAL CONTRIBU	30	736	740	35	1,067	1,088		52	53		3,801	3,813	(12)	
RL CLARK W.T.P. R&R	1,528	881	588	250							3,247	3,394	(147)	
SEWAGE PUMPING STATION UPGF	4,434	11,291	16,285	26,274	18,290	11,135	5,325	1,605			94,639	54,470	2,494	37,675
SEWER ASSET PLANNING	21,006	24,467	23,988	21,469	11,118	500	400				102,948	103,648	(700)	
SEWER REPLACEMENT PROGRAM	20,877	52,263	17,250	8,813	5,342	4,600	4,225	4,125	3,500		120,995	76,202	20,493	24,300
SEWER SYSTEM REHABILITATION	68,669	98,279	87,350	32,350	4,000	4,000	4,000				298,648	207,710	90,938	
STREAM RESTORATION & EROSIO	11,645	14,205	9,720	5,762	4,659	2,450	1,120	1,045	1,000	770	52,376	46,675	5,701	
SWITCH GEAR TRANSFORMER	480	3,385	5,400	5,400	5,400	5,400	76				25,541	25,352	189	
SWM END OF PIPE FACILITIES	1,216	8,129	14,750	15,667	4,093	243	1,200	3,100	9,300	23,000	80,698	69,869	10,829	
SWM SOURCE CONTROL PROG	35	20	20								75	120	(45)	
SWM TRCA FUNDING	4,604										4,604		4,604	
TRANSMISSION R&R	24,204	30,912	24,678	9,852	6,926	1,000	360	125			98,057	80,891	(9,584)	26,750
TRUNK SEWER SYSTEM	39,625	70,684	76,684	60,378	63,787	71,980	64,260	56,750	52,150	51,900	608,198	289,143	13,450	305,605
TRUNK WATERMAIN	3,067	4,810	1,026	41	92						9,036	12,637	(3,601)	
TRUNK WATERMAIN EXPANSION	16,435	12,652	11								29,098	29,036	62	
W&WW LABORATORIES	4,600	4,088	4,950	5,250	4,540	4,025	4,000				31,453	19,847	11,606	
WATER EFFICIENCY PROGRAM	736	633	637	167							2,173	2,091	82	
WATER SUSTAINABILITY PROGRA	10,046	5,634	24	10							15,714	15,537	177	
WESTERN BEACHES RETROFIT	9,955	21,056	11,936	50							42,997	40,684	2,313	
WET WEATHER FLOW MP	29,535	30,372	22,745	21,161	661	597					105,071	111,954	(6,883)	
WT&S PLANTWIDE	8,492	26,220	38,447	34,615	20,396	243					128,413	42,955	15,442	70,016
Total Expenditure (including carry forward from 2019)	1,217,837	1,618,970	1,363,775	1,037,644	738,123	591,109	449,333	280,916	186,116	127,018	7,610,841	6,297,287	281,733	1,031,821

The 2020 Cash Flow and Future Year Commitments as noted in the table above, reflects a sub-set of the 10-Year Capital Plan. This sub-set consists of 2020 and future year cash flow funding estimates for projects that have either previously received Council approval or will require approval in 2020 to begin, continue or complete capital work. This approval will enable Toronto Water to begin work and/or commit funding for expenses that may not be incurred until 2021 or future years.

* The 2020-2029 Capital Budget and Plan does not include new programs, the above represents the addition of new sub-projects to existing program areas.

