



Toronto Water

**Staff Recommended 2020 Operating Budget
2020 – 2029 Capital Budget, Plan & Water Rate**

**Budget Briefing to Budget Committee
November 15, 2019**

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Overview and Highlights

2020 Staff Recommended Operating Budget and Plan

2020 – 2029 Staff Recommended Capital Budget and Plan

Rate Changes

Overview and Highlights

- Toronto Water manages one of the largest utilities in North America, operating 24 hours a day, seven days a week.
- We serve 3.6 million residents and businesses in Toronto, and portions of York and Peel protecting public health, safety and property in an environmentally and a fiscally responsible manner.
- The following services are delivered to Toronto residents, businesses and visitors:



safe drinking water



wastewater collection
and treatment



stormwater management



	Outcomes	Description
Water Treatment & Supply	Supply +435 billion litres 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.
Wastewater Collection & Treatment	Return to Lake Ontario +400 billion litres 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 impact of runoff from rainwater and melted snow flowing into streams, rivers and Lake Ontario and manage basement flooding.

Water Treatment & Supply



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, \$483.6 million is drawn from Toronto Water's capital reserves to accommodate development growth over the next 10 years.

Wastewater Treatment & Collection



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.

Stormwater Management



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 and continued vigilance with regards to Cyber Security.

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.

Water Treatment & Supply



Wastewater Treatment & Collection



Stormwater Management



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 \$3.87 billion to protect the environment and lake, river and stream water quality including \$2.11 billion for the Basement Flooding Protection Program, completion of Environmental Assessments for all Basement Flooding Studies Areas by 2024 and investing \$1.37 billion over the 10 years to implement the Don River and Central Waterfront project, with all projects phases forecasted for completion in 2038.

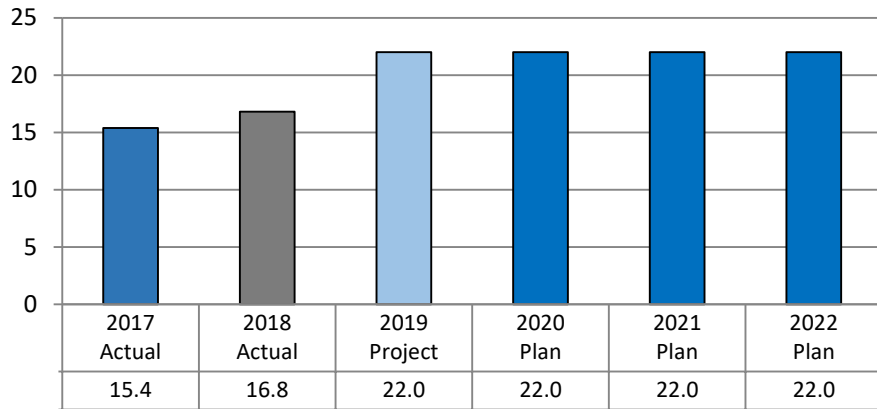
Modernization: Planning for resources to implement, support and maintain new technologies.

Customer Service: Ensure efficient and effective response times for customer service demands including improved customer service culture, technology and infrastructure.

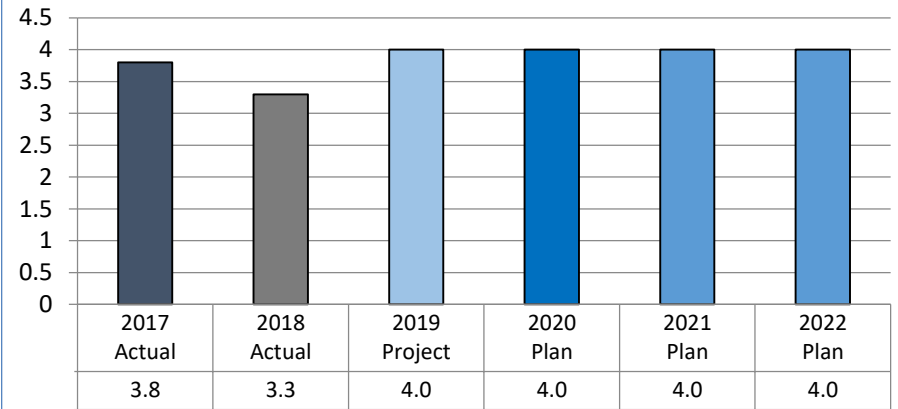
Workforce Strategies: Ongoing development of hiring strategies for critical, vulnerable and hard to fill positions including on-the-job training programs and planning for demographic changes.

State of Good Repair: Continued long-term investment in SOGR projects and reducing the backlog to \$83.8 million by 2029, effectively eliminating the backlog.

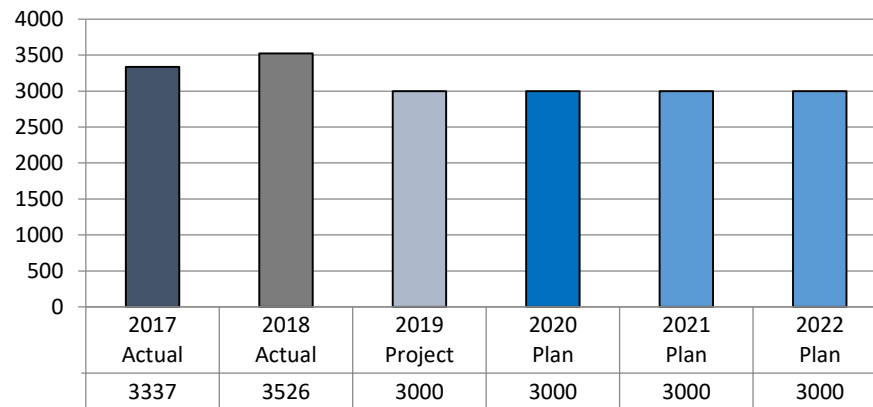
Watermain Breaks per 100 KM Water Distribution Pipe



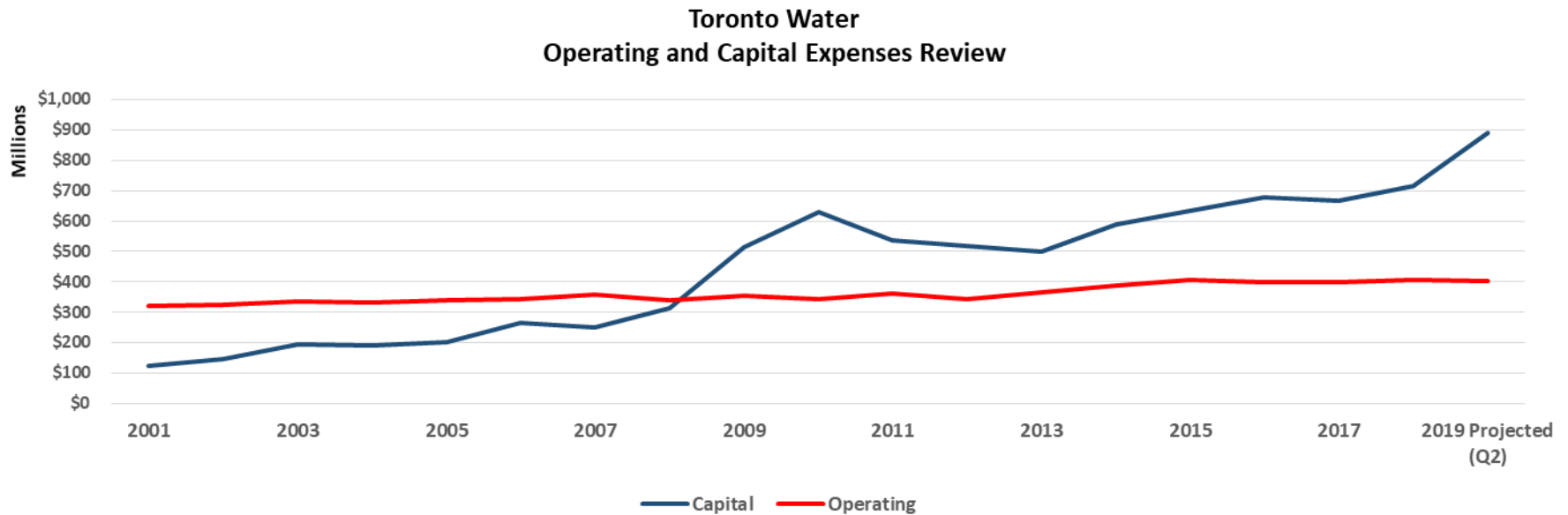
Wastewater Main Backups per 100 KM Wastewater Main



Water Course Inlet/Outlet Inspections (#)



2020 Staff Recommended Operating Budget and Plan



Stable Operating Costs

- Operating costs have been growing relatively slowly over the past 19 years.

