



Draft **BUDGET 2020**

An affordable approach for
responsible growth, mobility
and housing

Standing Committee on Environmental
Protection, Water and Waste
Management – Rate Supported

Tabled November 6, 2019

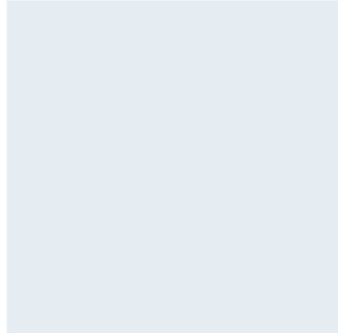


Table of Contents

Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported

Drinking Water Services.....	1
Service Area Summary	1
Operating Resource Requirement	2
User Fees.....	3
Wastewater Services.....	8
Service Area Summary	8
Operating Resource Requirement	9
User Fees.....	10
Stormwater Services.....	12
Service Area Summary	12
Operating Resource Requirement	13
User Fees.....	14
Capital Funding Summary.....	18
Operating and Capital Supplemental Information	22
Drinking Water Services.....	22
Analysis.....	22
Explanatory Notes.....	24
Wastewater Services	25
Analysis.....	25
Explanatory Notes.....	27
Stormwater Services.....	28
Analysis.....	28
Explanatory Notes.....	30
Capital Budget.....	31
Project Details.....	31

Drinking Water Services	32
Integrated Water and Wastewater Services	65
Stormwater Services	70
Wastewater Services	97
4 Year Forecast	117
Works-In-Progress Listing	123

Public Works & Environmental Services Department

2020 Service Area Summary - Drinking Water Services

Drinking Water Services is responsible for the production and distribution of safe, high-quality drinking water through the operation and maintenance of the City's central distribution system including the Britannia and Lemieux Island water purification plants, 16 drinking water pump stations and the 6 communal well systems: Carp Drinking Water System, Munster Hamlet Drinking Water System, Kings Park Drinking Water System, Richmond West Drinking Water System, Vars Drinking Water System, and Shadow Ridge Drinking Water Systems. This includes:

- Comprehensive systems operation and maintenance within regulatory framework
- Environmentally sound management of all City-owned facilities within the distribution system

Programs/Services Offered

- Leak detection programs
- First Response - 24 hour per day response for residents with drinking water and wastewater concerns
- Operation, inspection and maintenance (including disinfection, system isolation, connections and repairs) of over 3,800 km of watermains and over 58,000 valves
- Reinstatement of work to areas affected by water operations and repair work
- Provision of fire protection through inspection, maintenance and repair of over 23,000 public fire hydrants
- Maintaining the City's accreditation as an Operating Authority for the Drinking Water Quality Management System
- Technical and operational support for capital infrastructure renewal and development projects
- Supervisory control and data acquisition (SCADA) system operation, communication, and maintenance
- Quality assurance, compliance management and reporting, including water quality sampling, monitoring and testing

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - Operating Resource Requirement
In Thousands (\$000)

	2018	2019		2020	\$ Change over 2019 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Water share of Water Services	53,143	56,061	57,277	58,634	1,357
Technical Innovation & Engineering Support Services	6,631	5,975	6,916	7,085	169
Business & Technical Support Services	1,322	1,304	1,808	1,857	49
Non Departmental	113,812	120,444	120,444	124,319	3,875
Gross Expenditure	174,908	183,784	186,445	191,895	5,450
Recoveries & Allocations	-3,585	-3,558	-2,942	-2,942	0
Revenue	-178,560	-182,380	-183,503	-188,953	-5,450
Net Requirement	-7,237	-2,154	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	30,374	30,731	32,372	33,152	780
Overtime	1,328	1,652	1,752	1,942	190
Material & Services	17,862	19,481	20,085	20,605	520
Transfers/Grants/Financial Charges	91,599	97,220	97,220	100,890	3,670
Fleet Costs	2,953	2,926	3,204	3,289	85
Program Facility Costs	0	0	0	0	0
Other Internal Costs	30,792	31,774	31,812	32,017	205
Gross Expenditures	174,908	183,784	186,445	191,895	5,450
Recoveries & Allocations	-3,585	-3,558	-2,942	-2,942	0
Net Expenditure	171,323	180,226	183,503	188,953	5,450
Revenues By Type					
Federal	0	0	0	0	0
Provincial	-134	0	0	0	0
Municipal	0	0	0	0	0
Own Funds	-2,197	-2,197	-2,197	-2,197	0
Fees and Services	-176,229	-180,183	-181,306	-186,756	-5,450
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-178,560	-182,380	-183,503	-188,953	-5,450
Net Requirement	-7,237	-2,154	0	0	0
Full Time Equivalents			316.94	317.94	1.00

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Water Services Connection							-80
All sizes of Service Pipe							
Cost plus 15%, hourly	141.00	144.00	147.00	2.1%	4.3%	01-Jan-20	
Additional visit (service connection 20 mm-50 mm) - Cost plus 15%, hourly (new fee)	141.00	144.00	147.00	2.1%	4.3%	01-Jan-20	
Additional visit (service connection > 50 mm) - Cost plus 15%, hourly (new fee)	203.00	207.00	211.00	1.9%	3.9%	01-Jan-20	
Private service connection - Cost plus 15%, hourly (new fee)	141.00	144.00	147.00	2.1%	4.3%	01-Jan-20	
Services							
All Thawing of Services							
Cost plus 15%, hourly	169.00	175.00	179.00	2.3%	5.9%	01-Jan-20	
Fire Flow Test Support	256.00	261.00	266.00	1.9%	3.9%	01-Jan-20	
Service Charges							
Turn off water services for non payment or turn on following receipt of payment (per operation)	92.00	95.00	98.00	3.2%	6.5%	01-Jan-20	
Turn off or on of water services (per operation)	92.00	95.00	98.00	3.2%	6.5%	01-Jan-20	
Permit for Flusher Hydrant Usage	271.00	276.00	282.00	2.2%	4.1%	01-Jan-20	
Blanking of Water Services							
All sizes	Cost plus 15% \$3,000.00 deposit	Cost plus 15% \$3,000.00 deposit	Cost plus 15% \$4,000.00 deposit			01-Jan-20	
Inspection Fees (Inspection of activities connected to the water distribution system)							
All new watermains and services that don't require full disinfection	200.00	204.00	208.00	2.0%	4.0%	01-Jan-20	
All new watermains and services up to 50m long that require full disinfection	594.00	606.00	618.00	2.0%	4.0%	01-Jan-20	
All new watermains and services over 50m long that require full disinfection	Cost plus 15%	Cost plus 15%	Cost plus 15%				

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Meter Service Charges							
Inspection/Re-Inspection for New Water Meters (<= 20 mm meter)	96.00	99.00	102.00	3.0%	6.3%	01-Jan-20	
Meter Maintenance Service Call	164.00	170.00	175.00	2.9%	6.7%	01-Jan-20	
Water Meter Accuracy Test (<= 25 mm meter)	135.00	140.00	144.00	2.9%	6.7%	01-Jan-20	
Water Meter Accuracy Test (> 25 mm meter) (New in 2019)	-	187.00	193.00	3.2%	N/A	01-Jan-20	
Additional visits (<= 25 mm meter)	64.00	66.00	68.00	3.0%	6.3%	01-Jan-20	
Additional visits (large meters greater than 25 mm)	85.00	110.00	113.00	2.7%	32.9%	01-Jan-20	
Additional visits (fire line meters)	200.00	206.00	213.00	3.4%	6.5%	01-Jan-20	
Manual Meter Reading Fee	30.00	39.00	40.00	2.6%	33.3%	01-Jan-20	
New Water Meters							
Size of Meter							
15 mm Pos. Disp.	360.00	370.00	381.00	3.0%	5.8%	01-Jan-20	
15 mm Pos. Disp.(Carlsbad only)	549.00	565.00	582.00	3.0%	6.0%	01-Jan-20	
20 mm Pos. Disp.	403.00	415.00	428.00	3.1%	6.2%	01-Jan-20	
25 mm Pos. Disp.	474.00	488.00	503.00	3.1%	6.1%	01-Jan-20	
40 mm Pos. Disp.	883.00	910.00	937.00	3.0%	6.1%	01-Jan-20	
50 mm Pos. Disp.	985.00	1,010.00	1,040.00	3.0%	5.6%	01-Jan-20	
50 mm Turbine	1,955.00	2,010.00	2,070.00	3.0%	5.9%	01-Jan-20	
50 mm Compound	2,814.00	2,890.00	2,977.00	3.0%	5.8%	01-Jan-20	
75 mm Turbine	2,417.00	2,485.00	2,560.00	3.0%	5.9%	01-Jan-20	
75 mm Compound	3,540.00	3,630.00	3,739.00	3.0%	5.6%	01-Jan-20	
100 mm Turbine	2,956.00	3,035.00	3,126.00	3.0%	5.8%	01-Jan-20	
100 mm Compound	4,649.00	4,775.00	4,918.00	3.0%	5.8%	01-Jan-20	
150 mm Turbine	5,043.00	5,000.00	5,150.00	3.0%	2.1%	01-Jan-20	
150 mm Compound	7,919.00	7,700.00	7,931.00	3.0%	0.2%	01-Jan-20	
Fire Line Meter Assembly - Cost plus 15%, hourly	202.00	208.00	215.00	3.4%	6.4%	01-Jan-20	

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Replacement Water Meters							
Size of Meter							
15 mm Pos. Disp.	261.00	271.00	279.00	3.0%	6.9%	01-Jan-20	
15 mm Pos. Disp.(Carlsbad only)	265.00	275.00	284.00	3.3%	7.2%	01-Jan-20	
20 mm Pos. Disp.	304.00	313.00	322.00	2.9%	5.9%	01-Jan-20	
25 mm Pos. Disp.	375.00	385.00	398.00	3.4%	6.1%	01-Jan-20	
40 mm Pos. Disp.	751.00	773.00	796.00	3.0%	6.0%	01-Jan-20	
50 mm Pos. Disp.	854.00	877.00	903.00	3.0%	5.7%	01-Jan-20	
50 mm Turbine	1,731.00	1,780.00	1,833.00	3.0%	5.9%	01-Jan-20	
50 mm Compound	2,613.00	2,620.00	2,699.00	3.0%	3.3%	01-Jan-20	
75 mm Turbine	2,287.00	2,350.00	2,421.00	3.0%	5.9%	01-Jan-20	
75 mm Compound	3,338.00	3,430.00	3,533.00	3.0%	5.8%	01-Jan-20	
100 mm Turbine	2,824.00	2,905.00	2,992.00	3.0%	5.9%	01-Jan-20	
100 mm Compound	4,448.00	4,580.00	4,717.00	3.0%	6.0%	01-Jan-20	
150 mm Turbine	4,885.00	4,785.00	4,929.00	3.0%	0.9%	01-Jan-20	
150 mm Compound	7,691.00	7,425.00	7,648.00	3.0%	-0.6%	01-Jan-20	
Temporary removal and installation of meter	135.00	139.00	143.00	2.9%	5.9%	01-Jan-20	
City water meter reading device (new or damaged) replacement	206.00	212.00	219.00	3.3%	6.3%	01-Jan-20	
City water meter reading device and/or water meter reader wire re-location	162.00	168.00	173.00	3.0%	6.8%	01-Jan-20	

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Non Departmental							-4,900
Distribution of Drinking Water							
Variable Rate - per cubic meter water consumed							
0 - 6 m3	0.78	0.81	0.83	3.0%	6.9%	01-Apr-20	
>6 - 25 m3	1.55	1.60	1.65	3.0%	6.3%	01-Apr-20	
>25 - 180 m3	1.71	1.77	1.82	3.0%	6.6%	01-Apr-20	
>180 m3	1.90	1.97	2.03	3.0%	6.8%	01-Apr-20	
Daily Fixed Fee Rates - per meter size							
15 mm	0.32	0.33	0.34	1.7%	4.9%	01-Apr-20	
20 mm	0.47	0.48	0.49	1.7%	3.9%	01-Apr-20	
25 mm	0.79	0.81	0.82	1.7%	3.8%	01-Apr-20	
40 mm	1.58	1.61	1.64	1.7%	3.9%	01-Apr-20	
50 mm	2.52	2.57	2.61	1.7%	3.7%	01-Apr-20	
75 mm	4.73	4.83	4.91	1.7%	3.8%	01-Apr-20	
100 mm	7.88	8.05	8.19	1.7%	3.9%	01-Apr-20	
150 mm	15.76	16.09	16.36	1.7%	3.8%	01-Apr-20	
200 mm	25.22	25.75	26.19	1.7%	3.8%	01-Apr-20	
250 mm	36.26	37.02	37.65	1.7%	3.8%	01-Apr-20	
400 mm	144.40	147.43	149.92	1.7%	3.8%	01-Apr-20	
Compound Meter	1.45	1.50	1.54	2.7%	6.5%	01-Apr-20	

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Fire Supply Charge							-395
Annual cost - per meter size							
15 mm meter	46.28	47.21	48.15	2.0%	4.0%	01-Apr-20	
20 mm meter	82.28	83.93	85.61	2.0%	4.0%	01-Apr-20	
25 mm meter	128.58	131.15	133.77	2.0%	4.0%	01-Apr-20	
40 mm meter	329.14	335.72	342.44	2.0%	4.0%	01-Apr-20	
50 mm meter	514.29	524.58	535.07	2.0%	4.0%	01-Apr-20	
75 mm meter	1,157.15	1,180.29	1,203.89	2.0%	4.0%	01-Apr-20	
100 mm meter	2,057.14	2,098.28	2,140.25	2.0%	4.0%	01-Apr-20	
150 mm meter	4,628.57	4,721.14	4,815.57	2.0%	4.0%	01-Apr-20	
200 mm meter	8,228.57	8,393.15	8,561.01	2.0%	4.0%	01-Apr-20	
250 mm meter	12,857.15	13,114.29	13,376.57	2.0%	4.0%	01-Apr-20	
Total Departmental							-5,375

Public Works & Environmental Services Department

2020 Service Area Summary - Wastewater Services

Wastewater Services is responsible for the management of operations, maintenance and repairs of the City's stormwater collection, wastewater collection and wastewater treatment systems. This includes:

- Comprehensive systems operation and maintenance within regulatory framework
- Environmentally sound management of City-owned facilities and collection systems

Programs/Services Offered

- Operation and maintenance (including cleaning, inspection, and repair) of the wastewater collection system, comprised of over 6,600 km of sanitary, combined, and storm pipes, 110,000 maintenance holes, 123,000 catch basins, and 1,600 stormwater outlets
- Operation and maintenance of 94 sanitary sewage and storm water pumping stations, combined sewage regulators/storage facilities (including the upcoming Combined Sewage Storage Tunnel), odour control facilities and the Robert O. Pickard Environmental Centre (ROPEC), where all the City's wastewater is treated
- Sewer Use By-law compliance, monitoring, and enforcement, to ensure discharges into the sewer system are within regulatory limits
- Supervisory control and data acquisition (SCADA) system operation, communication, and maintenance
- Operational support for capital infrastructure renewal and development projects, including upgrades to ROPEC facility
- Quality assurance, compliance management and reporting