Appendix 5b

2021 - 2029 Capital Plan

(In \$000s)	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	2021 - 2029 Total	Health & Safety & Legislated	SOGR	Growth & Improved Service
ASHBRIDGES BAY T.P. YR2006	-	-	-	-	-	-	-	-	-	-	-	-	-
ASHBRIDGES BAY WWTP - BUILDING SERVICES &	-	-	-	-	-	-	-	-	1,300	1,300	-	-	1,300
ASHBRIDGES BAY WWTP - EFFLUENT SYSTEM	650	600	3,700	3,300	20	-	-	-	-	8,270	-	-	8,270
ASHBRIDGES BAY WWTP - LIQUID TREATMENT &	-	-	-	-	15,000	25,100	26,000	30,000	40,000	136,100	-	75,000	61,100
ASHBRIDGES BAY WWTP - O&M UPGRADES	-	-	-	-	2,790	2,880	2,960	3,005	3,140	14,775	-	14,775	-
ASHBRIDGES BAY WWTP - ODOUR CONTROL	-	-	-	-	-	-	-	-	-	-	-	-	-
ASHBRIDGES BAY WWTP - SOLIDS & GAS HANDL	-	-	-	-	-	-	-	-	-	-	-	-	-
ASHBRIDGES BAY WWTP REHAB	100	1,400	5,600	8,800	7,450	5,400	5,350	10,900	17,200	62,200	-	62,200	-
ASHRIDGES BAY TP YR2005	-	-	-	-	-	-	-	-	-	-	-	-	-
BASEMENT FLOODING RELIEF	1,286	7,089	10,391	23,621	30,651	105,932	190,963	191,001	191,040	751,974	-	-	751,974
BUSINESS IT PROJECTS	-	-	-	-	-	-	-	-	-	-	-	-	-
BUSINESS SYSTEM INFRASTRUCTURE - PW	581	2,324	2,709	3,904	3,514	2,529	2,529	3,489	2,669	24,248	-	-	24,248
CLARK RESIDUE MGMT. FACILITIES	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST SEWER REHAB OPS YR2005	-	-	-	-	-	-	-	-	-	-	-	-	-
DIST W/M REHABILITATION	196	49,211	66,760	70,260	70,260	70,260	65,460	65,360	65,260	523,027	-	523,027	-
DIST W/M REPLACEMENT	-	69,775	110,370	135,577	113,500	113,500	113,500	113,500	113,500	883,222	-	742,048	141,174
DIST WATER SERVICE REPAIR	1,108	15,098	41,246	47,246	45,746	44,246	44,246	44,246	47,246	330,428	330,428	-	-
DISTRICT WATERMANS - NEW	-	-	500	500	500	500	500	500	500	3,500	-	-	3,500
DON & WATERFRONT TRUNK CSO	150	9,000	18,850	40,850	63,200	140,700	221,850	269,900	240,800	1,005,300	-	-	1,005,300
EMERY CREEK POND	-	-	-	-	-	-	-	-	-	-	-	-	-
ENGINEERING	36,920	38,797	49,189	55,697	56,802	64,474	60,582	59,402	60,249	482,112	-	482,112	-
ENGINEERING STUDIES	-	-	-	50	50	50	50	50	50	300	-	300	-
EQUIPMENT REPLACEMENT & REHABILITATION	-	-	-	-	-	-	-	-	-	-	-	-	-
FJ HORGAN W.T.P. R&R	-	-	-	200	200	200	200	200	200	1,200	-	1,200	-
GEORGETOWN SOUTH CITY INFRASTRUCTURE U	-	-	-	-	-	-	-	-	-	-	-	-	-
HARRIS W.T.P. R&R	150	450	650	11,000	11,500	11,500	12,550	500	500	48,800	-	48,800	-
HIGHLAND CREEK WWTP - BUILDING SERV & SITA	-	-	-	-	-	-	-	-	-	-	-	-	-
HIGHLAND CREEK WWTP - ODOUR CONTROL	-	-	-	-	400	1,000	6,500	11,300	10,500	29,700	29,700	-	-
HIGHLAND CREEK WWTP - SOLIDS & GAS HANDL	5	100	5,000	5,000	5,000	7,000	-	-	-	22,105	-	22,105	-
HIGHLAND CREEK WWTP UPGRADES	-	-	-	1,200	17,500	34,500	33,500	32,500	34,400	153,600	-	31,600	122,000
HORGAN TRUNK MAIN EXPANSION	1,000	16,000	16,000	17,000	10,000	-	-	-	-	60,000	-	-	60,000
HORGAN W.T.P. EXPANSION	-	-	-	-	-	-	-	-	-	-	-	-	-
HUMBER TP YR2005	-	-	-	-	-	-	-	-	-	-	-	-	-
HUMBER WWTP - LIQUID TREATMENT & HANDLIN	-	-	150	1,000	1,350	5,000	32,000	35,000	32,000	106,500	-	106,500	-
HUMBER WWTP - O&M UPGRADES	-	-	-	-	-	-	-	-	-	-	-	-	-
HUMBER WWTP - ODOUR CONTROL	-	-	-	-	-	-	-	-	-	-	-	-	-
HUMBER WWTP UPGRADES	-	-	1,250	1,300	1,300	1,300	1,350	-	-	6,500	-	6,500	-
ISLAND W.T.P. R&R	200	2,550	5,300	3,125	3,700	1,365	705	4,530	375	21,850	-	19,000	2,850
LAND ACQUISITION FOR SOURCE WATER PROTE	9,500	9,500	11,000	11,000	11,000	11,000	11,000	11,000	11,000	96,000	-	-	96,000
LAWRENCE ALLAN REVITALIZATION PLAN	-	-	-	-	-	-	-	-	-	-	-	-	-
METERING & METER READING SYS	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix 5b (Continued)