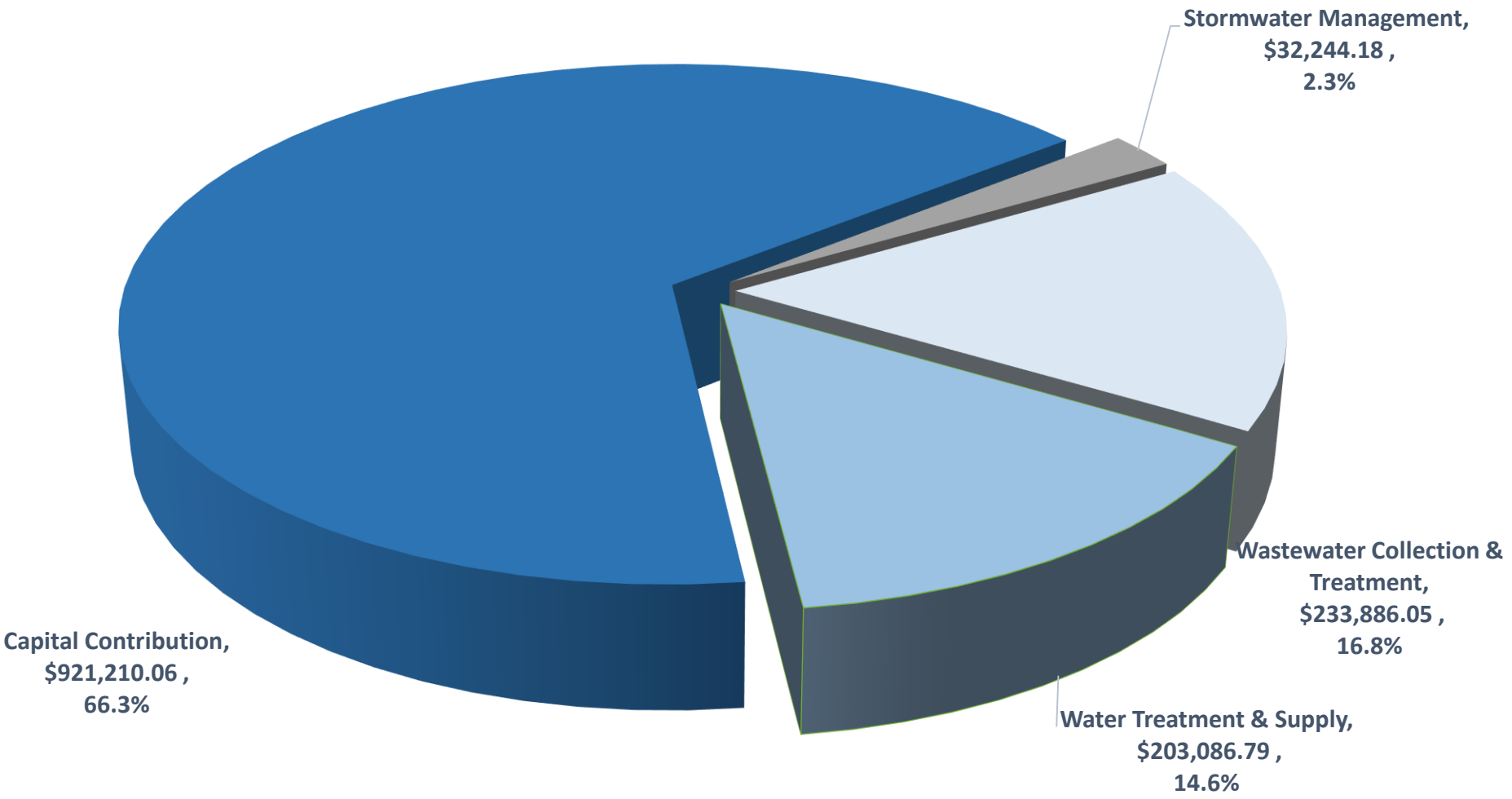
Capital Spending

- Increased revenue generated by rate increases have been reinvested in infrastructure.
- 2018 and Projected 2019 capital spending (\$715M) and (\$890M) are the highest in Toronto Water history.

2020 Staff Recommended Operating Budget

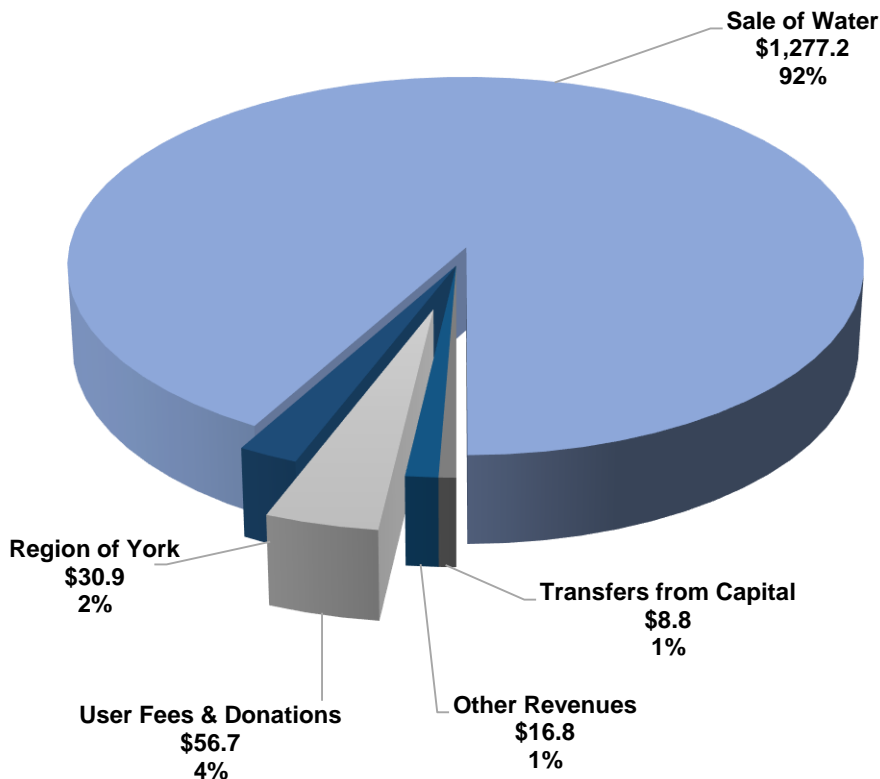
(In \$000s)	2017 Actual	2018 Actual	2019 Approved Budget	2019 Projected Actual	2020 Base Budget	2020 New / Enhanced	2020 Staff Rec'd Budget	Change v. 2019 Projected Actual	
By Service								\$	%
Revenues									
Water Treatment & Supply	535,770.3	574,230.4	586,263.7	590,705.9	614,385.4	151.2	614,536.6	23,830.7	4.0%
Wastewater Collection & Treatment	685,372.4	742,743.2	739,608.2	741,490.2	770,006.5	131.9	770,138.4	28,648.2	3.9%
Stormwater Management	5,253.4	5,115.8	5,517.8	4,733.4	5,748.7	3.4	5,752.1	1,018.7	21.5%
Total Revenues	1,226,396.1	1,322,089.4	1,331,389.7	1,336,929.5	1,390,140.6	286.5	1,390,427.1	53,497.6	4.0%
Expenses									
Water Treatment & Supply	186,849.6	187,909.3	201,634.5	190,172.7	202,882.6	204.2	203,086.8	12,914.1	6.8%
Wastewater Collection & Treatment	196,535.0	201,682.5	231,423.5	222,619.9	233,700.1	185.9	233,886.0	11,266.2	5.1%
Stormwater Management	27,688.8	25,484.5	31,340.9	28,106.3	32,239.8	4.4	32,244.2	4,137.8	14.7%
Subtotal Gross Expenditures	411,073.3	415,076.3	464,398.9	440,898.9	468,822.5	394.5	469,217.0	28,318.1	6.4%
Capital Contribution	815,322.8	907,013.1	866,990.8	896,030.6	921,318.1	(108.0)	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	1,390,140.6	286.5	1,390,427.1	53,497.6	4.0%
Approved Positions	1,752.7	1,764.7	1,805.7	1,805.7	1,816.3	4.0	1,820.3	14.6	0.8%

2020 Recommended Operating Budget by Service (\$000's) \$1.390 Billion



Where the Money Comes From

\$1,390.4 Million



Key Points

Sale of Water

Represents 92% of total operating revenue

Sale of Water Consumption Forecast

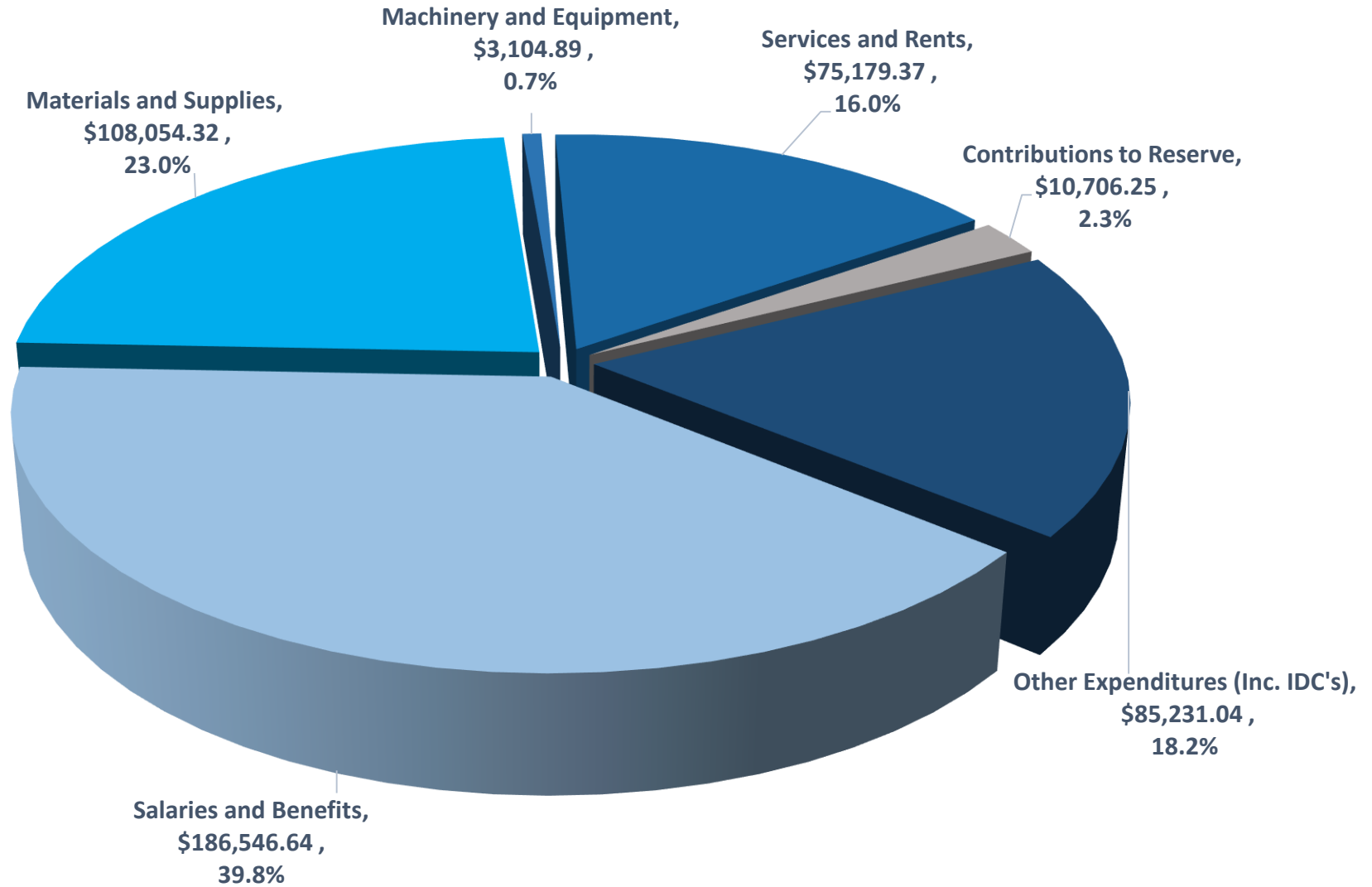
2020 flat and forward: 0.5% decrease per year