City of Ottawa
Public Works and Environmental Services
Wastewater Services - Operating Resource Requirement
In Thousands (\$000)

	2018	2019		2020	\$ Change over 2019 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Wastewater share of Water Services	48,206	48,852	48,758	49,505	747
Technical Innovation & Engineering Support	5,007	6,209	6,121	6,479	358
Business & Technical Support Services	289	205	179	191	12
Non Departmental	118,542	108,607	107,957	112,720	4,763
Gross Expenditure	172,044	163,873	163,015	168,895	5,880
Recoveries & Allocations	-13,936	-13,099	-12,699	-12,699	0
Revenue	-192,906	-149,265	-150,316	-156,196	-5,880
Net Requirement	-34,798	1,509	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	21,113	23,801	23,427	23,980	553
Overtime	774	1,013	843	910	67
Material & Services	27,949	27,204	27,498	27,928	430
Transfers/Grants/Financial Charges	100,617	89,479	88,829	93,507	4,678
Fleet Costs	1,414	1,477	1,444	1,511	67
Program Facility Costs	0	0	0	0	0
Other Internal Costs	20,177	20,899	20,974	21,059	85
Gross Expenditures	172,044	163,873	163,015	168,895	5,880
Recoveries & Allocations	-13,936	-13,099	-12,699	-12,699	0
Net Expenditure	158,108	150,774	150,316	156,196	5,880
Revenues By Type					
Federal	0	0	0	0	0
Provincial	0	0	0	0	0
Municipal	0	0	0	0	0
Own Funds	-4,474	-4,474	-4,474	-4,474	0
Fees and Services	-188,432	-144,791	-145,842	-151,722	-5,880
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-192,906	-149,265	-150,316	-156,196	-5,880
Net Requirement	-34,798	1,509	0	0	0
Full Time Equivalents			229.65	229.65	0.00

City of Ottawa
Public Works and Environmental Services
Wastewater Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Sanitary Sewer Systems							-45
Sewer Use Program - Disposal Fees							
Septic Tank Strength Liquid Material (per cubic meter)	16.44	16.77	16.77	0.0%	2.0%	N/A	
Holding Tank Strength Liquid Material (per cubic metre)	3.53	3.60	3.60	0.0%	2.0%	N/A	
Liquid Material Generated Outside the City of Ottawa (per cubic metre)	28.65	29.22	29.22	0.0%	2.0%	N/A	
Sewer Use Program - Permit Fees							
Annual Permit Fee	273.79	279.00	285.00	2.2%	4.1%	01-Jan-20	
Annual Permit Revision Fee	153.88	157.00	160.00	1.9%	4.0%	01-Jan-20	
Sewer Use Program - Discharge Fees							
Conveyance Fee	1.43	1.50	1.58	5.0%	10.3%	01-Jan-20	
Treatment Fee	0.89	0.93	0.98	5.0%	10.3%	01-Jan-20	
Sewer Use Program - Discharge Fees - Parameters in Sewage							
Biochemical Oxygen Demand (per kg)	1.63	1.66	1.66	0.0%	2.0%	N/A	
Suspended Solids (per kg)	0.86	0.88	0.88	0.0%	2.0%	N/A	
Phenolic Compounds (per kg)	1.63	1.66	1.66	0.0%	2.0%	N/A	
Kjeldahl Nitrogen (per kg)	6.47	6.60	6.60	0.0%	2.0%	N/A	
Phosphorus (per kg)	2.60	2.66	2.66	0.0%	2.0%	N/A	
Sewer Use Program - Administrative Fees							
Special Discharge Agreement Fee	1,064.00	1,085.00	1,107.00	2.0%	4.0%	01-Jan-20	
Sanitary Sewer Agreement Fee	758.00	773.00	788.00	1.9%	4.0%	01-Jan-20	
Compliance Program Fee	1,064.00	1,085.00	1,107.00	2.0%	4.0%	01-Jan-20	
Combined Agreement Fee	1,064.00	1,085.00	1,107.00	2.0%	4.0%	01-Jan-20	
Sanitary Discharge Agreement Revision Fee	228.00	233.00	238.00	2.1%	4.4%	01-Jan-20	
Combined Agreement Revision Fee	228.00	233.00	238.00	2.1%	4.4%	01-Jan-20	
Sanitary Sewer Agreement Revision Fee (per revision)	114.00	116.00	118.00	1.7%	3.5%	01-Jan-20	
Compliance Program Revision Fee (per revision)	228.00	233.00	238.00	2.1%	4.4%	01-Jan-20	

City of Ottawa
Public Works and Environmental Services
Wastewater Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Non Departmental							-5,780
Sewer Surcharge for Sanitary and Storm Sewer Systems							
Variable Rate - per cubic meter water consumed							
0 - 6 m3	0.680	0.71	0.75	5.0%	9.7%	01-Apr-20	
>6 - 25 m3	1.359	1.42	1.49	5.0%	9.7%	01-Apr-20	
>25 - 180 m3	1.500	1.57	1.65	5.0%	9.9%	01-Apr-20	
>180 m3	1.680	1.76	1.85	5.0%	10.0%	01-Apr-20	
Daily Fixed Fee Rates - per meter size							
15 mm	0.270	0.28	0.29	2.6%	6.4%	01-Apr-20	
20 mm	0.409	0.43	0.44	2.6%	7.9%	01-Apr-20	
25 mm	0.680	0.71	0.73	2.6%	7.1%	01-Apr-20	
40 mm	1.363	1.43	1.47	2.6%	7.7%	01-Apr-20	
50 mm	2.180	2.29	2.35	2.6%	7.8%	01-Apr-20	
75 mm	4.088	4.29	4.40	2.6%	7.7%	01-Apr-20	
100 mm	6.814	7.15	7.34	2.6%	7.7%	01-Apr-20	
150 mm	13.627	14.31	14.68	2.6%	7.7%	01-Apr-20	
200 mm	21.804	22.89	23.49	2.6%	7.7%	01-Apr-20	
250 mm	31.343	32.91	33.77	2.6%	7.7%	01-Apr-20	
Compound Meter	1.358	1.43	1.46	2.2%	7.3%	01-Apr-20	
Total Departmental							-5,825

Public Works & Environmental Services Department

2020 Service Area Summary - Stormwater Services

Stormwater Services is responsible for the operational planning, development and management of the City's stormwater management facilities, fully accredited and licensed laboratory services and municipal drainage services within a regulatory framework.

Programs/Services Offered

- Operation, maintenance and inspection of all municipal stormwater management facilities including: 133 wet ponds, 100 dry ponds, 83 underground stormwater treatment facilities
- Operation, maintenance and inspection of low impact development stormwater infrastructure (commonly referred to as green infrastructure) that supports environmental conservation and protection of water quality
- Operation and maintenance of the City's rain-gauge monitoring network
- Water quality monitoring within Ottawa's major rivers to assess the environmental effects of regulated municipal infrastructure
- Managing and maintaining laboratory license and accreditation requirements and renewals as required through the Ministry of the Environment, Conservation and Parks and the Accreditation Body (Canadian Association of Laboratory)
- Inspection and maintenance of all existing municipal drains as well approval of all newly constructed or modified drainage works to ensure compliance with the Provincial Drainage Act.
- Administration and investigation of drainage issues related to City-owned drainage easements and private property, outside the Road Right-of-Way (ROW)
- Providing advisory services to residents looking to address problems with drainage around their house in established areas

City of Ottawa
Public Works and Environmental Services
Stormwater Services - Operating Resource Requirement
In Thousands (\$000)

	2018	2019		2020	\$ Change over 2019 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Stormwater Operations	11,414	14,116	12,977	13,192	215
Tehnical Innovation & Engineering Support	793	409	409	409	0
Business & Technical Support Services	359	354	354	354	0
Non Departmental	19,369	42,032	42,032	46,937	4,905
Gross Expenditure	31,935	56,911	55,772	60,892	5,120
Recoveries & Allocations	-2,209	-3,434	-3,434	-3,434	0
Revenue	-1,624	-51,332	-52,338	-57,458	-5,120
Net Requirement	28,102	2,145	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	4,392	4,683	4,563	4,776	213
Overtime	21	58	58	60	2
Material & Services	1,532	1,960	2,248	2,248	0
Transfers/Grants/Financial Charges	5,903	28,315	28,315	33,165	4,850
Fleet Costs	220	230	230	230	0
Program Facility Costs	0	0	0	0	0
Other Internal Costs	19,867	21,665	20,358	20,413	55
Gross Expenditures	31,935	56,911	55,772	60,892	5,120
Recoveries & Allocations	-2,209	-3,434	-3,434	-3,434	0
Net Expenditure	29,726	53,477	52,338	57,458	5,120
Revenues By Type					
Federal	0	0	0	0	0
Provincial	-172	-145	-145	-145	0
Municipal	0	0	0	0	0
Own Funds	0	0	0	0	0
Fees and Services	-1,452	-51,187	-52,193	-57,313	-5,120
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-1,624	-51,332	-52,338	-57,458	-5,120
Net Requirement	28,102	2,145	0	0	0
Full Time Equivalents			46.02	46.02	0.00

City of Ottawa
Public Works and Environmental Services
Stormwater Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Laboratory Services (Tests)							-10
Alkalinity, PH, Conductivity	10.60	10.81	11.03	2.0%	4.1%	01-Jan-20	
Alkalinity Brinkman (wastewater)	15.95	16.27	16.60	2.0%	4.1%	01-Jan-20	
Biochemical Oxygen Demand	17.44	17.79	18.15	2.0%	4.1%	01-Jan-20	
Carbonaceous Biochemical Demand	17.44	17.79	18.15	2.0%	4.1%	01-Jan-20	
Chloride	11.90	12.45	12.70	2.0%	6.7%	01-Jan-20	
Chemical Oxygen Demand	11.33	11.56	11.79	2.0%	4.1%	01-Jan-20	
Conductivity	10.60	10.81	11.03	2.0%	4.1%	01-Jan-20	
Dissolved Organic Carbon	14.97	15.27	15.58	2.0%	4.1%	01-Jan-20	
E. coli (wastewater)	11.93	12.17	12.41	2.0%	4.0%	01-Jan-20	
Fluoride (SIE)	17.11	17.45	17.80	2.0%	4.0%	01-Jan-20	
Heterotrophic Plate	12.68	12.93	13.19	2.0%	4.0%	01-Jan-20	
Halo Acetic Acid	136.22	138.94	141.72	2.0%	4.0%	01-Jan-20	
ICP-OES Industrial Waste - 28 elements	26.95	27.49	28.04	2.0%	4.0%	01-Jan-20	
ICP-OES Metals Scan - 5 elements	13.96	14.24	14.52	2.0%	4.0%	01-Jan-20	
ICP-OES Metal Scan - 28 elements	23.36	23.83	24.31	2.0%	4.1%	01-Jan-20	
ICP/MS Metal Scan SW/DW - 27 elements	37.67	38.42	39.19	2.0%	4.0%	01-Jan-20	
ICP/MS Lead DW	13.96	14.24	14.52	2.0%	4.0%	01-Jan-20	
Ammonia - Surface/Waste Water	10.54	10.81	11.03	2.0%	4.6%	01-Jan-20	
Ion Chromatography	17.11	17.45	17.80	2.0%	4.0%	01-Jan-20	
Mercury	34.67	35.36	36.07	2.0%	4.0%	01-Jan-20	
Nitrates	17.11	12.45	12.70	2.0%	-25.8%	01-Jan-20	
PH	10.60	10.81	11.03	2.0%	4.1%	01-Jan-20	
Reactive Phosphorus	10.54	10.81	11.03	2.0%	4.6%	01-Jan-20	
Soluble Biochemical Oxygen Demand	18.62	18.79	19.17	2.0%	3.0%	01-Jan-20	
Soluble Carbonaceous Biochemical Oxygen Demand	18.62	18.79	19.17	2.0%	3.0%	01-Jan-20	
Soluble Chemical Oxygen Demand	11.33	12.56	12.81	2.0%	13.1%	01-Jan-20	
Specific gravity	22.06	22.50	22.95	2.0%	4.0%	01-Jan-20	
Sulphate	11.90	12.45	12.70	2.0%	6.7%	01-Jan-20	
Soluble Phosphorus	15.57	15.72	16.03	2.0%	3.0%	01-Jan-20	
Soluble Kjeldahl Nitrogen	15.57	15.72	16.03	2.0%	3.0%	01-Jan-20	

City of Ottawa
Public Works and Environmental Services
Stormwater Services - User Fees

	2018 Rate \$	2019 Rate \$	2020 Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Laboratory Services (Tests) cont'd							
Total Coliforms - E-Coli (DC)	10.99	11.21	11.43	2.0%	4.0%	01-Jan-20	
Total Coliforms - E-Coli (PA)	20.69	21.10	21.52	2.0%	4.0%	01-Jan-20	
Total Coliforms - E-Coli (MPN)	21.58	22.01	22.45	2.0%	4.0%	01-Jan-20	
Total Kjeldahl Nitrogen	14.37	14.72	15.01	2.0%	4.5%	01-Jan-20	
Total Phosphorus	14.37	14.72	15.01	2.0%	4.5%	01-Jan-20	
Total Solid - Waste Water	11.16	11.38	11.61	2.0%	4.0%	01-Jan-20	
Total Solid - Solid	11.16	11.38	11.61	2.0%	4.0%	01-Jan-20	
Total Suspended Solid	10.42	10.63	10.84	2.0%	4.0%	01-Jan-20	
Trihalomethane/VOC Full Scan	63.04	64.30	65.59	2.0%	4.0%	01-Jan-20	
Volatile Acids	38.81	39.59	40.38	2.0%	4.0%	01-Jan-20	
Volatile Solids - Waste Water	11.87	12.11	12.35	2.0%	4.0%	01-Jan-20	
Volatile Solids - Solids	12.09	12.33	12.58	2.0%	4.1%	01-Jan-20	
Volatile Suspended Solid (Water)	12.03	12.27	12.52	2.0%	4.1%	01-Jan-20	
Drinking Water Anion (Chloride, fluoride, nitrite and nitrate, sulphate)	17.11	17.45	17.80	2.0%	4.0%	01-Jan-20	
Standard Chemistry (Alkalinity, Conductivity, pH)	10.60	10.81	11.03	2.0%	4.1%	01-Jan-20	
Total Nutrients (Ammonia + Ammonia, Reactive Phosphorus)	11.58	11.81	12.05	2.0%	4.1%	01-Jan-20	
TKN/TP (Total Kjeldahl Nitrogen, Total Phosphorus)	15.41	15.72	16.03	2.0%	4.0%	01-Jan-20	
Increase to rates for various lab tests listed above							

City of Ottawa
Public Works and Environmental Services
Stormwater Services - User Fees