2021 - 2029 Capital Plan

(In \$000s)	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	2021 - 2029 Total	Health & Safety & Legislated	SOGR	Growth & Improved Service
NEW SERVICE CONNECTIONS	2,235	34,235	45,223	48,223	48,223	48,223	48,223	48,223	48,223	371,031	-	-	371,031
NEW SEWER CONSTRUCTION	150	1,670	8,755	8,700	7,700	1,681	1,715	1,525	1,131	33,027	-	-	33,027
NORTH TORONTO WTP UPGRADES	-	-	-	-	-	-	-	-	-	-	-	-	-
OPERATIONAL SUPPORT	1,130	1,610	1,760	1,880	1,880	1,880	1,880	1,880	1,880	15,780	-	5,610	10,170
PW ENGINEERING	450	860	1,525	1,275	975	975	975	975	975	8,985	-	-	8,985
REGENT PARK CAPITAL CONTRIBUTION	-	-	-	-	-	-	-	-	-	-	-	-	-
RL CLARK W.T.P. R&R	160	2,650	780	255	255	250	250	250	250	5,100	-	5,100	-
SEWAGE PUMPING STATION UPGRADES	200	1,800	1,275	3,975	2,700	540	35	-	-	10,525	-	10,525	-
SEWER ASSET PLANNING	1,500	2,000	2,150	12,032	22,150	22,150	22,150	22,150	22,150	128,432	-	79,882	48,550
SEWER REPLACEMENT PROGRAM	-	22,133	18,865	23,323	16,250	16,250	16,250	20,500	20,500	154,071	-	154,071	-
SEWER SYSTEM REHABILITATION	2,393	6,609	42,139	66,339	67,739	68,339	69,889	72,839	70,439	466,725	-	466,725	-
STREAM RESTORATION & EROSION CONTROL	610	2,595	6,965	7,305	11,745	15,585	13,545	13,405	7,035	78,790	-	78,790	-
SWITCH GEAR TRANSFORMER	-	-	-	-	-	-	-	-	-	-	-	-	-
SWM END OF PIPE FACILITIES	-	-	40	160	1,880	18,380	27,500	36,500	36,500	120,960	-	-	120,960
SWM SOURCE CONTROL PROG	-	-	-	-	-	-	-	-	-	-	-	-	-
SWM TRCA FUNDING	4,719	4,837	4,958	5,082	5,209	5,339	5,473	5,610	5,610	46,837	-	-	46,837
TRANSMISSION R&R	1,300	4,460	10,610	13,225	26,680	36,180	17,505	5,985	3,325	119,270	-	113,270	6,000
TRUNK SEWER SYSTEM	900	2,825	6,675	28,795	36,820	48,035	41,545	38,756	5,480	209,831	-	209,831	-
TRUNK WATERMAIN	550	625	14,550	23,575	15,004	5,579	34,080	36,002	26,250	156,215	-	156,215	-
TRUNK WATERMAIN EXPANSION	-	-	-	-	-	-	-	-	-	-	-	-	-
W&WW LABORATORIES	-	250	210	210	210	210	210	210	210	1,720	-	1,720	-
WATER EFFICIENCY PROGRAM	-	-	520	520	520	520	520	520	520	3,640	-	-	3,640
WATER SUSTAINABILITY PROGRAM	-	-	-	-	-	-	-	-	-	-	-	-	-
WESTERN BEACHES RETROFIT	-	-	-	-	-	-	-	-	-	-	-	-	-
WET WEATHER FLOW MP	610	2,110	2,110	7,110	7,110	4,610	6,610	5,110	4,810	40,190	-	29,500	10,690
WT&S PLANTWIDE	990	6,150	14,180	33,190	30,770	16,710	16,515	13,815	250	132,570	-	-	132,570
Total Expenditures (including carry forward from 2019)	69,743	319,313	531,955	725,804	775,253	959,872	1,156,665	1,210,638	1,127,467	6,876,710	360,128	3,446,406	3,070,176