Rate Increases

2020 and forward: 3%

Daily average cost for residential drinking water, wastewater and stormwater services only \$2.57 per day.

2020 Recommended Base Operating Budget by Expenditure (\$000's) \$468.8 Million



Key Cost Drivers – Base Budget

Key Cost Drivers (In \$000s)	2018 Actuals	2019 Proj. Actuals	2020 Staff Rec'd Base Budget	YoY Changes		Key Drivers to Preserve Service Levels and Address Issues
				\$	%	
Expenditures						
Salaries and Benefits	169,773.4	178,951.0	186,546.6	7,595.7	4.2%	Salaries and Benefits: Inflationary increases on existing staffing costs and additional net 10.6 positions to operate new facilities and infrastructure, deliver capital projects, and support Utility Cut Program are included in the base budget as previously identified.
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 (Inc. IDC's)	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%	Materials and Supplies: Energy and chemical inflationary increases higher than CPI, offset by ongoing hydro savings and efficiencies (\$4.8 million) through implementation of various utility conservation oriented initiatives.
Contribution To Capital	907,013.1	896,030.6	921,318.1	25,287.5	2.8%	
Total 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%	Services and Rents: Inflationary increases on existing service contracts and annualised costs for the Utility Cut Program.
User Fees	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 (Inc. IDR's)	41,109.9	39,393.4	47,628.1	8,234.7	20.9%	
Total Revenues	1,322,089.4	1,336,929.5	1,390,140.6	53,211.1	4.0%	Contribution to Capital: Approximately 66% of the 2020 Operating Budget will go towards the annual capital reserve contribution to support the 10-Year Capital Plan. The 2020 budget also includes provisions for contingencies and estimates based on fluctuating weather conditions.
Approved Positions	1,764.7	1,805.7	1,816.3	10.6	0.6%	
Revenue Changes: 2020 rate increase of 3 per cent will go towards the Contribution to Capital. Additional revenue to reflect volume and price of water sold to Region of York and increase in new water connections.						

Key Cost Drivers – Other Efficiencies/Savings

Other Efficiencies/Savings (In \$000s)								
Recommendations	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)				
Region of York - Rate Change	Auditor General Recommendations	3,818.4		(3,818.4)				
Budget Increase/(Decrease)		3,818.4	(9,969.3)	(13,787.7)	(1,236.9)	(1,236.9)	(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 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** - The expected 2020 wholesale water rate with York Region has increased in accordance with the City of Toronto and Region Municipality of York Agreement. The review of the Agreement considered recommendation from Auditor General Office.

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	

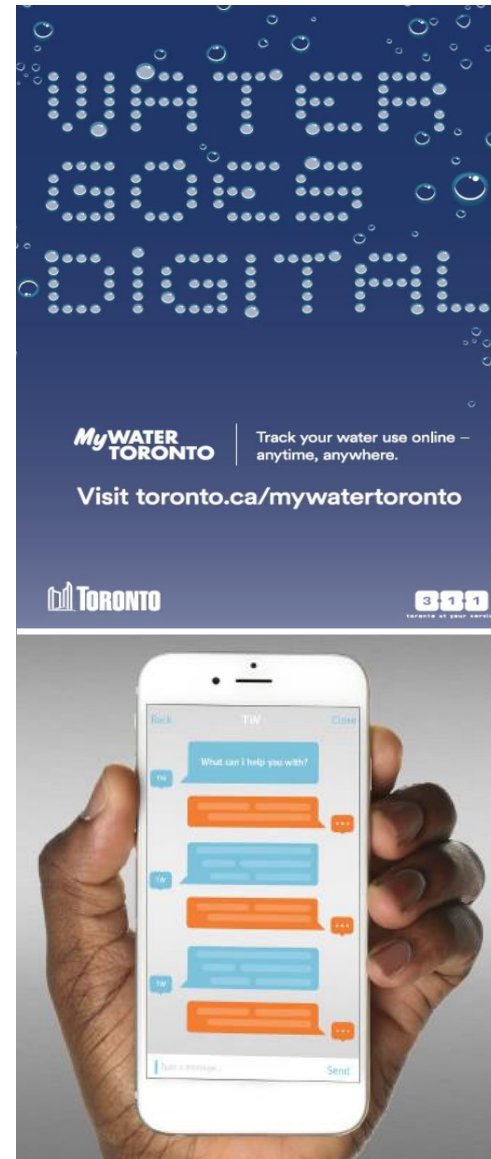
Technology Optimization Strategy

- Toronto Water’s Technology and Data Strategy includes the addition of 3 new positions to support improvement of governance of data, enterprise system integration, analytics and Cyber Security.
- The Strategy was created by reviewing practises within Toronto Water and other leading municipalities.
- The additional resources will expand capability and capacity to support project and data governance and ongoing support to ensure application and data integrity. Additional positions are proposed in future outlook years (4 in 2021 and 4 in 2022).



eCRM Salesforce Implementation and Integration

- 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 additional resource would support Toronto Water's Enterprise Solution Management unit's activities and provide testing, impact analysis, design review and sustainment.



(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

	2021 Drivers	2022 Drivers
Salaries & Benefits:	\$3.1M	\$3.1M
Inflation Impact:	\$8.0M	\$7.2 M
Permanent Surface Reinstatement	\$7.8M	\$0.2M
Reserve Contribution:	\$14.1M	\$19.5

2020 – 2029

Staff Recommended

Capital Budget and Plan



Water – \$9.2 Billion

- 4 water filtration plants
- 11 reservoirs and 4 elevated storage tanks
- 5,547 km of distribution watermains and 544 km of trunk watermains
- 67,015 valves and 41,903 hydrants
- 515,016 water service connections, plus York Region (population served: 600,000)
- 18 water pumping stations



Wastewater – \$11.5 Billion

- 4 wastewater treatment plants
- 3,726 km sanitary sewers, 1,517 km combined sewers
- 253 km sanitary trunk, 121 km combined trunk
- 57,477 sanitary maintenance holes, 23,987 combined maintenance holes
- 509,003 sewer service connections
- 67 sanitary pumping stations, 8 combined pumping stations