	2018 Full Tier Rate \$	2019 Full Tier Rate \$	2020 Full Tier Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
Non Departmental							
Annual Stormwater Service Fees							
Residential Connected							-5,110
Urban Single/Semi	116.85	128.31	140.65	9.6%	20.4%	01-Apr-20	
Rural Single/Semi	116.85	128.31	140.65	9.6%	20.4%	01-Apr-20	
Urban Townhouse/Apt	58.42	64.16	70.33	9.6%	20.4%	01-Apr-20	
Rural Townhouse/Apt	58.42	64.16	70.33	9.6%	20.4%	01-Apr-20	
Residential Non-Connected (2020 100% Phase-In Rate)							
Urban Single/Semi	81.79	89.81	98.46	9.6%	20.4%	01-Apr-20	
Rural Single/Semi	58.42	64.16	70.33	9.6%	20.4%	01-Apr-20	
Urban Townhouse/Apt	40.90	44.91	49.23	9.6%	20.4%	01-Apr-20	
Rural Townhouse/Apt	29.21	32.08	35.16	9.6%	20.4%	01-Apr-20	
Industrial, Commercial and Institutional (ICI)							
ICI Connected Urban and Rural							
0 to 300K Assessment	54.75	60.12	65.86	9.6%	20.3%	01-Apr-20	
>300K to 1M Assessment	259.10	284.50	311.68	9.6%	20.3%	01-Apr-20	
>1M to 5M Assessment	966.44	1,061.16	1,162.57	9.6%	20.3%	01-Apr-20	
>5M to 20M Assessment	4,236.83	4,652.04	5,096.62	9.6%	20.3%	01-Apr-20	
>20M to 50M Assessment	12,824.25	14,081.01	15,426.69	9.6%	20.3%	01-Apr-20	
>50M to 100M Assessment	30,951.19	33,984.37	37,232.17	9.6%	20.3%	01-Apr-20	
>100M to 150M Assessment	51,918.01	57,005.90	62,453.81	9.6%	20.3%	01-Apr-20	
>150M Assessment	109,944.41	120,718.81	132,255.61	9.6%	20.3%	01-Apr-20	

City of Ottawa
Public Works and Environmental Services
Stormwater Services - User Fees

	2018 Full Tier Rate \$	2019 Full Tier Rate \$	2020 Full Tier Rate \$	% Change Over 2019	% Change Over 2018	Effective Date	2020 Revenue (\$000)
ICI Non-Connected - Urban (2020 100% Phase-In Rate)							
0 to 300K Assessment	54.75	60.12	65.86	9.6%	20.3%	01-Apr-20	
>300K to 1M Assessment	259.10	284.50	311.68	9.6%	20.3%	01-Apr-20	
>1M to 5M Assessment	966.44	1,061.16	1,162.57	9.6%	20.3%	01-Apr-20	
>5M to 20M Assessment	4,236.83	4,652.04	5,096.62	9.6%	20.3%	01-Apr-20	
>20M to 50M Assessment	12,824.25	14,081.01	15,426.69	9.6%	20.3%	01-Apr-20	
>50M to 100M Assessment	30,951.19	33,984.37	37,232.17	9.6%	20.3%	01-Apr-20	
>100M to 150M Assessment	51,918.01	57,005.90	62,453.81	9.6%	20.3%	01-Apr-20	
>150M Assessment	109,944.41	120,718.81	132,255.61	9.6%	20.3%	01-Apr-20	
ICI Non-Connected - Rural (2020 100% Phase-In Rate)							
0 to 300K Assessment	38.32	42.08	46.10	9.6%	20.3%	01-Apr-20	
>300K to 1M Assessment	181.37	199.15	218.18	9.6%	20.3%	01-Apr-20	
>1M to 5M Assessment	676.51	742.81	813.80	9.6%	20.3%	01-Apr-20	
>5M to 20M Assessment	2,965.78	3,256.43	3,567.64	9.6%	20.3%	01-Apr-20	
>20M to 50M Assessment	8,976.97	9,856.71	10,798.69	9.6%	20.3%	01-Apr-20	
>50M to 100M Assessment	21,665.84	23,789.06	26,062.52	9.6%	20.3%	01-Apr-20	
>100M to 150M Assessment	36,342.61	39,904.13	43,717.67	9.6%	20.3%	01-Apr-20	
>150M Assessment	76,961.09	84,503.17	92,578.92	9.6%	20.3%	01-Apr-20	
Total Departmental							-5,120

City Of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Gas Tax	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Tax Supported/ Dedicated Debt	Grand Total
Drinking Water Services								
Renewal of City Assets								
908076 Large Water Meters Changeout Program	-	-	-	-	500	-	-	500
908613 Bank St (Rideau Rd-Mitch Owens)	-	-	-	-	6,970	100	-	7,070
908614 LRT2 W1 Hwy 174 - Shefford Rd	-	-	-	-	702	-	-	702
908633 Enhanced Corrosion Control	-	-	-	-	2,000	-	-	2,000
908908 Small Water Meters Changeout Program	-	-	-	-	2,825	-	-	2,825
908981 Lemieux island Pipe Bridge SN 017160	-	-	-	-	2,120	-	-	2,120
909682 2020 Buildings - Water Services	-	-	-	-	150	-	-	150
909713 Water System Improvements	-	-	-	-	5,900	100	-	6,000
909714 2020 WM Transmission/Distribution Rehab	-	-	-	-	4,000	87	-	4,087
909735 Carling Ave (Moodie-Shirleys Bay)	3,000	-	-	-	-	-	-	3,000
909795 Water Distribution Sys Improvements 2020	-	-	-	-	1,325	-	-	1,325
909796 Water Facilities Roofing 2020	-	-	-	-	250	-	-	250
909797 Water Storage Tanks & Reservoir 2020	-	-	-	-	630	-	-	630
909798 Water Pumping Station Facility Rehab2020	-	-	-	-	2,900	100	-	3,000
909799 Communal Well System Rehab 2020	-	-	-	-	1,150	-	-	1,150
909800 Water Treatment Rehab 2020	-	-	-	-	8,450	100	-	8,550
909801 Water Sys SCADA & Instrument Rehab 2020	-	-	-	-	2,670	100	-	2,770
909802 Protective Lead Serv Replace Prog 2020	250	-	-	-	1,000	-	-	1,250
909803 Cathodic Protection 2020	-	-	-	-	1,200	-	-	1,200
909804 Critical Links Risk Mitigation Meas 2020	-	-	-	-	500	-	-	500
Renewal of City Assets Total	3,250	-	-	-	45,242	587	-	49,079
Growth								
900632 Strandherd Road Watermain	-	-	1,917	-	216	-	-	2,133
902206 Ottawa South Pumping Station Upgrade	-	-	1,352	-	1,299	-	-	2,650
904916 DCA-Kanata West Feedermain	-	-	288	-	30	2	-	320
904982 Zone 2W West march Rd 406 to 6	-	-	540	-	60	-	-	600
905992 Manotick Supply Watermain	-	-	7,084	1,916	850	-	-	9,850
907456 Manotick North Island Link	-	-	5,543	-	617	-	-	6,160
909671 2020 Infrastructure Master Plan (Water)	-	-	56	-	454	-	-	510

City Of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Gas Tax	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Tax Supported/ Dedicated Debt	Grand Total
909672 2020 Off Site Reliability Links	-	-	144	-	16	-	-	160
909673 2020 Groundwater Studies	-	-	190	-	190	-	-	380
909674 2020 Rural Servicing Strategy	-	-	127	-	133	-	-	260
909725 2020 Water & Wastewater Studies	-	-	208	-	52	-	-	260
Growth Total	-	-	17,449	1,916	3,916	2	-	23,283
Drinking Water Services Total	3,250	-	17,449	1,916	49,158	589	-	72,362
Integrated Roads, Water & Wastewater								
Renewal of City Assets								
908137 CWWF Deerpark-Hilliard-Fisher et al.	-	-	-	-	22,230	300	-	22,530
908138 CWWF Avenue N-O-P-Q-R-S-T-U	-	-	-	-	8,000	300	-	8,300
908139 Montreal Rd (N River Rd-St Laurent Blvd)	-	-	-	-	3,980	600	-	4,580
908140 City Centre Ave & Elm St	-	-	-	-	820	50	-	870
908569 Borthwick-Quebec-Gardenvale	-	-	-	-	660	300	-	960
908572 Fairbairn-Bellwood-Willard-Belmont	-	-	-	-	4,980	600	-	5,580
908576 Larkin-Larose-Lepage	-	-	-	-	3,870	1,100	-	4,970
908726 CWWF Vanier Parkway - Presland Rd et al	-	-	-	-	560	700	-	1,260
908998 LRT2 R2 Hwy 174 Resurfacing EBL	-	-	-	-	72	-	-	72
909272 Scott St. (West of Smirle Ave)	-	-	-	-	4,380	430	-	4,810
909401 Broadview Ave	-	-	-	-	210	30	-	240
909402 Caroline Ave - Huron Ave N	-	-	-	-	1,560	250	-	1,810
909404 Claymor & Senio	-	-	-	-	4,690	1,100	-	5,790
909405 Hamlet Rd	-	-	-	-	750	200	-	950
909407 Longpre - Marquette- Michel Cir	-	-	-	-	1,840	200	-	2,040
909408 Monk - Oakland -Wilton	-	-	-	-	1,230	100	-	1,330
909409 Winona Ave & Wilmont Ave	-	-	-	-	730	100	-	830
Renewal of City Assets Total	-	-	-	-	60,562	6,360	-	66,922
Integrated Roads, Water & Wastewater Total	-	-	-	-	60,562	6,360	-	66,922
Integrated Water & Wastewater								
Renewal of City Assets								

City Of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Gas Tax	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Tax Supported/ Dedicated Debt	Grand Total
907084 Water & Sewer Utility Billing System	-	-	-	-	600	-	-	600
908997 LRT2 SS1 Sewer Upgrades (Byron Ave)	-	-	-	-	343	342	-	685
909492 LRT2 SS2 Richmond Compl Streets	-	-	-	-	2,500	500	-	3,000
909694 Hydraulic Structures	-	-	-	-	600	400	-	1,000
909695 2020 Sewer Repairs / Improvements	-	-	-	-	10,577	200	-	10,777
909696 2020 Sewer Trenchless Rehab	-	-	-	-	1,250	250	-	1,500
Renewal of City Assets Total	-	-	-	-	15,870	1,692	-	17,562
Integrated Water & Wastewater Total	-	-	-	-	15,870	1,692	-	17,562
Stormwater Services								
Renewal of City Assets								
903324 Kennedy Burnett SW Pond	-	-	-	-	2,000	810	-	2,810
909017 LRT2 C1 Hwy 174 Culverts	-	-	-	-	-	4,019	-	4,019
909385 2019 Drainage Culverts - CW	-	-	-	-	8,900	100	-	9,000
909707 2020 Culverts Scoping Pre/Post Eng.	-	-	-	-	600	-	-	600
909708 2020 Drainage Culverts - Site-Specific	-	-	-	-	2,400	100	-	2,500
909709 2020 Drainage Culverts - CW	-	-	-	-	2,900	100	-	3,000
909710 2020 Drainage Culverts - Other	-	-	-	-	250	250	-	500
909715 Beltown Stormwater Improvements	-	-	-	-	750	-	-	750
909744 Stormwater Mgmt. Rhab&Enviro Compl. 2020	-	-	-	-	1,450	-	-	1,450
909748 Mud Creek Stream Renewal	-	-	-	-	370	-	-	370
909749 2020 Flood Plain Mapping	-	-	-	-	310	-	-	310
909750 Storm and Surface Water Rehabilitation	-	-	-	-	1,200	300	-	1,500
909816 Linear Storm System Improvements	-	-	-	-	1,500	1,500	-	3,000
Renewal of City Assets Total	-	-	-	-	22,630	7,179	-	29,809
Growth								
909730 2020 Stormwater Master Planning	-	-	55	-	205	-	-	260
Growth Total	-	-	55	-	205	-	-	260
Regulatory								
909743 Municipal Drain Improvements - 2020	450	-	-	-	50	-	-	500
Regulatory Total	450	-	-	-	50	-	-	500

City Of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Gas Tax	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Tax Supported/ Dedicated Debt	Grand Total
Service Enhancements								
909815 ORAP-Water Enviro Strgy (WES) PH2 2020	-	-	-	-	1,000	-	-	1,000
Service Enhancements Total	-	-	-	-	1,000	-	-	1,000
Stormwater Services Total	450	-	55	-	23,885	7,179	-	31,569
Wastewater Services								
Renewal of City Assets								
908029 Remote Facility Corrosion/Odour	-	-	-	-	2,500	-	-	2,500
909716 Mooney's Bay Trunk Sewer	-	-	-	-	5,400	100	-	5,500
909717 2020 ORAP Wet Weather IMP	-	-	220	-	3,680	100	-	4,000
909724 Pump Stations Capacity Renewal	-	-	-	-	200	-	-	200
909805 Linear Sewage System Improve. Prog. 2020	-	-	-	-	500	-	-	500
909806 Sewer Lateral Repairs 2020	-	-	-	-	3,900	100	-	4,000
909807 Sewage Pumping Station Rehab Prog 2020	-	-	-	-	1,550	10,100	-	11,650
909808 ROPEC - Sewage Treatment Rehab Prog 2020	-	-	-	-	7,373	10,100	-	17,473
909809 ROPEC - Concrete Rehab & Repairs 2020	-	-	-	-	1,000	-	-	1,000
909810 New Vehicles Waste Water - 2020	-	-	-	-	100	-	-	100
Renewal of City Assets Total	-	-	220	-	26,203	20,500	-	46,923
Growth								
904985 North Kanata Sewer Ph 2	-	-	-	-	600	-	-	600
904988 March PS Conversion	-	-	-	423	407	-	-	830
907462 Pump Stations Capacity Increase	-	-	50	-	-	-	-	50
908247 Richmond PS & Forcemain Expans	-	-	6,553	-	2,228	-	-	8,780
908624 2017 Infrastructure Master Plan (Sewer)	-	-	27	-	223	-	-	250
909357 South Nepean Collector Ph3	-	-	3,143	-	-	-	-	3,143
Growth Total	-	-	9,773	423	3,458	-	-	13,653
Wastewater Services Total	-	-	9,993	423	29,661	20,500	-	60,576
Grand Total	3,700	-	27,496	2,339	179,136	36,320	-	248,991

* Integrated Roads, Water and Wastewater Program only the Rate portion is showed for informational purposes.