Appendix 6

Reporting on Major Capital Projects: Status Update

Project Name	Initial Approval Date	Approved Project Cost	Life to Date Expenditures as at December 31, 2018	2019 Cash Flow		2020	2021	Projection to End of Project	Status	End Date		On Budget	On Time
				Budget	Year-End Projection*	Budget	Plan			Planned	Revised		
St. Clair Reservoir Rehabilitation (CPW060-07)	Jan-14	32,644	21,631	5,300	5,300	428	304	27,663	On Track	Dec-21	Dec-22	Ⓞ	Ⓞ
Comments:				Extensive consultation was undertaken through the design phase to address community concerns regarding park access and restoration. Substantial Performance is forecast for 2019. In 2020, post construction and warranty inspections will continue.									
Explanation for Delay:				Project delivery is proceeding on track for 2019.									
ROSEHILL PS REHAB (CPW060-11)	Jan-15	7,299	2,396	1,464	1,185	813	1,264	5,658	On Track	Dec-21	Dec-21	Ⓞ	Ⓞ
Comments:				In 2019, the building addition, architectural works, low-voltage electrical, mechanical, lighting and HVAC system replacement are forecast for completion. In 2020, the high-voltage switchgear equipment will be installed, and system commission will start.									
Explanation for Delay:				Project delivery is proceeding on track for 2019.									
OUTFALL CONSTRUCTION (CWW039-06)	Jan-18	281,278	5,842	40,000	40,000	50,720	60,675	279,120	On Track	Dec-25	Dec-25	Ⓞ	Ⓞ
Comments:				Construction started in early 2019. In 2019, the secant piles for the shaft, improvements to the intersection of Leslie St and Unwin, and electrical connections are forecast for completion. In 2020, the tunnel boring machine will be delivered and tunnel activities will start.									
Explanation for Delay:				Construction was forecast to proceed ahead of schedule in 2019. An acceleration was approved by City Council in October 2019, and construction is now forecast to proceed on track for 2019.									
Don & Waterfront Trunk/CSO Construction - PHASE 1 (CWW480-03)	Jan-18	411,255	59,200	83,895	83,895	70,000	60,160	411,255	On Track	Jan-24	Jan-24	Ⓞ	Ⓞ
Comments:				Don & Central Waterfront Phase 1 construction started in mid-2018 and proceeded ahead of the 2018 forecast. Phase 1 of the Don River and Central Waterfront (DRCW) began construction in 2018 and includes the construction of the Coxwell Bypass Tunnel. The Coxwell Bypass Tunnel construction consists of a 10.5 kilometres in length, 6.3 metre diameter, concrete-lined rock tunnel, with five storage and tunnel access shafts that range in diameter from 20 to 22 metres at depths of 52 to 59 metres, and 12 small diameter connecting tunnels to drop shafts and tunnel air vents. Construction of vertical storage shafts continued through 2019 and the delivery of the tunnel boring machine expected by end of 2019. In 2020, construction will continue on all remaining shafts. The tunnel boring machine will be commissioned and mining activities will start.									
Explanation for Delay:				Construction activities for 2019 are proceeding on track.									

On/Ahead of Schedule	Ⓞ	>70% of Approved Project Cost
Minor Delay < 6 months	Ⓜ	Between 50% and 70%
Significant Delay > 6 months	Ⓡ	< 50% or > 100% of Approved Project Cost

Appendix 7

Summary of Capital Needs Constraints (In \$ Millions)

- The 2020-2029 Staff Recommended Capital Budget and Plan is based on the capacity to deliver (85 per cent spending rate included for planning purposes).
- Toronto Water does not have any unmet needs over the 10-year planning horizon.

Appendix 8

Inflows and Outflows to/from Reserves and Reserve Funds 2020 Operating Budget

Program Specific Reserve / Reserve Funds

Reserve / Reserve Fund Name (in \$000s)	Reserve / Reserve Fund Name	Projected Balance as of Dec. 31, 2019*	Withdrawals (-) / Contribution (+)		
			2020	2021	2022
			\$	\$	\$
Beginning Balance		25,211.0	31,100.3	36,989.6	42,878.9
Vehicle Replacement Reserve	XQ1012				
Withdrawals (-)		(6,405.1)	(23,289.7)	(11,662.5)	(4,388.5)
Contribution (+)		6,226.5	5,789.3	5,789.3	5,789.3
Total Reserve / Reserve Fund Draws / Contribution		25,032.4	13,599.9	31,116.3	44,279.7
Balance at Year-End		25,032.4	13,599.9	31,116.3	44,279.7