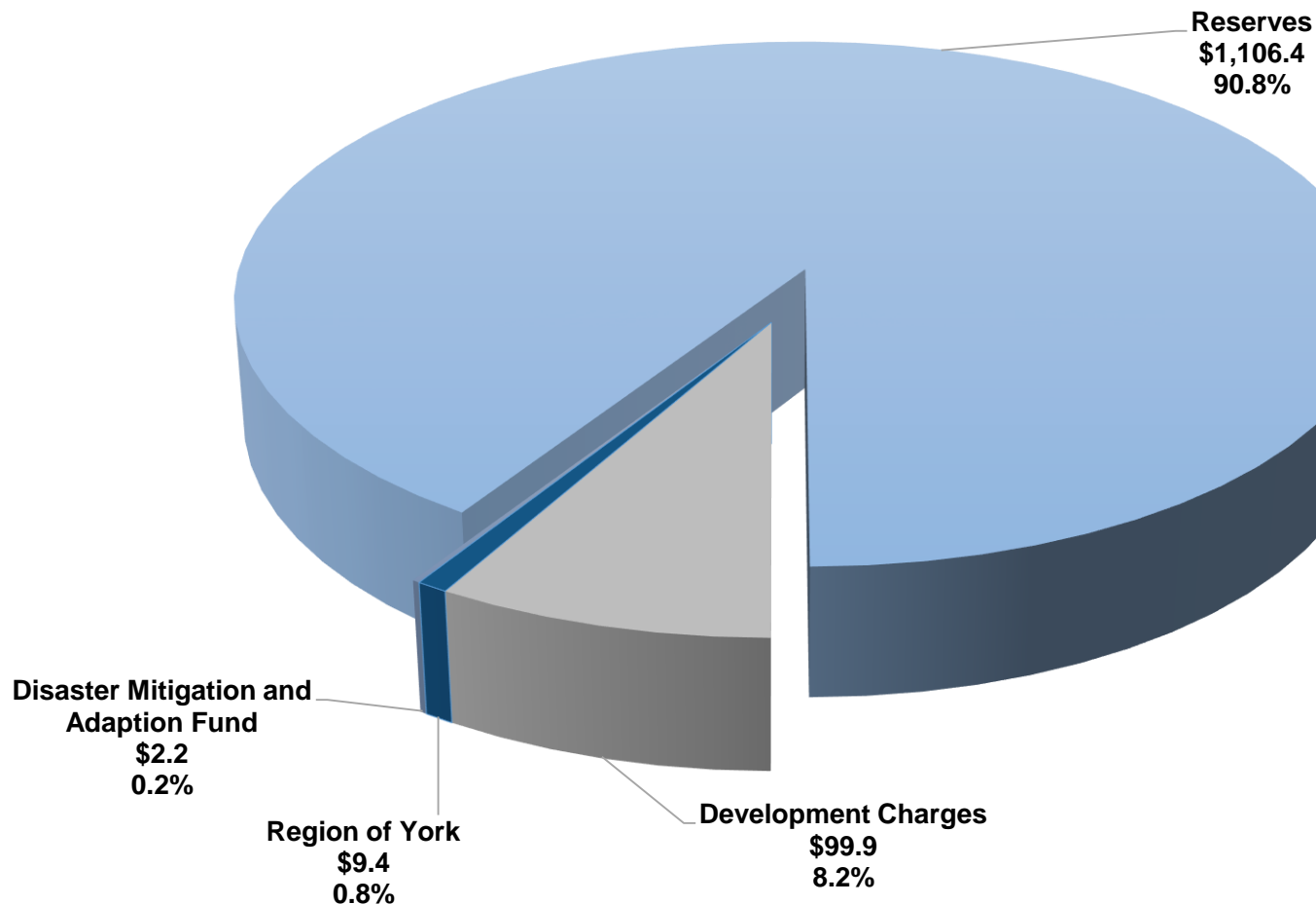


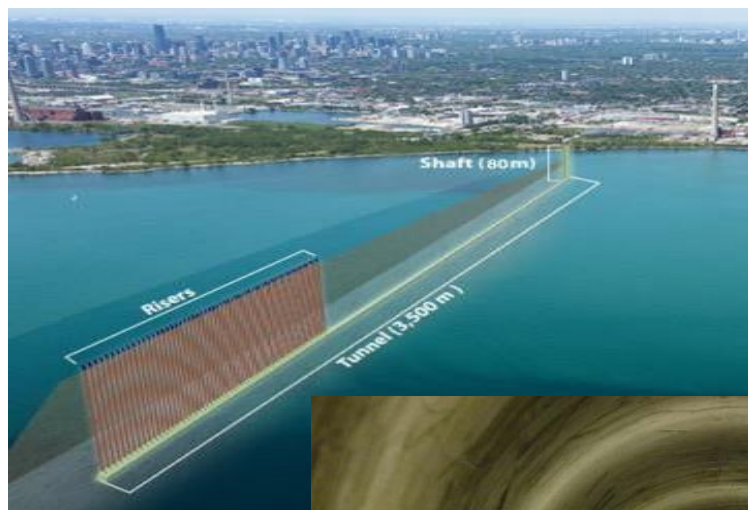
Stormwater – \$7.9 Billion

- 7 storage and detention tanks
- 4,893 km of storm sewers, and 27.5 km of trunk sewers
- 75,482 maintenance holes
- 371 km of watercourses, 84 stormwater management ponds
- 1,873 outfalls and 188,189 catch basins
- 12 stormwater pumping stations

Where the Money Comes From

2020 Capital Budget \$1,217.8 Million





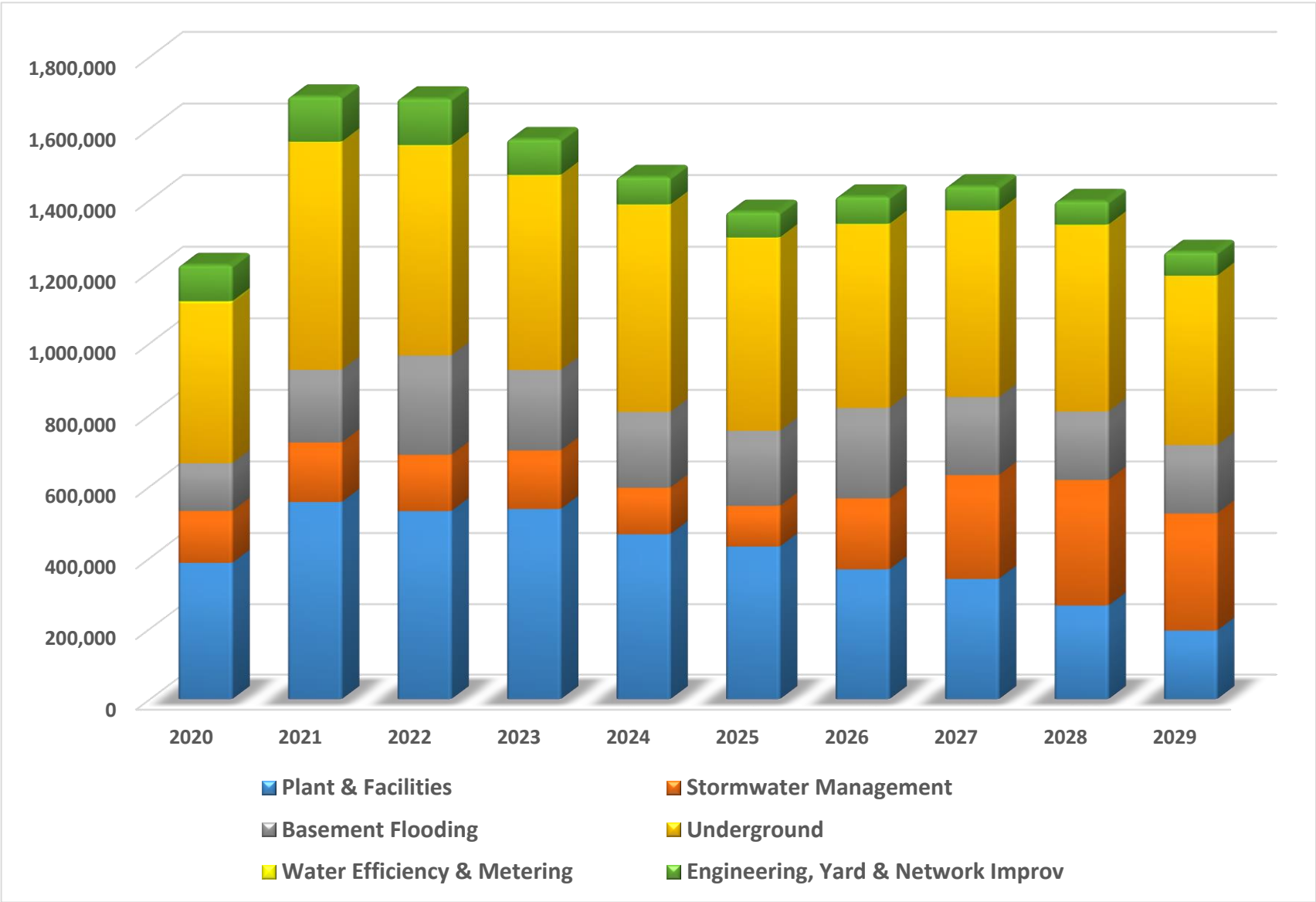
What This Buys

- \$4.5 billion of Water Treatment & Supply projects, including \$2.0 billion for watermain replacement and rehabilitation
- \$5.9 billion of Wastewater Treatment & Collection projects, including \$3.2 billion for upgrades at wastewater treatment plants, and \$1.9 billion for sewer and trunk sewer replacement and rehabilitation.
- \$4.2 billion of Stormwater Management projects. Continued investment for Basement Flooding Program and Wet Weather Flow Master Plan.

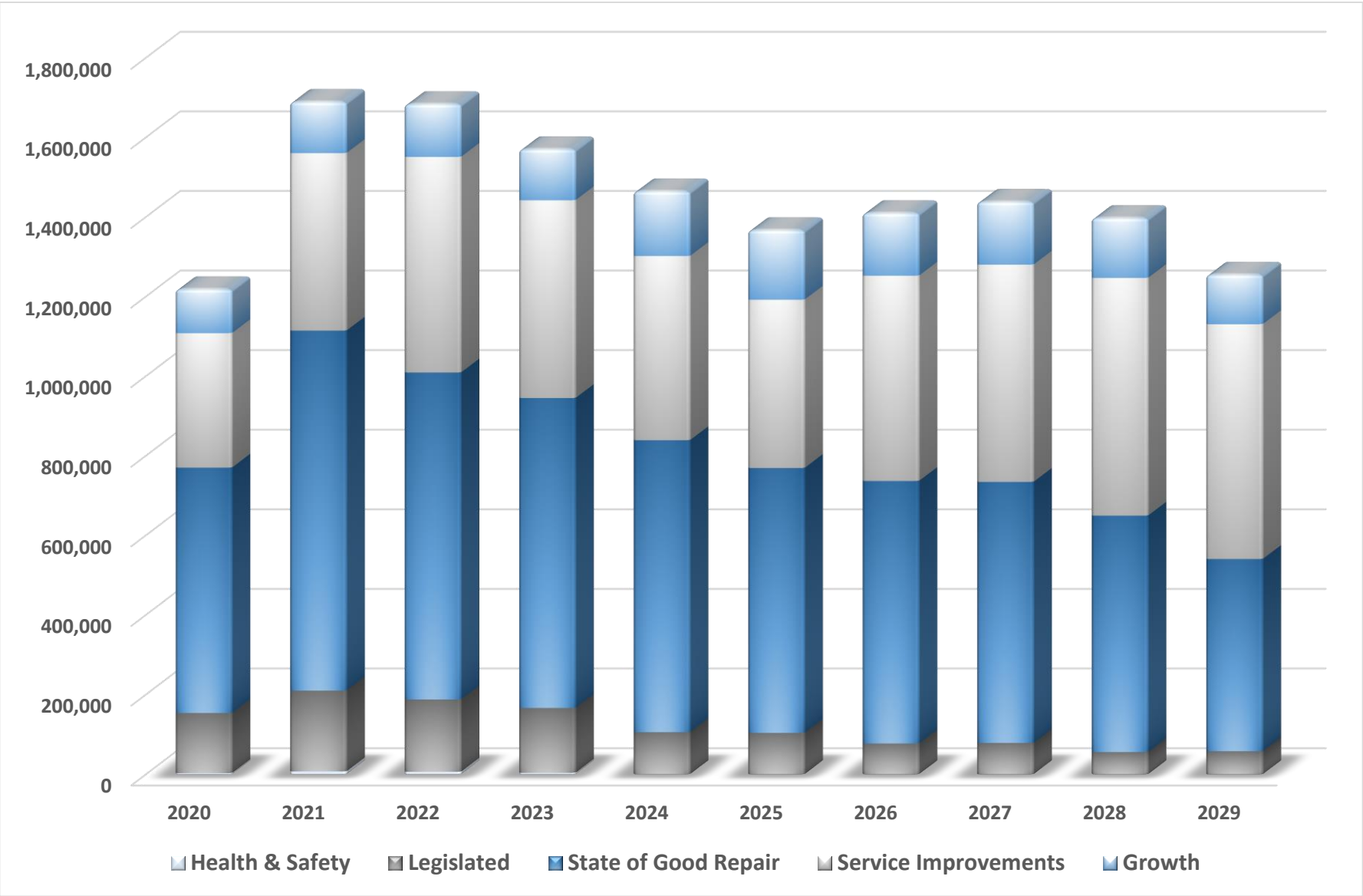
\$14.488B - 10 YEAR GROSS CAPITAL PROGRAM