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - Operating Resource Requirement Analysis
In Thousands (\$000)

	2019 Baseline			2020 Adjustments			2020	\$ Change over 2019 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Expenditures by Program								
Water share of Water Services	56,061	57,277	0	1,357	0	0	58,634	1,357
Technical Innovation & Engineering Support Services	5,975	6,916	0	79	90	0	7,085	169
Business & Technical Support Services	1,304	1,808	0	49	0	0	1,857	49
Non Departmental	120,444	120,444	0	3,875	0	0	124,319	3,875
Gross Expenditure	183,784	186,445	0	5,360	90	0	191,895	5,450
Recoveries & Allocations	-3,558	-2,942	0	0	0	0	-2,942	0
Revenue	-182,380	-183,503	0	0	0	-5,450	-188,953	-5,450
Net Requirement	-2,154	0	0	5,360	90	-5,450	0	0
Expenditures by Type								
Salaries, Wages & Benefits	30,731	32,372	0	690	90	0	33,152	780
Overtime	1,652	1,752	0	190	0	0	1,942	190
Material & Services	19,481	20,085	0	520	0	0	20,605	520
Transfers/Grants/Financial Charges	97,220	97,220	0	3,670	0	0	100,890	3,670
Fleet Costs	2,926	3,204	0	85	0	0	3,289	85
Program Facility Costs	0	0	0	0	0	0	0	0
Other Internal Costs	31,774	31,812	0	205	0	0	32,017	205
Gross Expenditures	183,784	186,445	0	5,360	90	0	191,895	5,450
Recoveries & Allocations	-3,558	-2,942	0	0	0	0	-2,942	0
Net Expenditure	180,226	183,503	0	5,360	90	0	188,953	5,450
Percent of 2019 Net Expenditure Budget			0.0%	2.9%	0.0%	0.0%	3.0%	

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - Operating Resource Requirement Analysis
In Thousands (\$000)

	2019 Baseline			2020 Adjustments			2020	\$ Change over 2019 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Revenues By Type								
Federal	0	0	0	0	0	0	0	0
Provincial	0	0	0	0	0	0	0	0
Municipal	0	0	0	0	0	0	0	0
Own Funds	-2,197	-2,197	0	0	0	0	-2,197	0
Fees and Services	-180,183	-181,306	0	0	0	-5,450	-186,756	-5,450
Fines	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Revenue	-182,380	-183,503	0	0	0	-5,450	-188,953	-5,450
Percent of 2019 Revenue Budget			0.0%	0.0%	0.0%	3.0%	3.0%	
Net Requirement	-2,154	0	0	5,360	90	-5,450	0	0
Percent of 2019 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		316.94	0.00	0.00	1.00	0.00	317.94	1.00
Percent of 2019 FTE's			0.0%	0.0%	0.3%	0.0%	0.3%	

City of Ottawa
Public Works & Environmental Services Department
Drinking Water Services - Operating Resource Requirement Explanatory Notes
In Thousands (\$000)

	Surplus / (Deficit)			
2019 Forecast vs. Budget Variance Explanation	Expense	Revenue	Net	
Forecasted surplus mainly due to savings in compensation, and reduced revenues due to lower volume of water consumed billed.	3,277	-1,123	2,154	
Total Surplus / (Deficit)	3,277	-1,123	2,154	
	Increase / (Decrease)			
2020 Pressure Category / Explanation	Expense	Revenue	Net 2020 Changes	FTE Impact
Maintain Services				
All programs include an adjustment for potential 2020 cost of living, increments and benefit adjustments.	730	0	730	0.00
Inflationary increase to chemical costs.	170	0	170	0.00
Increase in Fleet costs related to inflation on compensation contracts, parts, fuel, contribution to capital reserve and maintenance.	85	0	85	0.00
Impact of new Pavement Degradation By-Law.	500	0	500	0.00
Non Departmental				
Increase in Inter Departmental cost allocation due to collective bargaining increases.	205	0	205	0.00
Increase in the contribution to capital.	3,670	0	3,670	0.00
Total Maintain Services	5,360	0	5,360	0.00
Growth				
1 Inspector FTE for the new Backflow Prevention Program as per report ACS2015-COS-ESD-0017.	90	0	90	1.00
Total Growth	90	0	90	1.00
User Fees & Revenues				
See following user fee schedule for details on the specific rates.	0	-5,375	-5,375	0.00
Revenues from fees for Backflow Prevention Program implemented in 2019.	0	-90	-90	0.00
Reduction in property leasing revenues.	0	15	15	0.00
Total User Fees & Revenues	0	-5,450	-5,450	0.00
Total Budget Changes	5,450	-5,450	0	1.00

City of Ottawa
Public Works and Environmental Services
Wastewater Services - Operating Resource Requirement Analysis
In Thousands (\$000)

	2019 Baseline			2020 Adjustments			2020	\$ Change over 2019 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Expenditures by Program								
Wastewater share of Water Services	48,852	48,758	0	747	0	0	49,505	747
Tehnical Innovation & Engineering Support	6,209	6,121	0	358	0	0	6,479	358
Business & Technical Support Services	205	179	0	12	0	0	191	12
Non Departmental	108,607	107,957	0	4,763	0	0	112,720	4,763
Gross Expenditure	163,873	163,015	0	5,880	0	0	168,895	5,880
Recoveries & Allocations	-13,099	-12,699	0	0	0	0	-12,699	0
Revenue	-149,265	-150,316	0	0	0	-5,880	-156,196	-5,880
Net Requirement	1,509	0	0	5,880	0	-5,880	0	0
Expenditures by Type								
Salaries, Wages & Benefits	23,801	23,427	0	553	0	0	23,980	553
Overtime	1,013	843	0	67	0	0	910	67
Material & Services	27,204	27,498	0	430	0	0	27,928	430
Transfers/Grants/Financial Charges	89,479	88,829	0	4,678	0	0	93,507	4,678
Fleet Costs	1,477	1,444	0	67	0	0	1,511	67
Program Facility Costs	0	0	0	0	0	0	0	0
Other Internal Costs	20,899	20,974	0	85	0	0	21,059	85
Gross Expenditures	163,873	163,015	0	5,880	0	0	168,895	5,880
Recoveries & Allocations	-13,099	-12,699	0	0	0	0	-12,699	0
Net Expenditure	150,774	150,316	0	5,880	0	0	156,196	5,880
Percent of 2019 Net Expenditure Budget			0.0%	3.9%	0.0%	0.0%	3.9%	

City of Ottawa
Public Works and Environmental Services
Wastewater Services - Operating Resource Requirement Analysis
In Thousands (\$000)

	2019 Baseline			2020 Adjustments			2020	\$ Change over 2019 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Revenues By Type								
Federal	0	0	0	0	0	0	0	0
Provincial	0	0	0	0	0	0	0	0
Municipal	0	0	0	0	0	0	0	0
Own Funds	-4,474	-4,474	0	0	0	0	-4,474	0
Fees and Services	-144,791	-145,842	0	0	0	-5,880	-151,722	-5,880
Fines	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Revenue	-149,265	-150,316	0	0	0	-5,880	-156,196	-5,880
Percent of 2019 Revenue Budget			0.0%	0.0%	0.0%	3.9%	3.9%	
Net Requirement	1,509	0	0	5,880	0	-5,880	0	0
Percent of 2019 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		229.65	0.00	0.00	0.00	0.00	229.65	0.00
Percent of 2019 FTE's			0.0%	0.0%	0.0%	0.0%	0.0%	

City of Ottawa
Public Works and Environmental Services
Wastewater Services - Operating Resource Requirement Explanatory Notes
In Thousands (\$000)

2019 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Forecasted deficit mainly due to reduced volume of water consumed and billed.	-458	-1,051	-1,509
Total Surplus / (Deficit)	-458	-1,051	-1,509

2020 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2020 Changes	FTE Impact
Maintain Services				
All programs include an adjustment for potential 2020 cost of living, increments and benefit adjustments.	570	0	570	0.00
Increase in Fleet costs related to inflation on compensation contracts, parts, fuel, contribution to capital reserve and maintenance.	50	0	50	0.00
Increase in wastewater collection costs for sewer cleaning, mobility initiatives and communication costs.	280	0	280	0.00
Impact of new Pavement Degradation By-Law.	200	0	200	0.00
Fleet operating costs for 2 new vehicles.	17	0	17	0.00
Non Departmental				
Increase in debt servicing costs.	700	0	700	0.00
Increase in Inter Departmental cost allocation due to collective bargaining increases.	85	0	85	0.00
Increase in the contribution to capital.	3,978	0	3,978	0.00
Total Maintain Services	5,880	0	5,880	0.00
User Fees & Revenues				
See following user fee schedule for details on the specific rates.	0	-5,825	-5,825	0.00
Increase in property leasing revenues.	0	-55	-55	0.00
Total User Fees & Revenues	0	-5,880	-5,880	0.00
Total Budget Changes	5,880	-5,880	0	0.00

City of Ottawa
Public Works and Environmental Services
Stormwater Services - Operating Resource Requirement Analysis
In Thousands (\$000)

	2019 Baseline			2020 Adjustments			2020	\$ Change over 2019 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Expenditures by Program								
Stormwater Operations	14,116	12,977	0	215	0	0	13,192	215
Tehcnical Innovation & Engineering Support	409	409	0	0	0	0	409	0
Business & Technical Support Services	354	354	0	0	0	0	354	0
Non Departmental	42,032	42,032	0	4,905	0	0	46,937	4,905
Gross Expenditure	56,911	55,772	0	5,120	0	0	60,892	5,120
Recoveries & Allocations	-3,434	-3,434	0	0	0	0	-3,434	0
Revenue	-51,332	-52,338	0	0	0	-5,120	-57,458	-5,120
Net Requirement	2,145	0	0	5,120	0	-5,120	0	0
Expenditures by Type								
Salaries, Wages & Benefits	4,683	4,563	0	213	0	0	4,776	213
Overtime	58	58	0	2	0	0	60	2
Material & Services	1,960	2,248	0	0	0	0	2,248	0
Transfers/Grants/Financial Charges	28,315	28,315	0	4,850	0	0	33,165	4,850
Fleet Costs	230	230	0	0	0	0	230	0
Program Facility Costs	0	0	0	0	0	0	0	0
Other Internal Costs	21,665	20,358	0	55	0	0	20,413	55
Gross Expenditures	56,911	55,772	0	5,120	0	0	60,892	5,120
Recoveries & Allocations	-3,434	-3,434	0	0	0	0	-3,434	0
Net Expenditure	53,477	52,338	0	5,120	0	0	57,458	5,120
Percent of 2019 Net Expenditure Budget			0.0%	9.8%	0.0%	0.0%	9.8%	

City of Ottawa
Public Works and Environmental Services
Stormwater Services - Operating Resource Requirement Analysis
In Thousands (\$000)

	2019 Baseline			2020 Adjustments			2020	\$ Change over 2019 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Revenues By Type								
Federal	0	0	0	0	0	0	0	0
Provincial	-145	-145	0	0	0	0	-145	0
Municipal	0	0	0	0	0	0	0	0
Own Funds	0	0	0	0	0	0	0	0
Fees and Services	-51,187	-52,193	0	0	0	-5,120	-57,313	-5,120
Fines	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Revenue	-51,332	-52,338	0	0	0	-5,120	-57,458	-5,120
Percent of 2019 Revenue Budget			0.0%	0.0%	0.0%	9.8%	9.8%	
Net Requirement	2,145	0	0	5,120	0	-5,120	0	0
Percent of 2019 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		46.02	0.00	0.00	0.00	0.00	46.02	0.00
Percent of 2019 FTE's			0.0%	0.0%	0.0%	0.0%	0.0%	

City of Ottawa
Public Works and Environmental Services
Stormwater Services - Operating Resource Requirement Explanatory Notes
In Thousands (\$000)

2019 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Forecasted deficit mainly due to spring flooding and lower than anticipated revenues.	-1,139	-1,006	-2,145
Total Surplus / (Deficit)	-1,139	-1,006	-2,145

2020 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2020 Changes	FTE Impact
Maintain Services All programs include an adjustment for potential 2020 cost of living, increments and benefit adjustments.	215	0	215	0.00
Non Departmental				
Increase in debt servicing costs.	140	0	140	0.00
Increase in Inter Departmental cost allocation due to collective bargaining increases.	55	0	55	0.00
Increase in the contribution to capital.	4,710	0	4,710	0.00
Total Maintain Services	5,120	0	5,120	0.00
User Fees & Revenues See following user fee schedule for details on the specific rates.	0	-5,120	-5,120	0.00
Total User Fees & Revenues	0	-5,120	-5,120	0.00
Total Budget Changes	5,120	-5,120	0	0.00

Capital Budget

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
In Thousands (\$000)

Service Area: Drinking Water Services											
Category	2020 Capital Budget	Revenues	Tax Supported/ Dedicated Reserves	Rate Supported Reserves	Develop. Charges	Gas Tax	Debt				
							Tax/ Dedicated	Rate	Develop. Charges	Gas Tax	Total Debt
Renewal of City Assets	49,079	3,250	0	45,242	0	0	0	587	0	0	587
Growth	23,283	0	0	3,916	17,449	0	0	2	1,916	0	1,918
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancements	0	0	0	0	0	0	0	0	0	0	0
Total	72,362	3,250	0	49,158	17,449	0	0	589	1,916	0	2,505

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details					
Water Meter Replacement Program			Class of Estimate:		Not Applicable			
Dept: Corporate Services Department	Category: Renewal of City Assets		Ward: Multiple		Year of Completion: Various			
<p>This multi-year program has been established to increase accuracy of water meter recordings by replacing water meters, water meter equipment, and metering softwares which have passed their life expectancy. It also covers the mobility requirements for water meter servicing.</p>			2020 Request		3,325	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		3,325	Rate Supported Debt		0
			Develop. Charges		0	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		3,325	3,375	3,375	2,400
			Spending Plan		3,325	3,375	3,375	2,400
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
908076 Large Water Meters Changeout Program		Class of Estimate: Not Applicable	500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
Funding is required for ongoing replacement of commercial high volume water meters which have passed their life expectancy. Large volume water meters have a shorter useful lifecycle, requiring maintenance every two to eight years due to the high volume of water causing wear and tear on mechanical components of the meter. New Meters will reduce maintenance costs, increase accuracy, and provide consistent revenues			
908908 Small Water Meters Changeout Program		Class of Estimate: Not Applicable	2,825
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
Funding is required to replace a growing number of residential water meters which have passed their life expectancy of 20 years. Aging water meters will under record water consumption, resulting in loss of revenue.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details																																															
Buildings-Water Services			Class of Estimate:		C) Planning																																													
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various																																													
<p>The Building and Park programs provide for life cycle renewal and replacement works to existing building and park assets. Detailed scope of work for specific projects extends to a wide assortment of work, such as roof replacement, building preservation, building mechanical and electrical systems, parks playgrounds and property elements, hard landscaping, arena and pool equipment and unplanned emergency work. Forecasts are based on bulk allocations that will be detailed in future budget submissions. Project cost group summaries are provided following this program summary. Annual programming provides allocations as required for each of the service areas as follows:</p> <table><tr><th>Service Area</th><th>Buildings</th><th>Parks</th></tr><tr><td>By-Law Services</td><td>75</td><td></td></tr><tr><td>Child Care Services</td><td>450</td><td></td></tr><tr><td>Cultural Services</td><td>850</td><td></td></tr><tr><td>Fire Services</td><td>1,825</td><td></td></tr><tr><td>General Government</td><td>2,925</td><td></td></tr><tr><td>Library</td><td>750</td><td></td></tr><tr><td>Long Term Care</td><td>1,853</td><td></td></tr><tr><td>Parks & Recreation</td><td>22,790</td><td>8,250</td></tr><tr><td>Road Services</td><td>2,400</td><td></td></tr><tr><td>Social Services</td><td>750</td><td></td></tr><tr><td>Transit Services</td><td>3,600</td><td></td></tr><tr><td>Water Services</td><td>150</td><td></td></tr><tr><td>Total Authority Request</td><td>38,418</td><td>8,250</td></tr></table>			Service Area	Buildings	Parks	By-Law Services	75		Child Care Services	450		Cultural Services	850		Fire Services	1,825		General Government	2,925		Library	750		Long Term Care	1,853		Parks & Recreation	22,790	8,250	Road Services	2,400		Social Services	750		Transit Services	3,600		Water Services	150		Total Authority Request	38,418	8,250	2020 Request		150	Projected Yearend Unspent Bal.		0
			Service Area	Buildings	Parks																																													
			By-Law Services	75																																														
			Child Care Services	450																																														
			Cultural Services	850																																														
			Fire Services	1,825																																														
			General Government	2,925																																														
			Library	750																																														
			Long Term Care	1,853																																														
			Parks & Recreation	22,790	8,250																																													
Road Services	2,400																																																	
Social Services	750																																																	
Transit Services	3,600																																																	
Water Services	150																																																	
Total Authority Request	38,418	8,250																																																
Revenues		0	Debt																																															
Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt			0																																												
Rate Supported		150	Rate Supported Debt			0																																												
Develop. Charges		0	Develop. Charges Debt			0																																												
Gas Tax		0	Gas Tax Debt			0																																												
Forecast		2020	2021	2022	2023																																													
Authority		150	50	50	50																																													
Spending Plan		150	50	50	50																																													
FTE's		0	0	0	0																																													
Operating Impact		0	0	0	0																																													