* Based on Q2 2019 Variance Report

Reserve / Reserve Fund Name (in \$000s)	Reserve / Reserve Fund Name	Projected Balance as of Dec. 31, 2019*	Withdrawals (-) / Contribution (+)		
			2020	2021	2022
			\$	\$	\$
Beginning Balance		1,149,459.8	1,262,612.3	1,241,958.1	837,345.8
Water & Wastewater Capital Reserves	XR6003 & XR6004				
Withdrawals (-)					
- TW Capital Program		(801,645.2)	(940,416.2)	(1,344,858.1)	(1,321,571.5)
- Others		(4,083.6)	(10,249.9)	(11,361.9)	(12,498.0)
Contribution (+)					
- From Operations		904,867.6	921,210.1	945,335.6	968,440.2
- Others: Interest		14,013.7	8,801.9	6,272.0	3,312.2
Total Reserve / Reserve Fund Draws / Contribution		1,262,612.3	1,241,958.1	837,345.8	475,028.7
Balance at Year-End		1,262,612.3	1,241,958.1	837,345.8	475,028.7

* Based on the most recent estimates

Appendix 8 (Continued)

Corporate Reserve / Reserve Funds

Reserve / Reserve Fund Name (in \$000s)	Reserve / Reserve Fund Name	Projected Balance as of Dec. 31, 2019*	Withdrawals (-) / Contribution (+)		
			2020	2021	2022
		\$	\$	\$	\$
Beginning Balance		34,554.0	39,425.0	44,342.0	49,259.0
Insurance Replacement Reserve	XR1010				
Withdrawals (-)					
Contribution (+)		4,871.0	4,917.0	4,917.0	4,917.0
Total Reserve / Reserve Fund Draws / Contribution		39,425.0	44,342.0	49,259.0	54,175.9
Balance at Year-End		39,425.0	44,342.0	49,259.0	54,175.9

* Based on Q2 2019 Variance Report

Reserve / Reserve Fund Name (in \$000s)	Reserve / Reserve Fund Name	Projected Balance as of Dec. 31, 2019*	Withdrawals (-) / Contribution (+)		
			2020	2021	2022
		\$	\$	\$	\$
Beginning Balance		28,924.6	37,940.6	38,114.6	28,950.6
Development Charges Stormwater Management	XR2113				
Withdrawals (-)					
- TW Operating		(195.0)	(195.0)	(195.0)	(195.0)
- TW Capital		(1,959.0)	(3,077.0)	(3,950.0)	(3,382.0)
- Waterfront Capital		(1,250.0)	(6,659.0)	(11,829.0)	(15,444.0)
Contribution (+)		12,420.0	10,105.0	6,810.0	9,725.0
Total Reserve / Reserve Fund Draws / Contribution		37,940.6	38,114.6	28,950.6	19,654.6
Balance at Year-End		37,940.6	38,114.6	28,950.6	19,654.6

* Based on the most recent estimates

Appendix 8 (Continued)

Corporate Reserve / Reserve Funds

Reserve / Reserve Fund Name (in \$000s)	Reserve / Reserve Fund Name	Projected Balance as of Dec. 31, 2019*	Withdrawals (-) / Contribution (+)									
			2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Beginning Balance		1,149,459.8	1,262,612.3	1,241,958.1	837,345.8	475,028.7	235,355.8	127,691.5	113,307.9	81,257.0	42,105.9	74,573.4
Water & Wastewater Capital Reserves	XR6003 & XR6004											
Withdrawals (-)												
- TW Capital Program		(801,645.2)	(940,416.2)	(1,344,858.1)	(1,321,571.5)	(1,222,812.6)	(1,129,519.1)	(1,060,591.8)	(1,102,755.2)	(1,135,700.3)	(1,101,341.6)	(997,253.2)
- Others		(4,083.6)	(10,249.9)	(11,361.9)	(12,498.0)	(10,449.6)	(3,531.9)	(3,995.0)	(5,067.9)	(5,082.5)	(3,823.0)	(3,899.5)
Contribution (+)												
- From Operations		904,867.6	921,210.1	945,335.6	968,440.2	992,147.6	1,024,653.5	1,049,713.2	1,075,373.0	1,101,374.8	1,137,391.1	1,165,227.9
- Others: Interest		14,013.7	8,801.9	6,272.0	3,312.2	1,441.7	733.2	490.0	399.3	256.9	241.0	635.5
Total Reserve / Reserve Fund Draws / Contribution		1,262,612.3	1,241,958.1	837,345.8	475,028.7	235,355.8	127,691.5	113,307.9	81,257.0	42,105.9	74,573.4	239,284.2
Balance at Year-End		1,262,612.3	1,241,958.1	837,345.8	475,028.7	235,355.8	127,691.5	113,307.9	81,257.0	42,105.9	74,573.4	239,284.2