Plants & Facilities	Underground Infrastructure	Stormwater Management	Basement Flooding	Engineering, Yard & Network Improvements
\$4.076 B 28%	\$5.349 B 37%	\$2.045 B 14%	\$2.113 B 15%	\$ 0.904 B 6%
Water and Wastewater Plants Pumping Stations Storage & Reservoirs	Watermain and Sewer Replacement and Rehabilitation Water Service Replacement New Connections	Wet Weather Flow Don River & Central Waterfront	Implementation Engineering Studies Subsidy Program	Engineering Support Business & Technology Yards & buildings Water Efficiency & Metering

2020 – 2029 Capital Plan by Asset Class

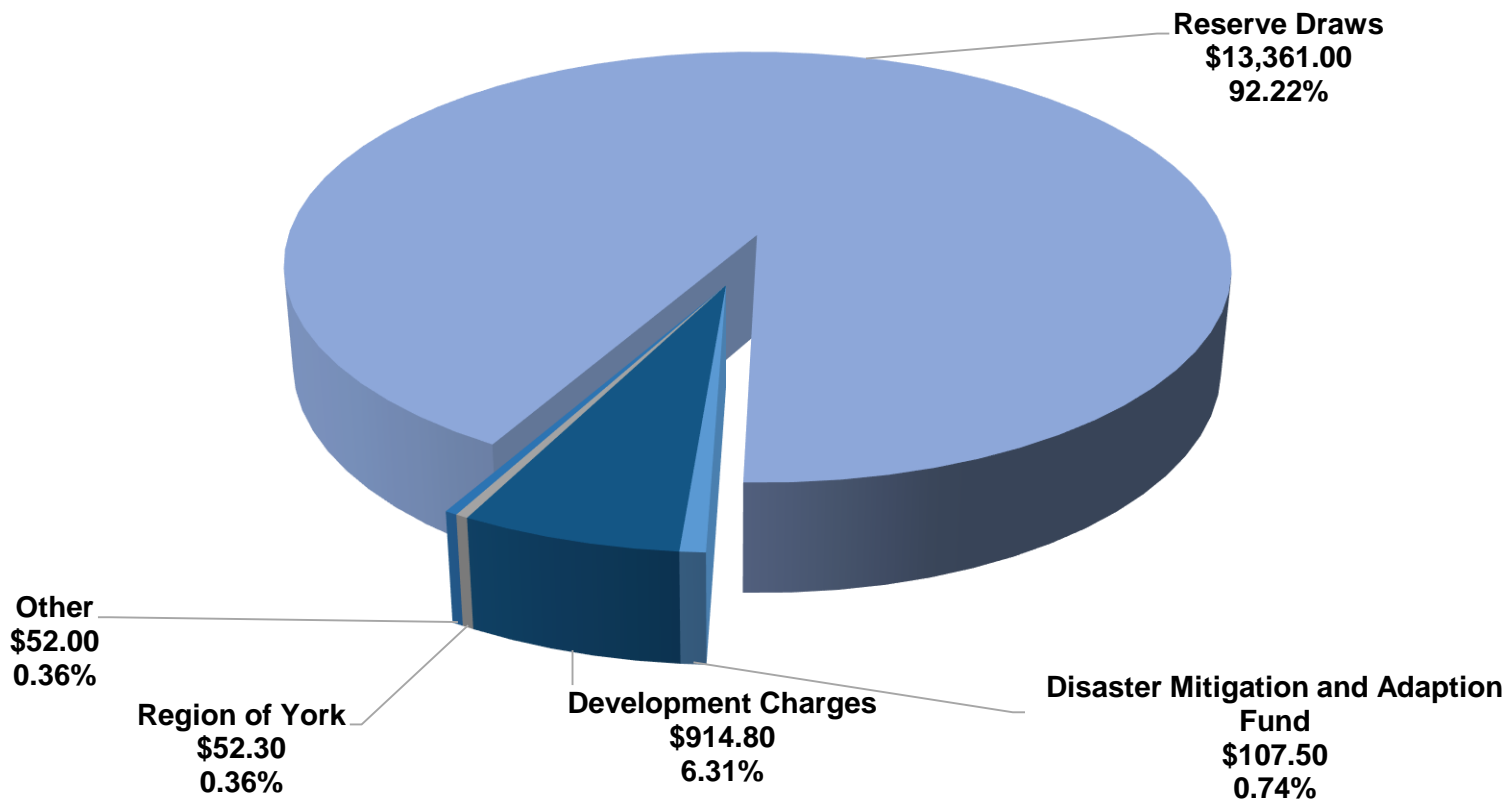


2020 - 2029 Capital Budget & Plan Submission

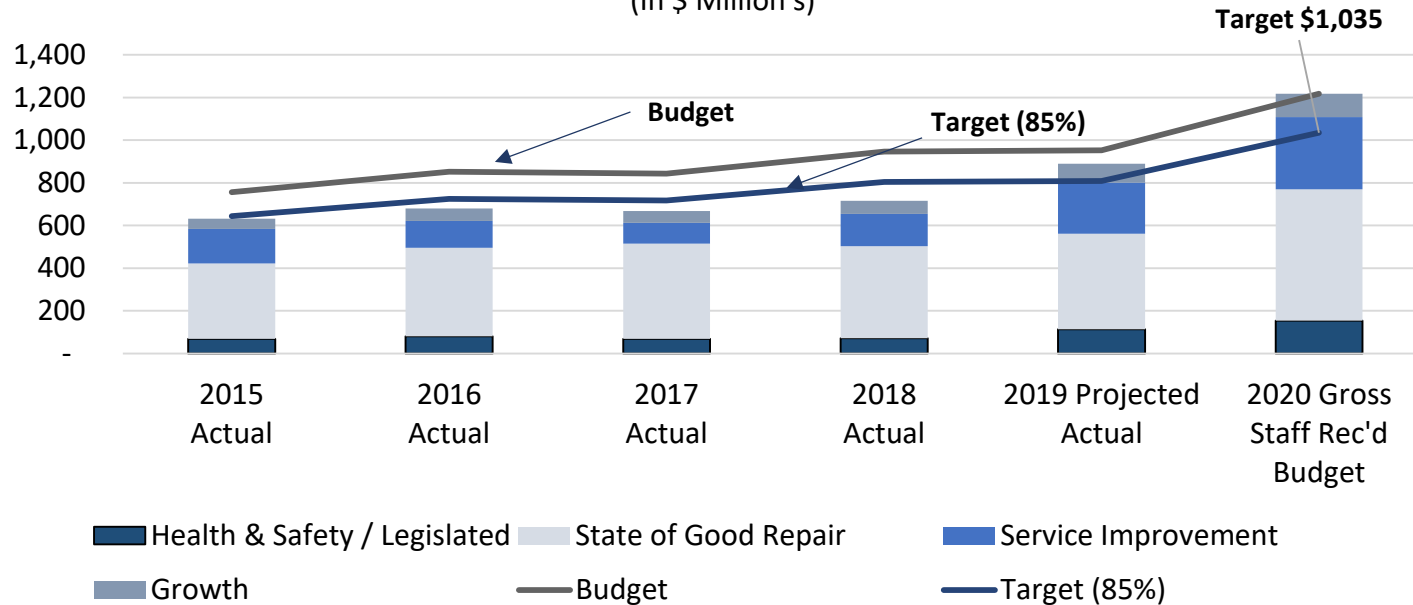


\$14,487.6 M 10 YEAR GROSS CAPITAL PROGRAM TOTAL FUNDING

In \$Millions



Spending by Category (In \$ Million's)



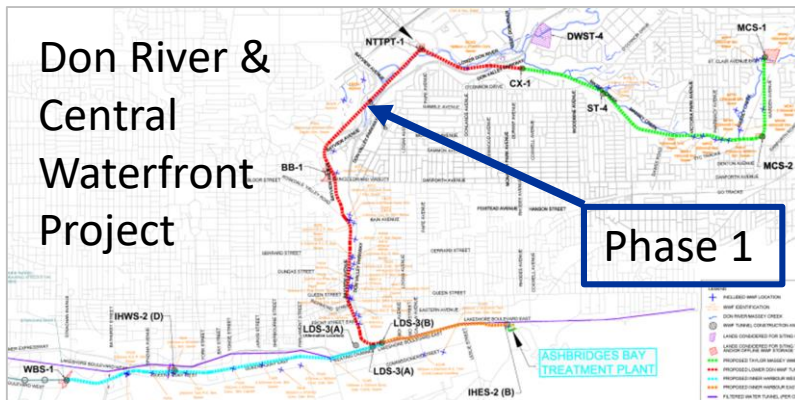
In \$ Millions	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Projected Actual	2020 Gross Staff Rec'd Budget
Health & Safety / Legislated	69	80	68	72	114	154
State of Good Repair	353	416	447	431	447	616
Service Improvement	161	125	97	151	240	338
Growth	49	59	55	61	89	110
Total	632	680	667	715	890	1,218
% Spent	84%	80%	79%	76%	93%	

Capacity to Spend (cont'd.)