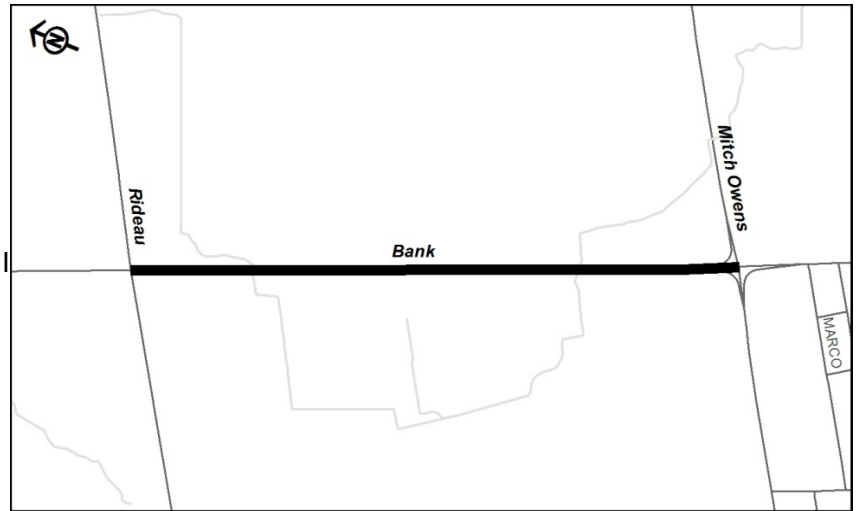
City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

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City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details						
Water System Rehabilitation			Class of Estimate:		C) Planning				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The Water System Rehabilitation Program addresses the annual rehabilitation requirements for the City's piped water network: to extend the life of the infrastructure, provide continued supply of potable water, prevent failures requiring more extensive reconstruction, and ensure drinking water quality is maintained throughout the water distribution network. The program is focused on:</p> <ul style="list-style-type: none">• Proactive lifecycle renewal and rehabilitation projects• Level of service initiatives• System improvements and optimization• Miscellaneous upgrades and rehabilitation to support growth demand• Miscellaneous local repairs <p>Program funding requirements to support renewal needs are defined in the Long Range Financial Plan.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions. The funding requests for watermain costs coordinated with roadway, wastewater or stormwater rehabilitation are included within the Integrated Rehabilitation Programs.</p> <p>Detailed information and costs associated with specific stand alone (non-integrated) components and projects directly follow this program summary page.</p>			2020 Request		22,979	Projected Yearend Unspent Bal.		0	
			Revenues		3,000	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		19,692	Rate Supported Debt		287	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		22,979	13,850	18,710	19,751	
			Spending Plan		14,481	13,457	18,010	18,250	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

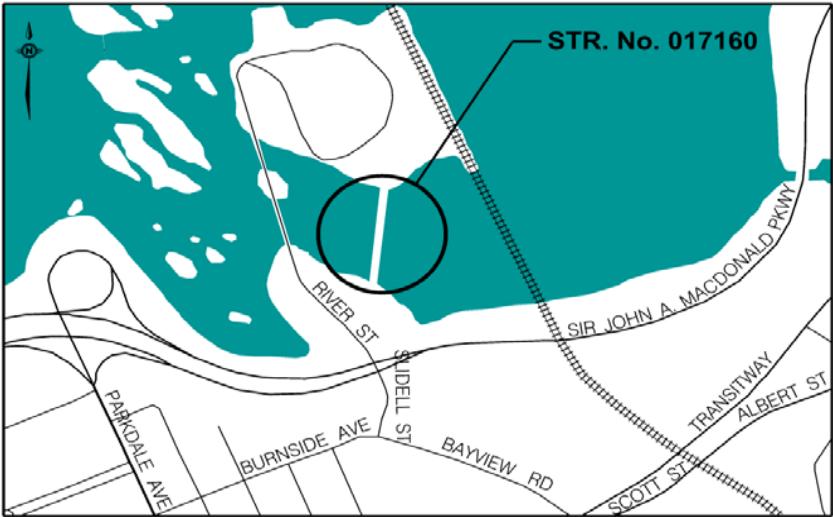
City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			Location/Description	\$000's
908613 Bank St (Rideau Rd-Mitch Owens)			Class of Estimate: C) Planning	7,070
Category: Renewal of City Assets	Ward: 20	Year of Completion: 2021		
<p>The watermain in Bank St from Rideau Rd to Mitch Owens Rd requires rehabilitation due to its condition and to improve the reliability of the distribution system. The authority request will provide for construction and associated project costs.</p>				

City of Ottawa
 2020 Draft Capital Budget
 Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
908614	LRT2 W1 Hwy 174 - Shefford Rd	Class of Estimate: C) Planning	702
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2021	
This project relates to the watermain crossing of Highway 174 at Shefford Rd, part of which will be built in conjunction with LRT2 works.			

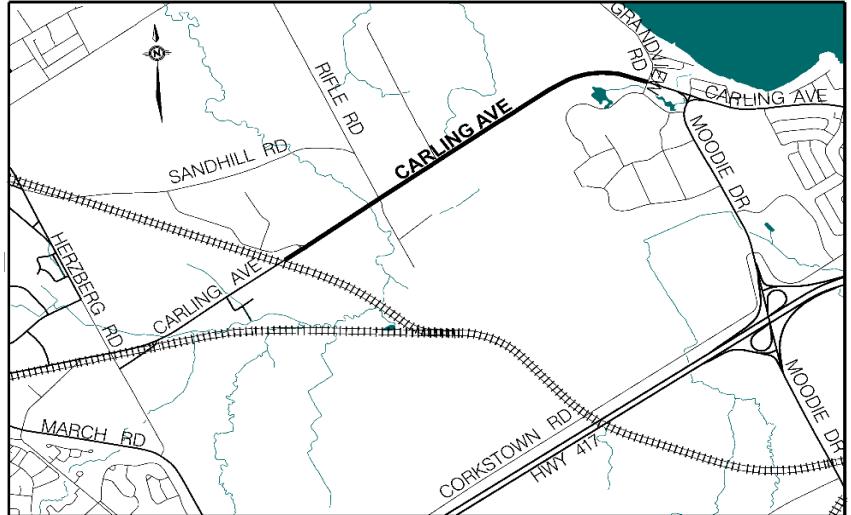
City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			Location/Description	\$000's
908981 Lemieux island Pipe Bridge SN 017160			Class of Estimate: C) Planning	2,120
Category: Renewal of City Assets	Ward: 15	Year of Completion: 2024		
<p>Funding is required for the project costs related to the future renewal of the structure in line with the recommendations obtained from the 2010 Risk Assessment Study and 2013 Seismic Retrofit Feasibility Study.</p> <p>New year of completion 2025.</p>				

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

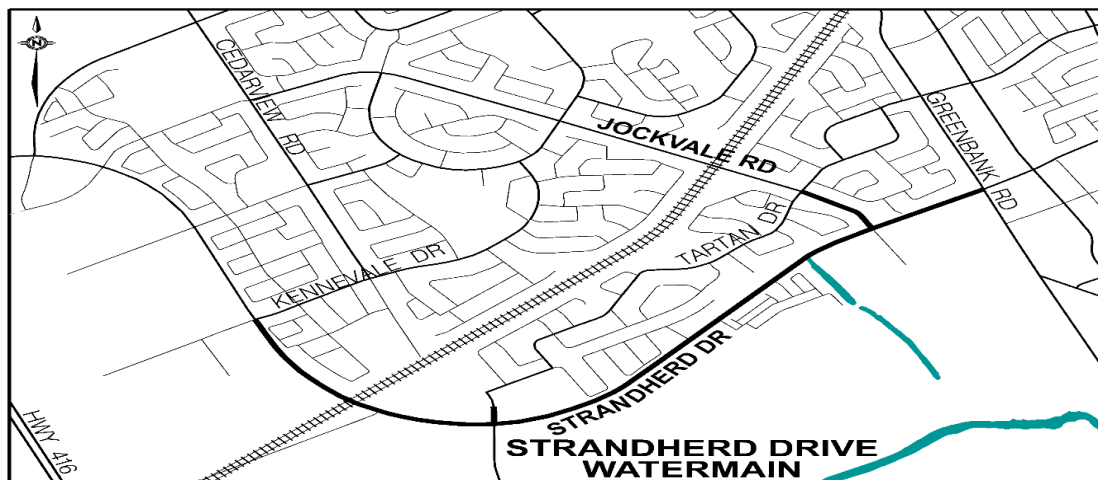
Project(s) within a Program Information			\$000's
909713 Water System Improvements		Class of Estimate: C) Planning	6,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
<p>To meet long range watermain replacement goals, this program provides funding for watermain replacement in areas where there are no sewer or roadway needs. Funding is also used to implement measures to reduce system vulnerability to critical service areas. Measures could include, but are not limited to, watermains, valves, pumping stations, pumps, storage, backup power, other infrastructure and appurtenances, as required, to improve system reliability. The funding request may include design, construction and related project costs.</p>			
909714 2020 WM Transmission/Distribution Rehab		Class of Estimate: C) Planning	4,087
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
<p>The City of Ottawa’s water distribution system consists of over 3,000 km of watermains, of which approximately 270 km are classified as transmission watermains. This program provides funding for improvements identified by the transmission watermain condition assessment program: rehabilitation or replacement of defective pipes or appurtenances as a result of corrosive attack, structural deficiencies, and erosion or soil movement. In addition, this program will allow for construction of various watermain links and appurtenances in the transmission and distribution systems, as well as repairs and cathodic protection to improve system flexibility and reliability.</p>			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

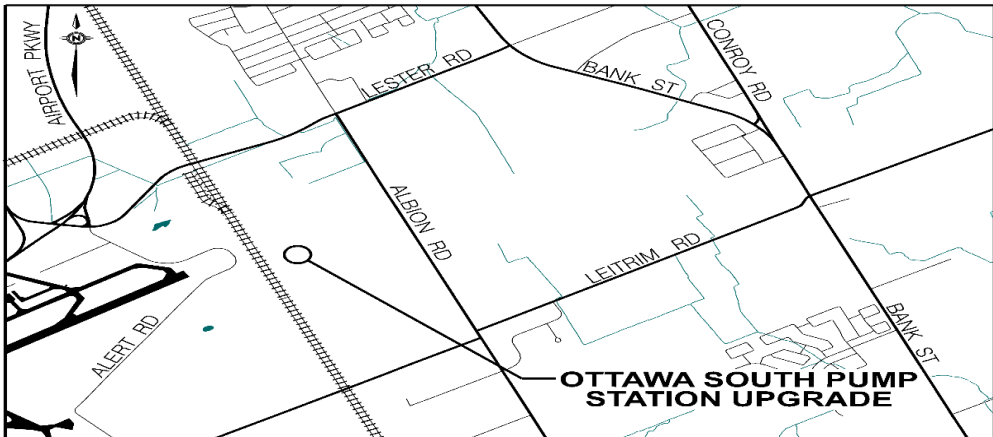
Project(s) within a Program Information			Location/Description	\$000's
909735 Carling Ave (Moodie-Shirleys Bay)			Class of Estimate: C) Planning	3,000
Category: Renewal of City Assets	Ward: 7	Year of Completion: 2022		
<p>Public Service and Procurement Canada (PSPC) requires a second watermain feed to their site located at 60 Moodie Drive, Ottawa, Ontario. They have requested that the City provide approximately 3500m of 305mm diameter watermain in Carling Ave. between Grandview Drive and 1.4km east of Herzberg Road. PSPC shall pay for the design, construction and administration costs. This funding request is to design, construct and administer the project and will be paid back by PSPC upon completion of the watermain.</p>				

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

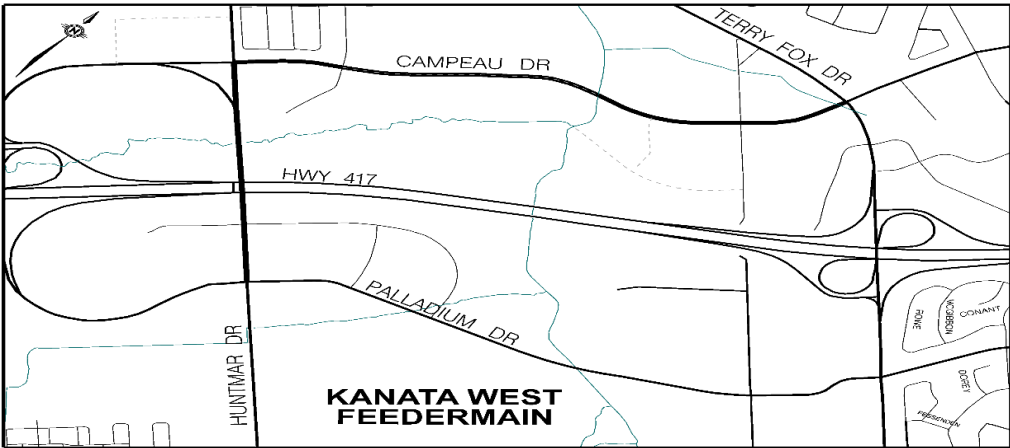
Project Information			Financial Details						
900632 Strandherd Road Watermain			Class of Estimate: C) Planning						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 3	Year of Completion: 2020					
<p>The Strandherd Drive watermain is needed to support growth in the Barrhaven area north of the Jock River. The 305 mm/406 mm watermain will extend from the existing watermain on Strandherd Drive at Kennevale Drive to Greenbank Road. A connection on Jockvale from Strandherd to Tartan/Exeter is also included in the project scope. Construction will be coordinated with the Strandherd Road Widening project.</p> <p>New estimated year of completion 2022.</p>			2020 Request		2,133	Projected Yearend Unspent Bal.		5,627	
			Revenues		0	Debt			
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0	
			Rate Supported		216	Rate Supported Debt		0	
			Develop. Charges		1,917	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		2,133	0	0	0	
			Spending Plan		6,707	648	405	0	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	