* Based on the most recent estimates

Appendix 8 (Continued)

Inflows and Outflows to/from Reserves and Reserve Funds

2020 – 2029 Capital Budget and Plan

Corporate Reserve / Reserve Funds

Reserve Fund Name	Project Name	Projected Balance at Dec 31, 2019	2020 Budget	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	Total 2020-2029	
Water Development Charges Reserve Fund XR2111 (in \$000s)	Beginning Balance	106,241	108,579	97,191	86,063	75,343	73,587	73,810	86,451	107,876	131,369	156,860		
	Withdrawals													
	DIST W/M REPLACEMENT		(19,297)	(15,039)	(12,239)	(12,141)	(12,765)	(10,758)	(10,758)	(10,758)	(10,758)	(10,758)	(125,271)	
	DISTRICT WATERMAINS - NEW		(10)	(325)	(325)	(325)	(325)	(325)	(325)	(325)	(325)	(325)	(2,935)	
	HORGAN TRUNK MAIN EXPANSION		(1,000)	(1,591)	(10,823)	(10,823)	(11,505)	(6,672)	(24)	0	0	0	(42,438)	
	HORGAN W.T.P. EXPANSION		0	0	0	0	0	0	0	0	0	0	0	
	ISLAND W.T.P. R&R		(19)	(481)	(1,154)	(1,443)	(890)	0	0	0	0	0	(3,987)	
	LAWRENCE ALLAN REVITALIZATION PLAN		(2,480)	(969)	(2,009)	(2,335)	(2,497)	0	0	0	0	0	(10,290)	
	PW ENGINEERING		(527)	(638)	(562)	(398)	(328)	(328)	(306)	(240)	(77)	(77)	(3,481)	
	REGENT PARK CAPITAL CONTRIBUTION		(30)	(478)	(481)	(23)	(694)	(707)	0	(34)	(34)	0	(2,481)	
	RL CLARK W.T.P. R&R		(159)	(46)	(27)	0	0	0	0	0	0	0	(232)	
	TRANSMISSION R&R		0	(650)	(1,300)	(1,950)	0	0	0	0	0	0	(3,900)	
	TRUNK WATERMAIN EXPANSION		(6,605)	(3,305)	(3)	0	0	0	0	0	0	0	(9,913)	
	WATER EFFICIENCY PROGRAM		(736)	(412)	(414)	(447)	(338)	(338)	(338)	(338)	(338)	(338)	(4,037)	
	WATER SUSTAINABILITY PROGRAM		(1,040)	(379)	(2)	(1)	0	0	0	0	0	0	(1,422)	
	WT&S PLANTWIDE		(622)	(1,060)	(1,719)	(1,506)	(1,422)	(617)	(698)	(227)	(3)	(7)	(7,881)	
	Total Withdrawals		(26,701)	(32,525)	(25,373)	(31,058)	(31,392)	(30,764)	(19,745)	(12,449)	(11,922)	(11,535)	(11,505)	(218,268)
	Contribution:													
	- Projected Contribution		29,039	21,137	14,245	20,338	29,636	30,987	32,386	33,874	35,415	37,026	38,621	293,665
	Total Contribution		29,039	21,137	14,245	20,338	29,636	30,987	32,386	33,874	35,415	37,026	38,621	293,665
	Balance at Year-End		108,579	97,191	86,063	75,343	73,587	73,810	86,451	107,876	131,369	156,860	183,976	

* Based on the most recent estimates

Appendix 8 (Continued)