Toronto Water Capacity to Deliver

Status / Category	2020 Budget	2020%	2021 Plan	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan	2027 Plan	2028 Plan	2029 Plan	2020 - 2029 Total	2020 - 2029 %
<i>Awarded and/or On-Going</i>	753,067	61.8%	741,818	449,535	311,491	160,059	69,249	29,385	9,084	8,083	6,548	2,538,320	17.5%
<i>Projects that are ready to proceed based on realistic cash-flows</i>	257,922	21.2%	441,437	393,826	253,068	162,015	93,168	64,250	27,075	4,850	5,650	1,703,261	11.8%
<i>Payment To Third Party</i>	125,383	10.3%	121,790	109,624	89,179	74,483	74,069	72,524	73,669	74,872	76,115	891,708	6.2%
<i>In Procurement</i>	71,792	5.9%	92,210	72,176	32,600	6,224	5,411	3,140	520	475	-	284,548	2.0%
<i>Projects based on high level estimates/place holders</i>	9,673	0.8%	291,458	657,927	883,261	1,061,146	1,124,465	1,239,906	1,327,233	1,308,474	1,166,172	9,069,715	62.6%
Total Expenditures by Category (including carry forward)	1,217,837	100.0%	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	14,487,552	100.0%

- Volume of on-going and awarded contracts:** As of mid-October, Toronto Water had over \$2.416 billion in funds committed associated with awarded contracts. Over 60% of the 2020 Cashflow will support the continued delivery of awarded or on-going projects, with an additional 5.9% of 2020 Cashflow associated with projects currently in the procurement process.
- Payments to Third Parties:** Over 10% of the 2020 Cashflow is associated with Payments to Third Parties, including IDCs, Grants, Subsidies, Salary Recoveries and payments to Third Parties (such as Metrolinx, Waterfront Toronto, TCHC, TRCA, etc)
- 85% Delivery Target:** The 2020 financial model assumes that 85% of the net Capital Budget will be drawn from Toronto Water's Capital Reserve, so as not to overstate actual projected funding requirements.



Don River & Central Waterfront Project

Phase 1

Coxwell Bypass Tunnel (10.6 km tunneling)



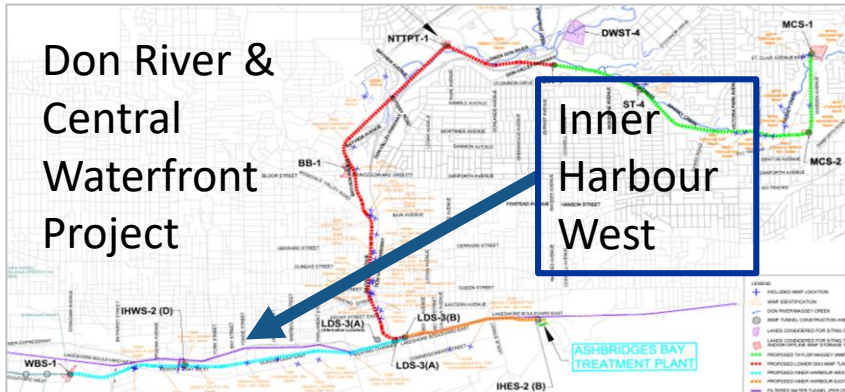
Project	Cost
St. Clair Reservoir Rehabilitation	\$25M
ABTP Service Air P Building Upgrades	\$132M
HTP Secondary Treatment Upgrades – South	\$157
ABTP Disinfection System	\$213M
Don & Central Waterfront – Phase 1	\$404M
Rosehill Reservoir	\$31M
Scarborough Transmission WM	\$37M
ABTP Outfall Construction	\$269M
ABTP Digester 9-12 Refurbishing	\$39M
ABTP Integrated Pumping Station Phase 2*	\$144M
HCTP Liquid Train*	\$91M
HTP Operations Control Centre*	\$30M
HCTP BMP Implementation Pre Purchase*	\$42M
Multi-Year CCTV Inspection Contract*	\$63M
Basement Flooding Area 19 Construction*	\$31M
2019-2021 Watermain Replacement*	\$57M
Basement Flooding Study Areas (All Remaining)*	\$51M

* Projects awarded in 2019 (\$510M)

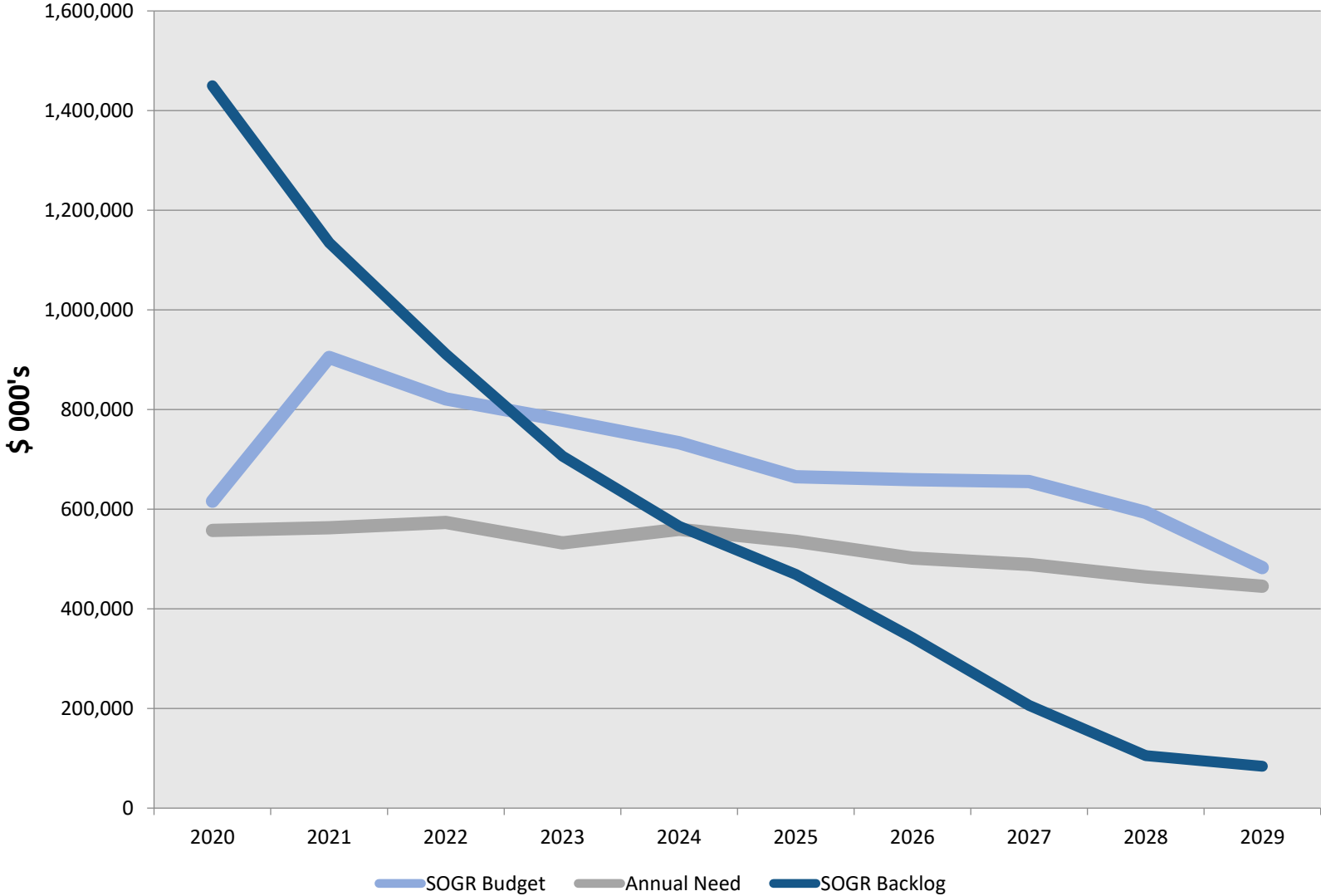


Major Projects to be Awarded in 2019 and 2020 (\$555M)

Project	Cost
ABTP Polymer Upgrade	\$97M
ABTP Waste Activated Sludge Upgrades	\$170M
Western Beaches Tunnel Phase 2	\$25M
Basement Flooding Area 22 Construction	\$27M
ABTP Aeration Tank 12 & 13 Engineering	\$44M
D&CW Inner Harbour West Engineering	\$25M
Basement Flooding Area 15 Construction	\$72M
Program Management Engineering	\$74M
Pumping Stations Group 6 Construction	\$22M