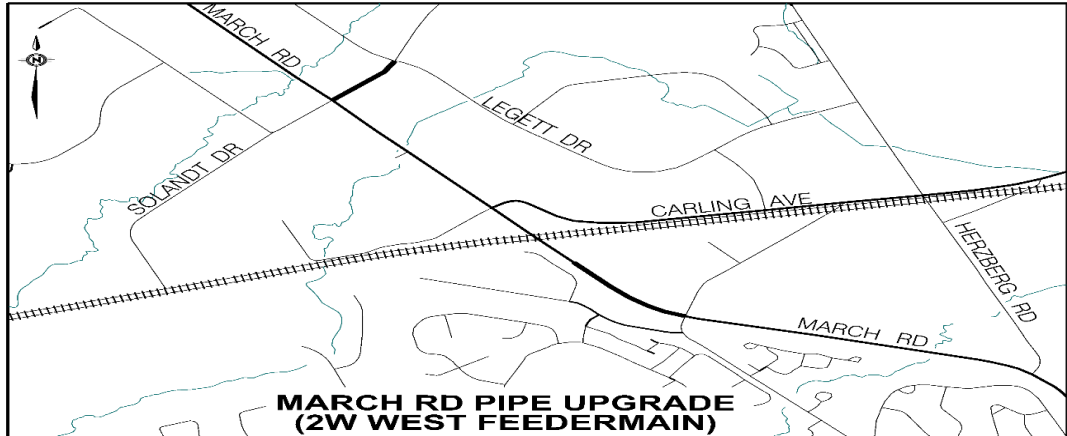
City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details			
902206 Ottawa South Pumping Station Upgrade			Class of Estimate: C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 10	Year of Completion: 2019		
<p>This project was identified in the Infrastructure Master Plan and is needed to provide sufficient drinking water pumping capacity to meet the needs of the South Urban Community and the Ottawa Airport. This budget request is to supplement existing authority for construction based on revised cost estimates.</p> <p>New Completion Year 2022.</p>			2020 Request		Projected Yearend Unspent Bal.	
			2,650		11,456	
			Revenues	0	Debt	
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0
			Rate Supported	1,299	Rate Supported Debt	0
			Develop. Charges	1,352	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	2,650	0	0
			Spending Plan	12,781	795	530
			FTE's	0	0	0
			Operating Impact	0	0	0
						

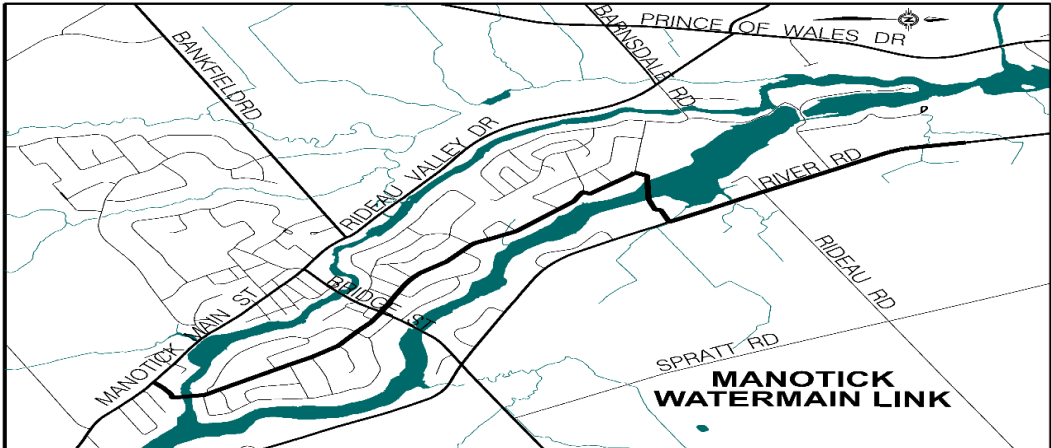
City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details			
904916 DCA-Kanata West Feedermain			Class of Estimate: C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 4	Year of Completion: 2018		
<p>This project was identified in the Infrastructure Master Plan and is needed to improve drinking water transmission capacity in the West Urban Community. The project is being implemented in phases. This budget request is to cover the design and construction of the 2nd phase of the project.</p> <p>New Completion Year 2023.</p>			2020 Request		Projected Yearend Unspent Bal.	
			320		2,654	
			Revenues	0	Debt	
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0
			Rate Supported	30	Rate Supported Debt	2
			Develop. Charges	288	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	320	1,020	0
			Spending Plan	2,814	606	370
			FTE's	0	0	0
			Operating Impact	0	0	0
						

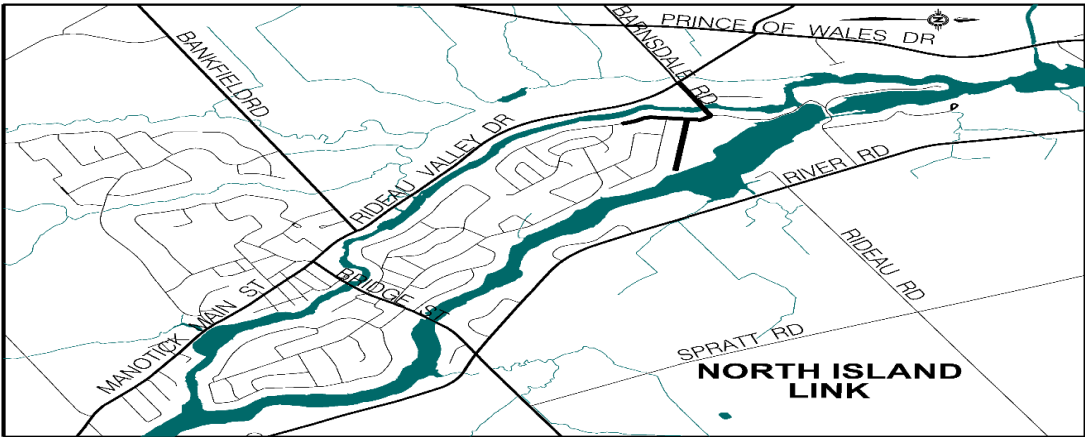
City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details					
904982 Zone 2W West march Rd 406 to 6			Class of Estimate: C) Planning					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 4	Year of Completion: 2024				
<p>This project was identified in the 2013 Infrastructure Master Plan and is needed to improve pressure requirements for future growth in the Kanata North Area. This budget request is to cover the design of this project.</p>			2020 Request		600	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		60	Rate Supported Debt		0
			Develop. Charges		540	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		600	1,730	0	0
			Spending Plan		300	1,045	639	346
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0
 <p>MARCH RD PIPE UPGRADE (2W WEST FEEDERMAIN)</p>								

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details			
905992 Manotick Supply Watermain			Class of Estimate: C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 21	Year of Completion: 2019		
<p>This project involves a new watermain from Riverside South to the Village of Manotick. It is needed to support growth and provide reliability to Manotick and urban areas south of the Jock River. The project also provides the opportunity for local improvements for village residents that currently rely on private rural services.</p> <p>The public art budget for this project is \$63,000.</p> <p>New Completion Year 2024.</p>			2020 Request		Projected Yearend Unspent Bal.	
			9,850		936	
			Revenues	0	Debt	
			Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0
			Rate Supported	850	Rate Supported Debt	0
			Develop. Charges	7,084	Develop. Charges Debt	1,916
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	9,850	0	16,020
			Spending Plan	5,861	2,955	9,980
			FTE's	0	0	0
			Operating Impact	0	0	0
						

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details			
907456 Manotick North Island Link			Class of Estimate: C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 21	Year of Completion: 2021		
<p>This project provides a key reliability link for water supply in the South Urban Community. The new feedermain will connect the proposed Manotick Supply Watermain with the existing feedermain on Rideau Valley Road.</p> <p>The public art budget for this project is \$38,000.</p> <p>New Estimated Year of Completion 2022.</p>			2020 Request		Projected Yearend Unspent Bal.	
			6,160		1,083	
			Revenues	0	Debt	
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0
			Rate Supported	617	Rate Supported Debt	0
			Develop. Charges	5,543	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	6,160	0	0
			Spending Plan	4,163	1,848	1,232
			FTE's	0	0	0
			Operating Impact	0	0	7
						

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details						
909671 2020 Infrastructure Master Plan (Water)			Class of Estimate:						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2022					
This capital account is to support the planning of major drinking water infrastructure required to support growth City-wide. The scope of infrastructure includes transmission mains, pump stations, storage facilities, municipal wells, and other distribution system-related components, but excludes works at the central water purification plants.			2020 Request		510	Projected Yearend Unspent Bal.			0
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		454	Rate Supported Debt		0	
			Develop. Charges		56	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		510	260	0	0	
			Spending Plan		510	260	0	0	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	
909672 2020 Off Site Reliability Links			Class of Estimate:						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2022					
This budget request is to cover minor off-site watermain connections needed to improve the reliability of water supply to development areas.			2020 Request		160	Projected Yearend Unspent Bal.			0
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		16	Rate Supported Debt		0	
			Develop. Charges		144	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		160	160	160	160	
			Spending Plan		160	160	160	160	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details					
909673 2020 Groundwater Studies			Class of Estimate:					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2022				
<p>These funds will be used to further the City’s ongoing groundwater characterization efforts. The work to be undertaken will be in line with the City’s groundwater management strategy direction set by City Council in May, 2003. The approach includes the preparation of various studies: to characterize local groundwater resources and demands; to assess existing water supply and wastewater disposal risks; and to support the development of the Rural Servicing Strategy. This request will support groundwater characterization studies in various locations and will leverage planned complementary investigations by the Ontario Geological Survey.</p>			2020 Request		380	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		190	Rate Supported Debt		0
			Develop. Charges		190	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		380	370	160	160
			Spending Plan		380	370	160	160
			FTE's		0	0	0	0
Operating Impact		0	0	0	0			
909674 2020 Rural Servicing Strategy			Class of Estimate:					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2022				
<p>The Rural Servicing Strategy is made up of a coordinated set of initiatives geared to promoting safe and sustainable rural water supply and wastewater disposal. It utilizes the findings of various groundwater studies and provides technical and policy direction on private and public servicing within the rural area. The rural area has a variety of public and private servicing systems, and these are regularly reviewed for sustainability and future growth. This budget request will support village servicing study work in 2020.</p>			2020 Request		260	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		133	Rate Supported Debt		0
			Develop. Charges		127	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		260	200	210	210
			Spending Plan		260	200	210	210
			FTE's		0	0	0	0
Operating Impact		0	0	0	0			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details					
909725	2020 Water & Wastewater Studies		Class of Estimate:					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2022				
This capital account is intended to support various studies related to the planning of growth-driven water and wastewater infrastructure. This includes technical studies and Class Environmental assessments.			2020 Request		260	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		52	Rate Supported Debt		0
			Develop. Charges		208	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		260	260	260	270
			Spending Plan		260	260	260	270
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details			
Water Distribution Systems			Class of Estimate: C) Planning			
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>The City of Ottawa operates a water distribution system consisting of approximately 3,100 km of piping, 21,300 fire hydrants, over 49,000 valves and 240,000 water service meters. The value of this buried infrastructure is over \$4.0 billion. This program is aimed at addressing annual preventive and corrective maintenance for the City's existing water distribution network in order to provide reliable operation of the network components, to ensure drinking water quality is maintained throughout the water distribution network and to preserve and extend the life of the infrastructure to prevent failures requiring heavier and costlier reconstruction strategies.</p> <p>The program is focused on:</p> <ul style="list-style-type: none"> - Proactive lifecycle renewal and rehabilitation projects; - Level of service initiatives; - System improvements and optimization; - Asset lifecycle upgrades and rehabilitation to support growth demand. <p>Some of the key infrastructure renewal projects for 2020 are:</p> <ul style="list-style-type: none"> - Large Transmission Main condition assessment and risk mitigation projects; - Preventative maintenance and water distribution system improvements; - Lead Service Replacement program. 			2020 Request		Projected Yearend Unspent Bal.	
			4,275		0	
			Revenues	250	Debt	
			Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0
			Rate Supported	4,025	Rate Supported Debt	0
			Develop. Charges	0	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	4,275	5,450	5,450
			Spending Plan	4,275	5,450	5,450
			FTE's	0	0	0
			Operating Impact	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909795 Water Distribution Sys Improvements 2020		Class of Estimate: C) Planning	1,325
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>The City of Ottawa's water distribution system consists of approximately 3,100 km of watermains, 49,000 valves and 21,300 hydrants. This program involves a number of smaller scale improvements including water loss control initiatives, access improvements, hydrant and valve life-cycle replacements, installation of flusher units, a watermain cleaning program, watermain rehab on dead-end streets, water distribution system security and system identification improvements for hydrants and valves. These initiatives ensure that the watermain infrastructure (watermains and appurtenances) is replaced and/or upgraded when normal life expectancy is surpassed and to ensure the system performs in accordance with licencing requirements as set out in the Drinking Water Quality Management Standard (DWQMS).</p>			
909802 Protective Lead Service Replacement Program 2020		Class of Estimate: C) Planning	1,250
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>The City produces and distributes drinking water that is lead-free. However, lead can enter drinking water through exposure to existing lead service lines. As these services exist within public right-of-way and private property, the responsibility for these services is a shared City/property owner responsibility. The City replaces lead services within the public right-of-way as part of the Integrated Watermain Rehabilitation Program. This program provides the funds to cover the costs of the City's portion of Lead Service Replacement (outside of the integrated program). Customers are responsible for the cost of replacement on private property. The program offers residents deferred payment options on the tax bill and a rebate option for customers with only a private lead service. Production and distribution costs for public information bulletins are provided by this account.</p>			
909803 Cathodic Protection 2020		Class of Estimate: C) Planning	1,200
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
<p>The water distribution system consists of over 3,100 km of watermains. The Cathodic Protection program is a proactive program to extend the life of metallic watermains that are showing signs of premature corrosion failure. Anodes are installed onto the pipe network to prolong its useful life by acting as a sacrificial material, thereby protecting watermains from corrosion. Key elements include condition assessment, installation, monitoring and testing of the anodes to measure their effectiveness and predict life cycle expectations.</p>			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909804 Critical Links Risk Mitigation Meas 2020		Class of Estimate: C) Planning	500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
<p>This multi-year project will provide the funding to implement various failure impact mitigation initiatives on large transmission mains which may include in-line contingency pumping stations and supply by-pass systems to automated valves aimed to maintain reliable basic daily supply during failure events. These mains and appurtenances are the backbone of the system and are critical to the continued reliability of service to large portions of the urban population. This project is one of the three key capital projects which together form the transmission main condition assessment program that focus on condition assessment, risk mitigation and transmission main repairs and renewals. By reducing the risk of key infrastructure failure, this program will improve drinking water service delivery.</p>			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details					
Water Systems General-Renewal			Class of Estimate:	C) Planning				
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>This program is aimed at addressing matters that are common to Drinking Water Services, including Water Distribution, Water Production, Water Quality Assurance. These programs cover operational issues, legislative requirements, system planning, and other strategic directions such as environmental programs.</p>			2020 Request		250	Projected Yearend Unspent Bal.		0
			Revenues	0	Debt			
			Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0		
			Rate Supported	250	Rate Supported Debt	0		
			Develop. Charges	0	Develop. Charges Debt	0		
			Gas Tax	0	Gas Tax Debt	0		
			Forecast	2020	2021	2022	2023	
			Authority	250	490	460	450	
			Spending Plan	250	490	460	450	
			FTE's	0	0	0	0	
			Operating Impact	0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909796 Water Facilities Roofing 2020		Class of Estimate: C) Planning	250
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
The lifecycle maintenance of the Water Production facilities roofing systems involves 159 distinct roof structures on 41 separate facilities, consisting of an area of 47,891 square meters (approximately 11 acres) with a total replacement value of over \$8.0 million dollars. Bi-annual inspections are performed on these facilities to produce a prioritized list of annual roofing repair and replacement projects to maintain these facilities' roofing envelopes.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details			
Water Storage Tanks & Reservoirs			Class of Estimate: C) Planning			
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>The purpose of this program is to establish a funding envelope required to sustain the continuous and reliable operation of the elevated tank and reservoir facilities which are critical in distributing drinking water to the City's customers.</p> <p>Typical projects include: equipment asset which must be retrofitted, rehabilitated or replaced due to age or condition failure; structural repairs at reservoirs; Health & Safety retrofits and specialized inspections of elevated tanks.</p>			2020 Request		Projected Yearend Unspent Bal.	
			630		0	
			Revenues	0	Debt	
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0
			Rate Supported	630	Rate Supported Debt	0
			Develop. Charges	0	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	630	1,350	1,350
			Spending Plan	630	1,350	1,350
			FTE's	0	0	0
			Operating Impact	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909797 Water Storage Tanks & Reservoir 2020		Class of Estimate: C) Planning	
		630	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>The purpose of this project is to establish a funding envelope required to sustain the continuous and reliable operation of the elevated tank and reservoir facilities which are critical in distributing drinking water to the City's customers.</p> <p>Typical projects include: equipment asset which must be retrofitted, rehabilitated or replaced due to age or condition failure; structural repairs at reservoirs; Health & Safety retrofits and specialized inspections of elevated tanks.</p>			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details					
Water Pumping Stations			Class of Estimate:		C) Planning			
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various			
<p>The purpose of this program is to establish a funding envelope for the retrofit, rehabilitation or replacement of the pumping station assets as they age.</p> <p>Typical projects include: medium voltage electrical assessments, electrical upgrades, various condition assessments, standby power generator retrofits, flow meter replacements, and specialized Arc flash hazard studies.</p>			2020 Request		3,000	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		2,900	Rate Supported Debt		100
			Develop. Charges		0	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		3,000	2,150	2,150	2,150
			Spending Plan		3,000	2,150	2,150	2,150
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909798	Water Pumping Station Facility Rehab2020	Class of Estimate: C) Planning	3,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
To establish a funding envelope for retrofit, rehabilitation or replacement of the infrastructure as it ages. Projects for 2020 include: condition assessment activities, Arc flash hazard review, reliability improvements and chemical system modifications.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Program Information			Financial Details							
Water Communal Well System			Class of Estimate:		C) Planning					
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various					
<p>The City currently operates six (6) communal well based drinking water systems. These include systems serving:</p> <ul style="list-style-type: none">· Munster Hamlet· Richmond – King’s Park Subdivision· Richmond West Subdivision· Carp· Vars· Greely - Shadow Ridge Subdivision <p>Taken collectively, the asset value for the facilities associated with these communal drinking water systems (pumping stations, reservoirs, treatment process) is estimated at \$24.8 million.</p> <p>This program has been developed to ensure that these assets are maintained and that the demand, quality and regulatory requirements of this service are met.</p>			2020 Request		1,150	Projected Yearend Unspent Bal.			0	
			Revenues		0	Debt				
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0		
			Rate Supported		1,150	Rate Supported Debt		0		
			Develop. Charges		0	Develop. Charges Debt		0		
			Gas Tax		0	Gas Tax Debt		0		
			Forecast		2020	2021	2022	2023		
			Authority		1,150	2,500	2,500	2,500		
			Spending Plan		1,150	2,500	2,500	2,500		
			FTE's		0	0	0	0		
			Operating Impact		0	0	0	0		