Corporate Reserve / Reserve Funds – Continued

Reserve Fund Name	Project Name	Projected Balance at Dec 31, 2019	2020 Budget	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	Total 2020-2029	
Sanitary Development Charges Reserve Fund XR2112 (in \$000s)	Beginning Balance	106,475	99,243	69,033	38,424	14,496	4,583	(12,099)	(34,930)	(56,613)	(78,563)	(97,524)		
	Withdrawals													
	ASHBRIDGES BAY WWTP - EFFLUENT SYSTEM		(14,181)	(10,265)	(9,195)	(6,591)	(2,163)	(1,550)	(6)	0	0	0	(43,951)	
	ASHBRIDGES BAY WWTP - LIQUID TREATMENT & HANDLING		(9,376)	(8,289)	(6,575)	(10,296)	(22,641)	(30,236)	(31,230)	(32,027)	(27,587)	(9,761)	(188,018)	
	ASHBRIDGES BAY WWTP - ODOUR CONTROL		(339)	(183)	0	0	0	0	0	0	0	0	(522)	
	ASHBRIDGES BAY WWTP - SOLIDS & GAS HANDLING		(4,287)	(4,549)	(4,951)	(4,207)	(3,426)	(19)	0	0	0	0	(21,439)	
	ASHBRIDGES BAY WWTP REHAB		(215)	(137)	(2)	0	0	0	0	0	0	0	(354)	
	ASHRIDGES BAY TP YR2005		(36)	(24)	(1)	0	0	0	0	0	0	0	(61)	
	BASEMENT FLOODING RELIEF		(10,739)	(9,556)	(14,311)	(11,165)	(9,017)	(8,775)	(7,211)	(665)	(10)	0	(71,449)	
	DIST SEWER REHAB OPS YR2005		0	0	0	0	0	0	0	0	0	0	0	
	DON & WATERFRONT TRUNK CSO		(11,355)	(6,388)	(6,433)	(7,937)	(7,979)	(6,731)	(12,908)	(20,354)	(24,761)	(21,999)	(126,845)	
	Georgetown South City Infrastructure Upgrades		(565)	0	0	0	0	0	0	0	0	0	(565)	
	HIGHLAND CREEK WWTP - ODOUR CONTROL		(955)	(658)	(10)	(5)	(3)	(37)	(92)	(596)	(1,037)	(963)	(4,356)	
	HIGHLAND CREEK WWTP - SOLIDS & GAS HANDLING		(626)	(355)	(828)	(1,841)	(1,949)	(1,953)	(1,443)	(14)	(4)	0	(9,013)	
	HIGHLAND CREEK WWTP UPGRADES		(56)	(233)	0	0	0	0	0	0	0	0	(289)	
	HUMBER TP YR2005		0	0	0	0	0	0	0	0	0	0	0	
	HUMBER WWTP - LIQUID TREATMENT & HANDLING		(4,227)	(2,578)	(1,165)	(1,603)	(1,283)	(138)	(473)	(2,960)	(3,211)	(2,936)	(20,574)	
	HUMBER WWTP - ODOUR CONTROL		(264)	(213)	(111)	(52)	0	0	0	(50)	0	0	(690)	
	NEW SEWER CONSTRUCTION SEWAGE PUMPING STATION UPGRADES		(444)	(673)	(1,027)	(1,456)	(974)	(1,107)	(484)	(147)	0	0	(6,312)	
	SEWER ASSET PLANNING		(667)	(625)	(623)	(444)	(382)	(358)	(353)	(334)	(334)	(334)	(4,454)	
	SEWER REPLACEMENT PROGRAM		(2,505)	(1,939)	(1,699)	(1,154)	(1,099)	(715)	(715)	(715)	(715)	(715)	(11,971)	
	SEWER SYSTEM REHABILITATION		(771)	(233)	(165)	0	0	0	0	0	0	0	(1,169)	
	TRUNK SEWER SYSTEM		(6)	(116)	(1,367)	(4,783)	(10,936)	(20,213)	(20,290)	(20,136)	(20,020)	(20,020)	(117,887)	
	SWM END OF PIPE FACILITIES		(48)	(35)	(161)	(138)	0	0	0	0	0	0	(382)	
	Total Withdrawals		(49,719)	(64,252)	(53,186)	(56,385)	(57,442)	(66,398)	(74,828)	(76,074)	(78,840)	(78,462)	(57,389)	(663,256)
	Contribution:													
	- Projected Contribution		42,487	34,259	23,089	32,969	48,041	50,228	52,509	54,903	57,402	60,013	62,599	518,499
	- Other Program/Agency Net Withdrawals and Contribution		(217)	(512)	(512)	(512)	(512)	(512)	(512)	(512)	(512)	(512)	0	(4,313)
	Total Contribution		42,487	34,042	22,577	32,457	47,529	49,716	51,997	54,391	56,890	59,501	62,599	514,186
	Balance at Year-End		99,243	69,033	38,424	14,496	4,583	(12,099)	(34,930)	(56,613)	(78,563)	(97,524)	(92,314)	