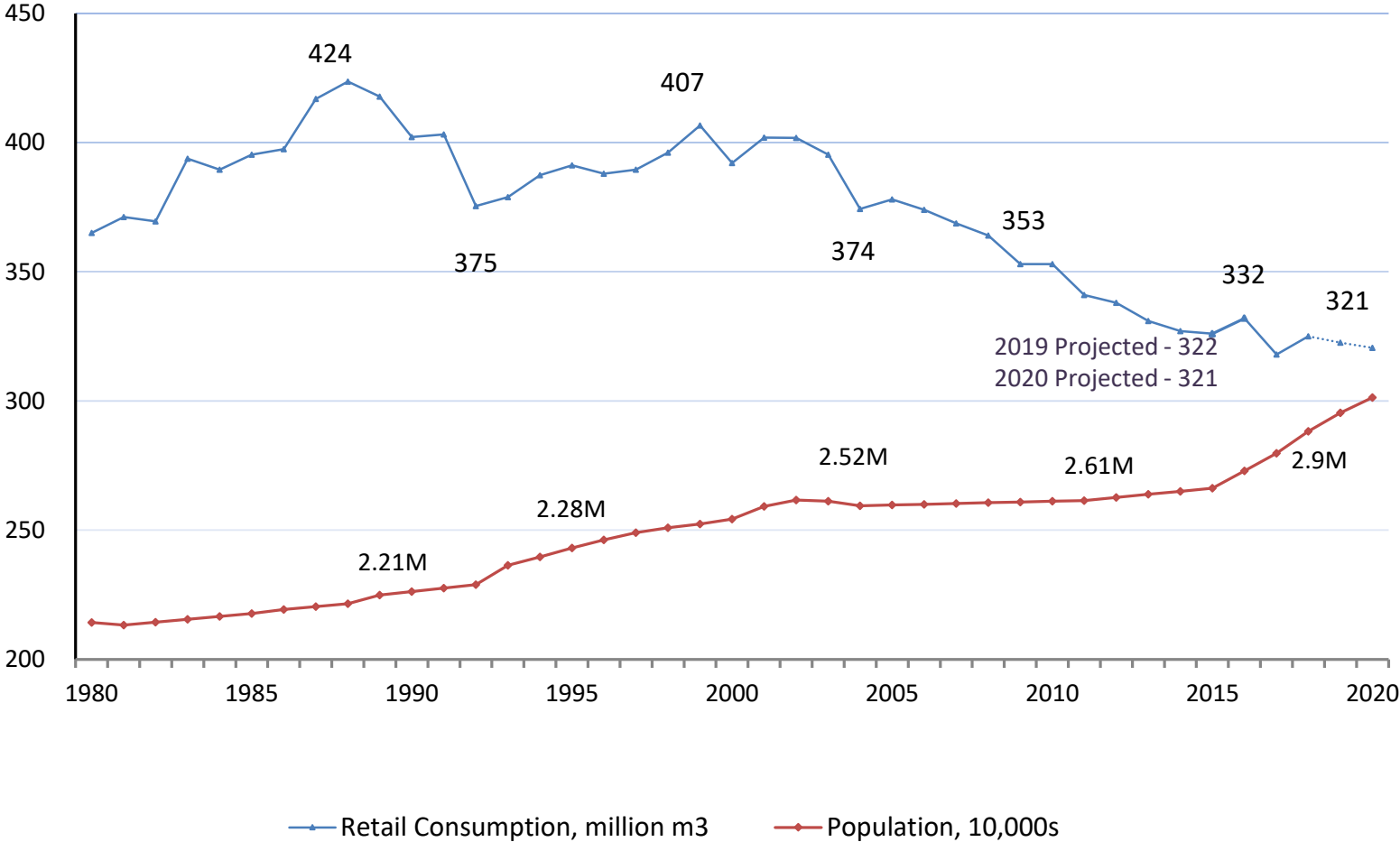


State of Good Repair Backlog & Funding

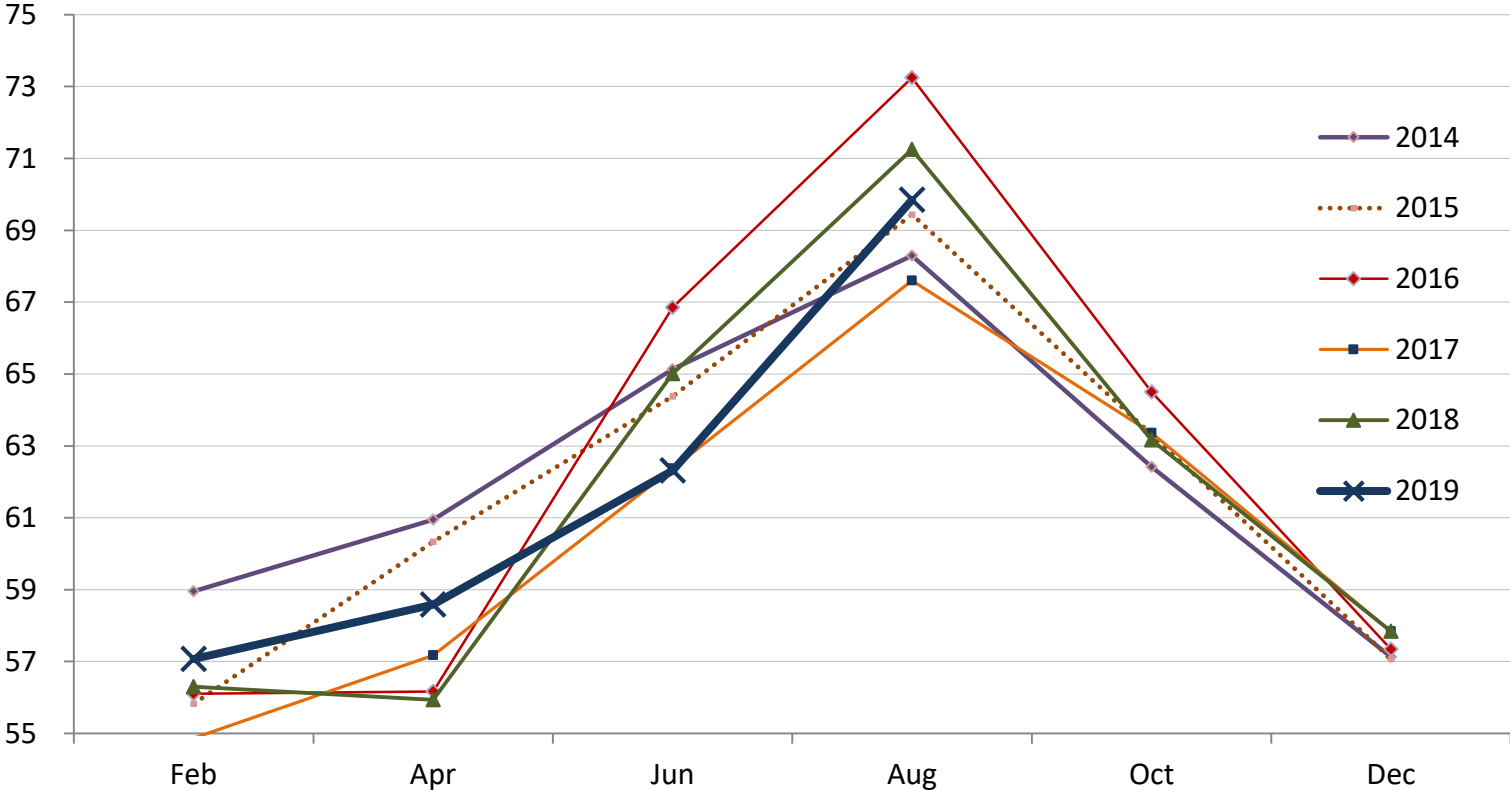


2020 Recommended Rate Changes

Population and Water Consumption

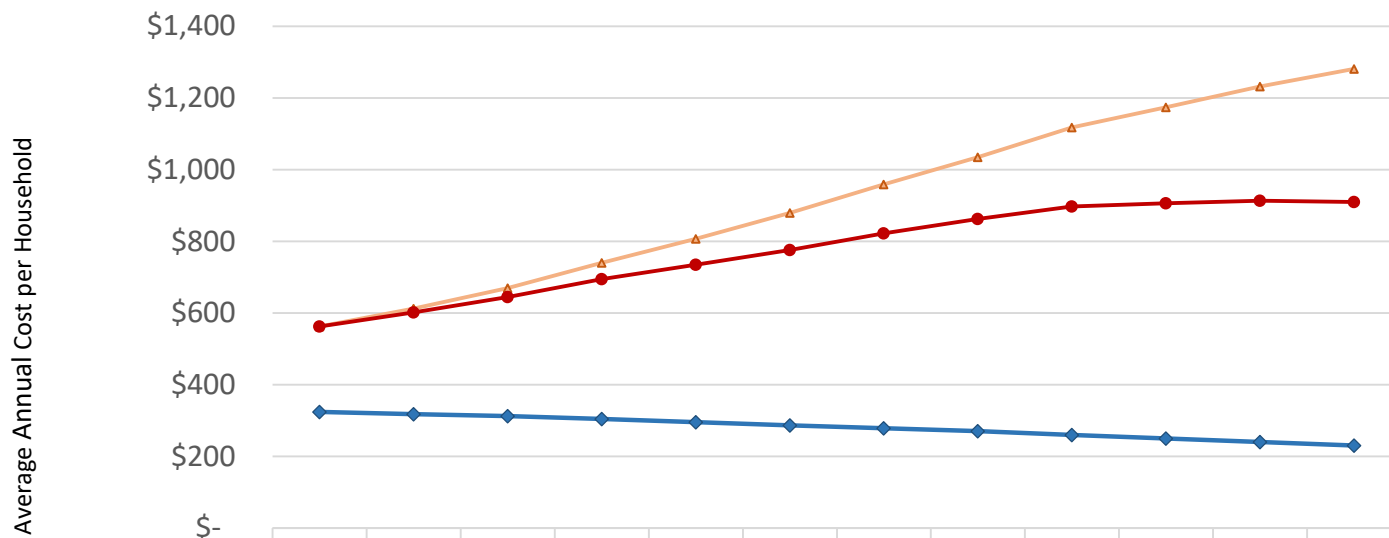


Toronto Water Production 2014-2019, m³ bi-monthly



Impact of Rate Increases

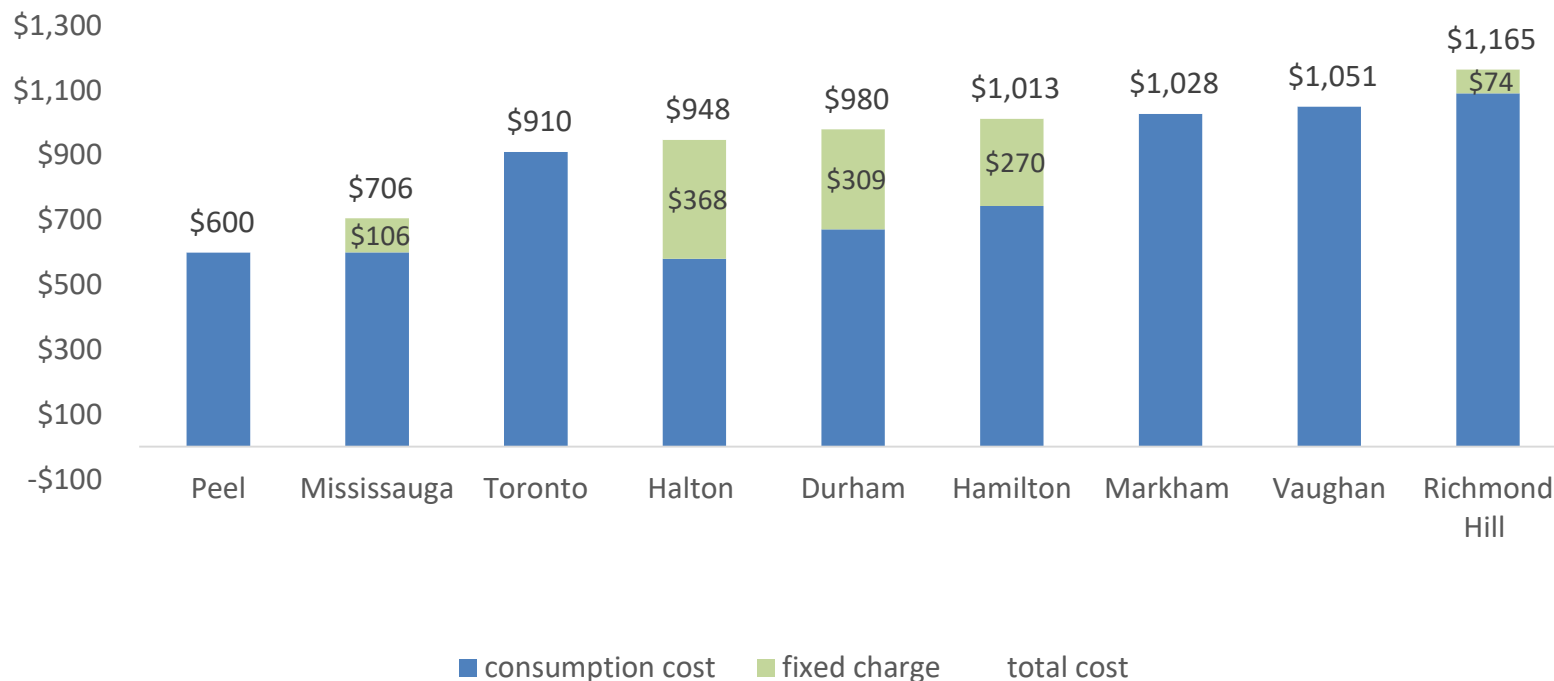
Average Residential Cost



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
—▲ Residential cost with constant consumption at 2008 level, \$/y	\$562	\$613	\$669	\$740	\$807	\$879	\$958	\$1,035	\$1,118	\$1,174	\$1,232	\$1,281
—● Residential cost with actual consumption \$/y	562	601	645	694	734	776	822	863	897	906	913	910
—◆ Average annual consumption per household m3/y	324	318	312	304	295	286	278	270	260	250	240	230

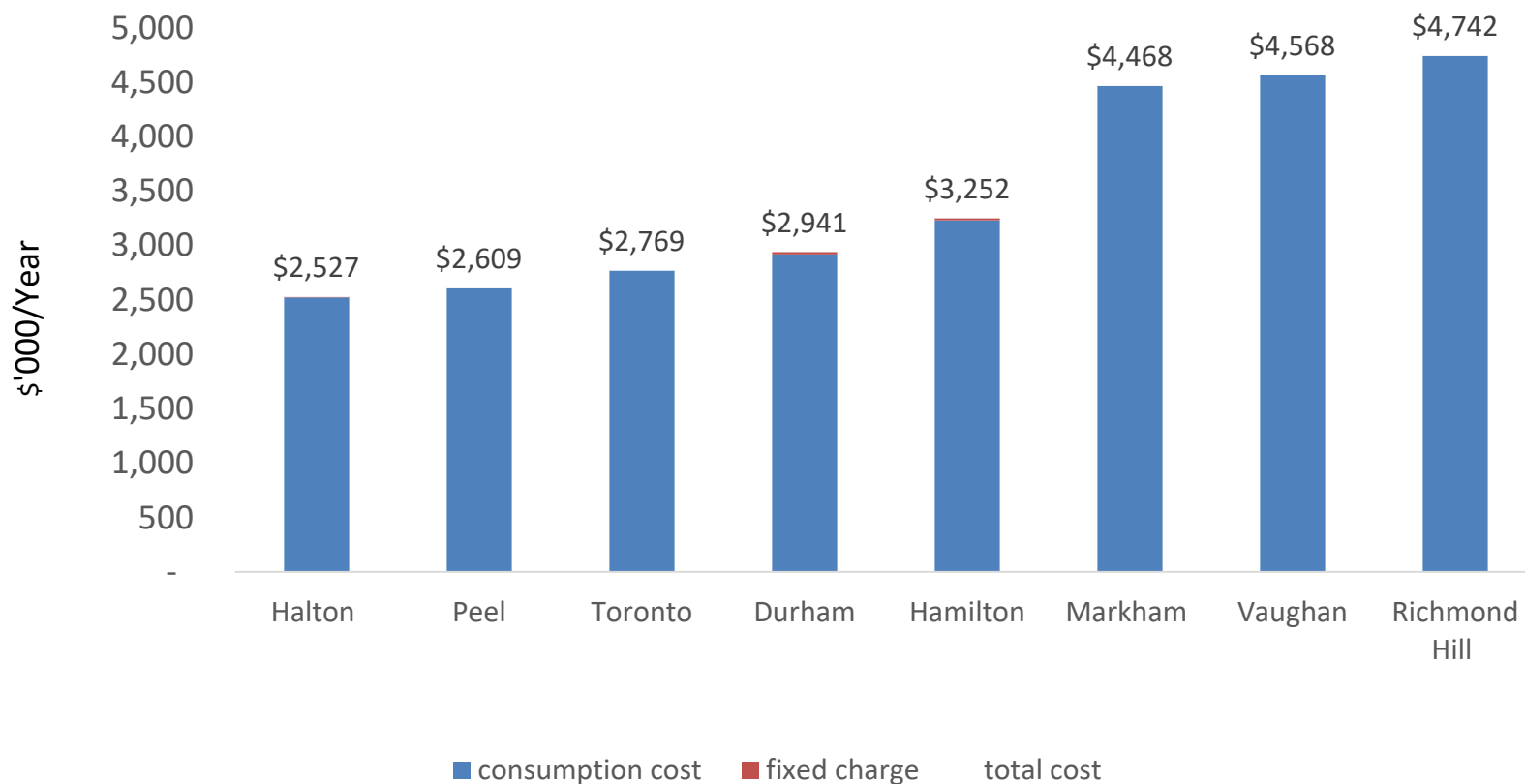
How Does Toronto Compare?

2019 Residential Cost
230 m³/year



How Does Toronto Compare?

2019 Industrial Cost 1,000,000 m³/year



2020 Water Rate Increase Impact