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909799 Communal Well System Rehab 2020		Class of Estimate: C) Planning	1,150
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>This project is to establish a funding envelope for the retrofit, rehabilitation or replacement of asset components at the six (6) communal well based drinking water systems serving: Munster Hamlet; Richmond - King's Park Subdivision; Richmond West Subdivision; Carp; Vars; Greely - Shadow Ridge Subdivision. Taken collectively, the asset value for the facilities associated with these communal systems (pumping stations, reservoirs, treatment process) is estimated at \$24.8 million.</p> <p>Typical projects include: condition assessment; control and instrumentation rehabilitations; water treatment and process upgrades; well condition and capacity testing.</p>			

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Program Information			Financial Details						
Water Treatment-Renewal			Class of Estimate:		C) Planning				
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The program is aimed at addressing annual requirements for the City's two Water Purification Plants that have an estimated replacement value of \$550 million. In order to provide continued uninterrupted safe supply of potable water, to preserve and extend the life of the infrastructure, and to meet provincial and federal regulation requirements it is necessary to invest in the ongoing rehabilitation and renewal of these assets.</p>			2020 Request		13,320	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0	
			Rate Supported		13,120	Rate Supported Debt		200	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		13,320	19,066	17,098	17,209	
			Spending Plan		7,480	14,252	15,402	16,895	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				

City of Ottawa
2020 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
908633 Enhanced Corrosion Control			2,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>This project involves the design and construction of new phosphate treatment processes at both water treatment plants in order to further enhance corrosion control of distribution system piping. This is in response to the revised Health Canada guideline for lead in drinking water, and the anticipated adoption of a 5 ppb standard in Ontario. The new treatment strategy is required to comply with the lower standard.</p>			
909800 Water Treatment Rehab 2020			8,550
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>The replacement value of the City's two (2) water facilities is estimated to be in excess of \$550 million. This project addresses equipment upgrades; infrastructure life cycle replacement; and process changes resulting from operational, legislative and health and safety initiatives. Work includes: valve and meter replacements, mechanical and electrical rehabilitation, chemical system control/operational improvements. It also covers the costs related to condition assessment within the water purification plants.</p>			
909801 Water Sys SCADA & Instrument Rehab 2020			2,770
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
<p>The Supervisory Control and Data Acquisition (SCADA) system is a computerized system that is used by certified Operators to monitor and control the drinking water treatment system. The Operator monitors all critical components of the treatment process and is able to remotely operate equipment within the purification plants, communal well systems, pump stations, reservoirs and storage tanks. The SCADA system is crucial to the operation of the treatment system for monitoring key parameters required under provincial and federal legislation. Components of the existing SCADA system are nearing the end of their lifecycles. Various components of the system require to be either upgraded or replaced to maintain reliability.</p>			

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
In Thousands (\$000)

Service Area: Integrated Water & Wastewater											
Category	2020 Capital Budget	Revenues	Tax Supported/ Dedicated Reserves	Rate Supported Reserves	Develop. Charges	Gas Tax	Debt				
							Tax/ Dedicated	Rate	Develop. Charges	Gas Tax	Total Debt
Renewal of City Assets	17,562	0	0	15,870	0	0	0	1,692	0	0	1,692
Growth	0	0	0	0	0	0	0	0	0	0	0
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancements	0	0	0	0	0	0	0	0	0	0	0
Total	17,562	0	0	15,870	0	0	0	1,692	0	0	1,692

City of Ottawa
2020 Draft Capital Budget
Service Area: Integrated Water & Wastewater
In Thousands (\$000)

Project Information			Financial Details						
907084 Water & Sewer Utility Billing System			Class of Estimate:		Not Applicable				
Dept: Corporate Services Department		Category: Renewal of City Assets	Ward: CW		Year of Completion: 2020				
<p>The City's Water Billing System (AQUACis) requires renewal in order to support the Water, Wastewater and Stomrwater billing and collection functions in years to come. AQUACis was implemeneted in 1998 using Powerbuilder as a programing tool. The version used for programming has not been updated since version 8 and has become outdated and obsolete with no upgrade path to the current market available versions of the tool. The limited availability of programmers conversant in this tool has made it more problematic to support, enhance or keep the application current. As a result this project was identified as early as 2008 as a Priority of the IT Renewal Systems Project.</p> <p>In February of 2019 the City successfully implemented a new water, wastewater and billing system. Additional funding is required to support post implementation work on the new system.</p>			2020 Request		600	Projected Yearend Unspent Bal.			831
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		600	Rate Supported Debt		0	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		600	0	0	0	
			Spending Plan		600	0	0	0	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Integrated Water & Wastewater
In Thousands (\$000)

Program Information			Financial Details						
Integrated Water & Wastewater			Class of Estimate:		C) Planning				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The Integrated Rate Program includes rehabilitation of more than one asset class (sanitary sewers, storm drainage, and water mains) that are coordinated within a single project. The program is aimed at renewing and replacing the infrastructure assets in order to provide continued service and prevent failures.</p> <p>The program is comprised of:</p> <ul style="list-style-type: none">• Functional and preliminary designs.• Lifecycle renewal: renewal, rehabilitation and replacements for deterioration.• Coordinated renewal: schedule coordination (escalation or deferral) between asset classes and with other asset classes.• Level of service enhancements: flooding improvements and system optimization.• Upgrades and rehabilitation to support growth and miscellaneous localized repairs. <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p> <p>Detailed information and costs associated with specific components and projects are provided following this program summary.</p>			2020 Request		16,962	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		15,270	Rate Supported Debt		1,692	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		16,962	21,394	16,000	12,576	
			Spending Plan		12,065	15,637	17,855	17,074	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Integrated Water & Wastewater
In Thousands (\$000)

Project(s) within a Program Information			\$000's
908997	LRT2 SS1 Sewer Upgrades (Byron Ave)	Class of Estimate: C) Planning	685
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>In conjunction with the LRT Stage 2 construction, this funding request provides for renewal of existing sanitary sewer infrastructure on Byron Ave.</p> <p>This funding request provides for all project related costs including design, construction and any associated consultation costs.</p>			
909492	LRT2 SS2 Richmond Compl Streets	Class of Estimate: C) Planning	3,000
Category: Renewal of City Assets	Ward: 7	Year of Completion: 2023	
<p>This project will coordinate the rehabilitation of existing infrastructure within the LRT stage-2 limits. In conjunction with the construction of Richmond Rd "complete streets", the sanitary sewers in Richmond Rd from New Orchard Ave to Cleary Ave will be replaced due to age and condition. The watermain in Richmond Rd from the Sir John A. MacDonald Pkwy to Redwood Ave will be replaced to accommodate the construction of adjacent infrastructure. Localized, condition driven storm sewer rehabilitation will be included in Woodroffe Ave from Richmond Rd to Byron Ave. Additional storm sewer and outfall rehabilitation is required along the southwest transitway between Baseline Rd and Iris St.</p> <p>This funding request provides for all project related costs including design, construction and any associated consultation costs.</p>			
909694	Hydraulic Structures	Class of Estimate: C) Planning	1,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
<p>The authority will provide for the rehabilitation of the City's sewer outfalls, access structures and other hydraulic features. The funding is for all project related costs which may include but not limited to design, construction and property acquisition.</p>			

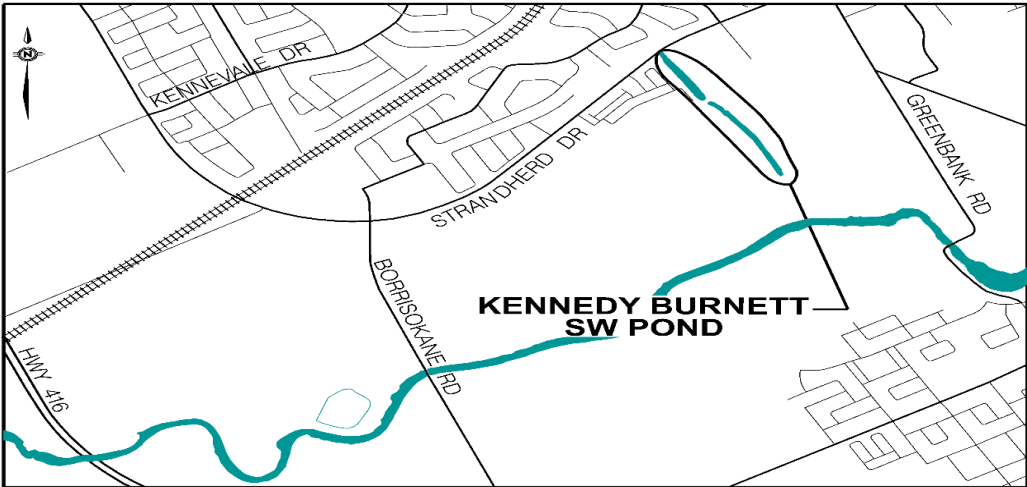
City of Ottawa
2020 Draft Capital Budget
Service Area: Integrated Water & Wastewater
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909695 2020 Sewer Repairs / Improvements		Class of Estimate: C) Planning	10,777
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
A number of locations have been identified to resolve surface flooding and sewer performance problems. Work could entail both trenchless and conventional pipe repairs, as well as various hydraulic improvements such as, installing catch basins and re-profiling driveways or road grading. The authority provides for the design, construction and all associated costs for various drainage improvements.			
909696 2020 Sewer Trenchless Rehab		Class of Estimate: C) Planning	1,500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
This project provides for relining of sewers, access structures, and spot repairs at various locations. The work will improve: structural integrity, hydraulic performance, reduce basement flooding, extraneous flows, and improve the overall operation of the system.			