* Based on the most recent estimates

Reserve Fund Name	Project Name	Projected Balance at Dec 31, 2019	2020 Budget	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	Total 2020-2029	
Stormwater Management Development Charges Reserve Fund XR2113 (in \$000s)	Beginning Balance	28,925	38,136	38,505	29,536	20,435	15,836	12,577	10,209	7,173	3,904	(2)		
	Withdrawals													
	EMERY CREEK POND		(17)	(45)	0	0	0	0	0	0	0	0	(62)	
	Land Acquisition for Source Water Protect		0	(229)	(229)	(275)	(275)	(275)	(275)	(275)	(275)	(275)	(2,383)	
	STREAM RESTORATION & EROSION CONTROL		(244)	(231)	(143)	(135)	(87)	(62)	(53)	0	0	0	(955)	
	SWM TRCA FUNDING		(681)	(433)	(444)	(455)	(466)	(478)	(490)	(502)	(515)	(515)	(4,979)	
	SWM END OF PIPE FACILITIES		(131)	(711)	(1,193)	(1,304)	(390)	(195)	(1,796)	(2,807)	(4,201)	(5,458)	(18,186)	
	WESTERN BEACHES RETROFIT		(1,473)	(1,932)	(1,095)	(5)	0	0	0	0	0	0	(4,505)	
	WET WEATHER FLOW MP		(531)	(369)	(278)	(223)	(296)	(286)	(56)	(56)	(56)	(74)	(2,225)	
	Total Withdrawals		(1,959)	(3,077)	(3,950)	(3,382)	(2,397)	(1,514)	(1,296)	(2,670)	(3,640)	(5,047)	(6,322)	(33,295)
	Contribution:													
	- Projected Contribution		12,420	10,105	6,810	9,725	14,170	14,815	15,488	16,194	16,931	17,701	18,464	152,823
	- Other Program/Agency Net Withdrawals and Contribution		(1,250)	(6,659)	(11,829)	(15,444)	(16,372)	(16,560)	(16,560)	(16,560)	(16,560)	(16,560)	0	(133,104)
	Total Contribution		11,170	3,446	(5,019)	(5,719)	(2,202)	(1,745)	(1,072)	(366)	371	1,141	18,464	19,719
	Balance at Year-End		38,136	38,505	29,536	20,435	15,836	12,577	10,209	7,173	3,904	(2)	12,140	

* Based on the most recent estimates

Appendix 9

Glossary of Terms

Actuals: An actual financial amount paid (or received) for the delivery of City services.

Capacity to Spend: Ability to spend money along with the capacity to deliver projects as demonstrated by historic spending patterns and approved contractual obligations.

Capital Budget: A Capital Budget is the City's plan to acquire / build assets or extend the useful life of existing assets; an example of a capital expenditure is the construction of a new community centre.

Capital Needs Constraints: The capital needs that cannot be accommodated within the capital plan that the Division or Agency have the capacity to deliver.

Complement: Positions that support the delivery of City services and service levels as approved by Council.

Efficiencies: Reductions in the cost of delivering a service without a reduction in service level.

New / Enhanced: New and enhanced service changes resulting in an increase in service levels from what was previously approved by Council.

Operating Budget: An Operating Budget is the City's annual plan to provide services to the residents of Toronto; the budget includes all revenues and expenses needed to provided services; an example of an operating cost would be the cost to run the TTC subways.

Operating Impact of Completed Capital Projects: The additional expense (or savings) and positions needed to operate or maintain a new asset; an example would be the additional expense and staff needed to operate a recently completed community centre.

Rate Supported Budget: Budget fully funded by user fees such as Solid Waste, Toronto Water and Toronto Parking Authority

Staff Recommended Operating / Capital Budget: An operating or capital budget recommended by City Manager and Chief Financial Officer and Treasurer to City Council for consideration and approval.

State of Good Repair: The cost of maintaining assets to ensure they are able to support the delivery of City services and meet service outcomes

Tax Supported Budget: Budget funded by property taxes.

User Fees: Program generated fee and rental revenue for the use of its services (such as the TTC fare, ice rental fees and various City permits).

Value Based Outcome Review: The City conducted a Value Based Outcome Review in 2019 for all of its operations and agencies to identify specific opportunities and strategies to maximize the use of tax dollars, enhance its financial sustainability while achieving service outcomes. These opportunities will help the City chart its financial course in the next four years.