Type of Property	Average Consumption	2019 Annualized Cost	2020 Projected Cost	2020 Rate Increase Impact	
Residential	230	\$910	\$937	\$27	3.00%
Commercial	100,000	\$395,490	\$407,350	\$11,860	3.00%
Industrial	100,000	\$282,754	\$291,232	\$8,478	3.00%
Large Industrial	1,000,000	\$2,774,134	\$2,857,312	\$83,178	3.00%

Daily average cost for residential drinking water, wastewater and stormwater services only \$2.57 per day.

Projected Water Rate Increases

			2020-2029 Plan									
TORONTO WATER	2019 Budget	2019 Projected Actual	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Water Rate Increase	3.98%	3.98%	3.00%	3.00%	3.00%	3.60%	3.00%	3.00%	3.00%	3.60%	3.00%	3.00%
WATER RATE REVENUE, \$M	\$1,234	\$1,239	\$1,283	\$1,315	\$1,347	\$1,380	\$1,423	\$1,458	\$1,494	\$1,530	\$1,577	\$1,616
Water Rate Revenue Increase %			3.53%	2.46%	2.46%	2.46%	3.06%	2.46%	2.46%	2.45%	3.06%	2.46%
CAPITAL RESERVE CLOSING BALANCE	\$1,259	\$1,263	\$1,242	\$837	\$475	\$235	\$128	\$113	\$81	\$42	\$75	\$239

Thank You