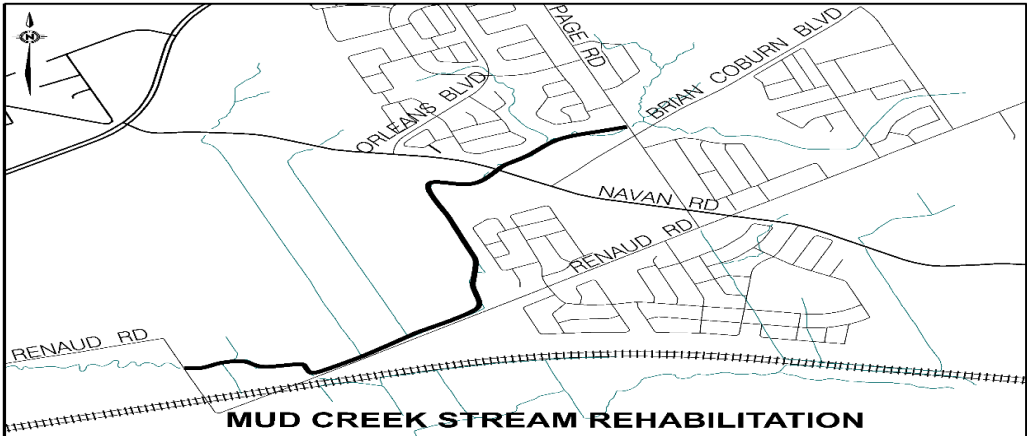
City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
In Thousands (\$000)

Service Area: Stormwater Services											
Category	2020 Capital Budget	Revenues	Tax Supported/ Dedicated Reserves	Rate Supported Reserves	Develop. Charges	Gas Tax	Debt				
							Tax/ Dedicated	Rate	Develop. Charges	Gas Tax	Total Debt
Renewal of City Assets	29,809	0	0	22,630	0	0	0	7,179	0	0	7,179
Growth	260	0	0	205	55	0	0	0	0	0	0
Regulatory	500	450	0	50	0	0	0	0	0	0	0
Service Enhancements	1,000	0	0	1,000	0	0	0	0	0	0	0
Total	31,569	450	0	23,885	55	0	0	7,179	0	0	7,179

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Financial Details			
903324 Kennedy Burnett SW Pond			Class of Estimate: C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward 3	Year of Completion: 2021		
<p>An upgrade to the existing stormwater management pond is required to provide water quality treatment to future development lands and improve water quality treatment to existing development areas that are tributary to the facility. The pond is located in Barrhaven adjacent to the Barrhaven Town Centre. This budget request is for the construction phase of the project.</p> <p>New year of completion 2022.</p>			2020 Request		Projected Yearend Unspent Bal. 13,153	
			Revenues	0	Debt	
			Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0
			Rate Supported	2,000	Rate Supported Debt	810
			Develop. Charges	0	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	2,810	0	0
			Spending Plan	14,558	843	562
			FTE's	0	0	0
			Operating Impact	0	0	0
						

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Financial Details			
909748 Mud Creek Stream Renewal			Class of Estimate: C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward 2	Year of Completion: 2024		
<p>Reconstruction of portions of Mud Creek is required to mitigate the impacts of existing and future development in the watershed, including the East Urban Community Mixed Use Centre Community Design Plan area. The project will be funded through an area-specific development charge and the City's stormwater rate. This request is for the share of design costs to be covered by the stormwater rate.</p>			2020 Request		Projected Yearend Unspent Bal.	
			370		0	
			Revenues	0	Debt	
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0
			Rate Supported	370	Rate Supported Debt	0
			Develop. Charges	0	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	370	740	2,940
			Spending Plan	185	481	1,766
			FTE's	0	0	0
			Operating Impact	0	0	0
						

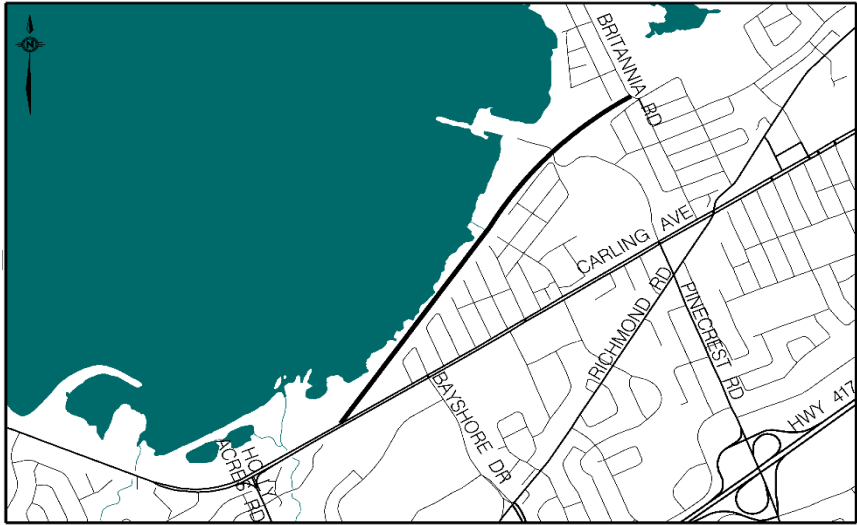
City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Financial Details						
909749	2020 Flood Plain Mapping		Class of Estimate:		C) Planning				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW		Year of Completion: 2022				
<p>The City has a multi-year agreement to update its flood plain mapping with the three Conservation Authorities: Rideau Valley, South Nation and Mississippi. The assessment uses contemporary methods in hydrologic and hydraulic analysis, historical records of stream flow and/or water level, and the most up-to-date topographical data, to produce new or updated estimates of the 1:100 year flood lines for specific watercourses. This budget request is needed to comply with the planned cost-sharing as described in the contribution agreement.</p>			2020 Request		310	Projected Yearend Unspent Bal.			0
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		310	Rate Supported Debt		0	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		310	200	130	220	
			Spending Plan		310	200	130	220	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Program Information			Financial Details						
Stormwater Collection Rehabilitation			Class of Estimate:		C) Planning				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The Stormwater Collection Rehabilitation Program addresses annual rehabilitation and operational capital requirements for the City's stormwater collection system in order to preserve and extend the life of the infrastructure, reduce flooding occurrences, and prevent failures requiring more extensive reconstruction. The program is focused on:</p> <ul style="list-style-type: none">• Flood mitigation measures.• Proactive lifecycle renewal and rehabilitation projects.• Level of service initiatives.• System improvements and optimization.• Miscellaneous upgrades and rehabilitation to support growth demand. <p>The funding requests for stormwater costs coordinated with roadway, wastewater or water rehabilitation are included within the Integrated Rehabilitation Programs. Program funding requirements to support renewal needs are defined in the Long Range Financial Plan.</p> <p>Detailed information and costs associated with specific stand-alone (non-integrated) components and projects are provided following this program summary page.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>			2020 Request		2,250	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0	
			Rate Supported		1,950	Rate Supported Debt		300	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		2,250	1,500	1,500	1,500	
			Spending Plan		2,250	1,500	1,500	1,500	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project(s) within a Program Information			Location/Description	\$000's
909715 Belltown Stormwater Improvements			Class of Estimate: C) Planning	750
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022		
<p>This funding request will provide for an Environmental Assessment for the extension of the Lincoln Heights Trunk storm sewer. The proposed trunk storm sewer will allow the City to retire storm pumping station assets which will increase reliability during high river water level events, lower long term operation costs and reduce energy consumption. In addition, parts of the neighbourhood closest to the river will realize an increased level of service for small storm events through ditch improvements and other stormwater improvements.</p>				

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909750	Storm and Surface Water Rehabilitation	Class of Estimate: C) Planning	1,500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
This program provides for the rehabilitation of storm and surface water features, including creeks, rivers, ravines, slope stabilization and flood mitigation measures at various locations. The funding is for all project related costs which may include investigation, design, construction and property acquisition.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Program Information			Financial Details					
Structures-Stormwater			Class of Estimate:		C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various			
<p>The Structures Stormwater Program provides for condition assessments, preventative maintenance, rehabilitation and reconstruction works undertaken on the City's existing drainage culverts. Program funding requirements to support renewal needs are defined in the Long Range Financial Plan. Detailed information and costs associated with specific components and projects directly follow this program summary page.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>			2020 Request		19,619	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		15,050	Rate Supported Debt		4,569
			Develop. Charges		0	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		19,619	18,160	15,200	14,750
			Spending Plan		16,517	15,980	17,119	16,110
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

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City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
909385	2019 Drainage Culverts - CW		Class of Estimate: C) Planning	9,000
Category: Renewal of City Assets		Ward: CW	Year of Completion: 2021	
<p>The City has a significant inventory of drainage culverts ranging from small diameter roadway culverts (typically non-urbanized ditch drainage under roadways and intersections) to larger span drainage structures. This program provides authority to address the most critical needs for this asset group. This project is for construction work to be delivered by IS Design & Construction. Design for these locations was funded in the previous year.</p>				
Ward	Project	Location		
	5 Thomas Dolan Pkwy Culvert - 438460	0.75 km east of Carp Rd		
	8 Timm Dr Stillwater Creek Culvert - 110160	0.5 km W of Moodie Dr		
	21 Douglas/King Richmond Village Culvert -	Douglas St @ King St in Village of Richmond		
	1 Jeanne D'Arc Blvd N Culvert - 898020	0.70 Km E of Tenth Line Rd		
	10 River Rd Culvert - 220240	3.15 km N of Leitrim Rd		
	5 Breezy Hts Rd Culvert - 438791	0.50 km N of Panmure Rd		
	19 Frank Kenny Rd Culvert - 890460	0.56 km S of Innes Rd		
	20 Mitch Owens Rd Culvert on Rochon MD -	4.45 km E of Anderson Rd		
	5 Vances Side Rd Culvert on McLaren MD -	0.65 km W of Dunrobin Rd		
	5 Second Line Rd Culvert - 648130	4.6 km N of March Rd		
	19 Frank Kenny Rd Culvert on Harold Shaw MD -	4.20 km S of Innes Rd		
	8 Robertson Rd Culvert - 110120	1.30 km E of Eagleson Rd [CR49]		
22,20	Earl Armstrong Rd Culvert - 220100	1.5 km E of Limebank Rd		
	21 Fourth Line Rd Twin Culvert at Cranberry	2.00 km N of Dilworth Rd		
	19 Etienne Rd Culvert on D. Legault MD - 898800	0.60 km E of Birchgrove Rd		
	21 Century Rd Culvert on Crawford Hill MD -	0.50 km W of Fourth Line Rd		
	21 McCordick Rd Culvert on John Padden MD -	0.25 km south of Dilworth Rd		
	21 Fourth Line Rd Culvert on Kenny Branch of	0.90 km S of Brophy Dr		
	5 Kerwin Rd Culvert - 648050	1.0 km S of Berry Side Rd		
	5 Kinburn Side Rd Culvert - 438520	1.30 km W of Hwy 17		
	5 John Shaw Rd Culvert - 430220	0.62 km N of Grant's Side Rd		
	19 Saumure Rd Culvert - 898920	0.52 km N of Devine Rd		
	5 Barlow Cres Culvert - 330630	2.50 km N of Thomas Dolan Pkwy		
	21 Pierce Rd Culvert - 868410	0.95 km W of McCordick Rd		
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
	Class of Estimate: C) Planning			0
Category:		Ward:	Year of Completion:	
Continued				
Ward	Project		Location	
21	Long Island Rd Culvert - L221045		0.20 km north of Sunrise Ave	
21	Barnsdale Rd Culvert - L112110		0.01 km east of Rideau Valley Dr N	
20/32	Marionville Rd Culvert - L882095		0.01 km west of 8th Line Rd	
19	Thunder Rd Culvert - L222330		0.08 km west of Hall Rd	
10	Mary Dr Culvert - L224070		0.11 km west of Lewer St	
19	Kinsella Dr Culvert - L895940		0.01 east of Byrnes Terr	
19	Rockdale Rd Culvert - L893690		1.09 km south of Magladry Rd	
20	Victoria St Culvert - A882940		0.42 km west of Boundary Rd	
19	Beckett's Creek Rd Culvert - L897490		0.24 km south of Old Montreal Rd	
19	Russell Rd Culvert - A224100		0.01 km east of Farmers Way	
19	Russell Rd Culvert - A224070		0.36 km west of Farmers Way	
19	Russell Rd Culvert - A224080		0.01 km west of Farmers Way	
19	Frank Kenny Rd Culvert - A891370		0.60 km south of Giroux Rd	
19	Frank Kenny Rd Culvert - A891310		0.06 km north of Colonial Rd	
20	Ray Wilson Rd Culvert - L884130		0.01 km west of Gregoire Rd	
20	Springhill Rd Culvert - L882670		0.01 km west of Gregoire Rd	
19	Beckett's Creek Rd Culvert - L897450		0.05 km south of Green Pine Crt	
20	Louiseize Rd Culvert on Johnston MD - L222610		0.45 km east of Hawthorne Rd	
20	Owen St Culvert on Ferguson Br (line C) MD -		0.01 km west of White Spruce St	
20	Manotick Station Rd Culvert on Gough Road		0.09 km north of Apple Orchard Rd	
20	Albion Rd Culvert - A221533		0.12 km south of Tullamore St	
19	French Hill Rd Culvert - L896575		0.74 km east of O'Toole Rd	
5	Marchurst Rd Culvert - L647845		0.07 km north of John Aselford Drwy	
5	Marchurst Rd Culvert - L647930		0.54 km south of Thomas A. Dolan Pkwy	
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
	Class of Estimate: C) Planning			0
Category:	Ward:	Year of Completion:		
Continued				
5	Marchurst Rd Culvert - L647820	0.13 km south of John Aselford Drwy		
5	Marchurst Rd Culvert - L647850	0.21 km north of John Aselford Drwy		
5	Marchurst Rd Culvert - L647870	0.32 km north of John Aselford Drwy		
5	Marchurst Rd Culvert - L647840	0.06 km south of John Aselford Drwy		
5	Old Carp Rd Culvert - L547060	0.01 km south of March Rd		
21	McCaffrey Trl Culvert - L756320	0.01 km west of Dwyer Hill Rd		
21	Roger Stevens Dr Culvert - A862840	4.33 km east of Dwyer Hill Rd		
5	Thomas A.Dolan Pkwy Culvert - A434100	2.00 km east of Carp Rd		
5	Burnt Lands Rd Culvert - L541340	1.08 km south of Vaughn Side Rd		
5	Fitzroy St Culvert - A436140	0.17 km east of Old Ship Rd		
5	Thomas A.Dolan Pkwy Culvert - A434140	2.42 km east of Carp Rd		
5	Thomas A.Dolan Pkwy Culvert - A434060	1.42 km east of Carp Rd		
5	Thomas A.Dolan Pkwy Culvert - A434120	2.08 km east of Carp Rd		
5	Thomas A.Dolan Pkwy Culvert - A434080	1.66 km east of Carp Rd		
5	Thomas A. Dolan Pky Culvert - A332060	0.23 km west of Ridgetop Rd		
5	Bearhill Rd Culvert - L543250	0.01 km south of March Rd		
7	Moodie Dr Culvert - A112430	0.05 km south of Carling Ave		
5	Richardson Side Rd Culvert - L542475	0.70 km west of Huntmar Dr		
21	Second Line Rd S Culvert - L873170	0.91 km south of Carsonby Rd E		
19	Larmours Ln Culvert on Labreche MD 890790	1.80 km W of Birchgrove		
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909707 2020 Culverts Scoping Pre/Post Eng.		Class of Estimate: C) Planning	600
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
Scoping and design briefs are necessary to adequately define conditions, coordinate requirements, and scope projects prior to initiating design stages. Detailed condition assessment, structure evaluation, drainage studies, species-at-risk screening, and lifecycle based renewal options analysis are key components of this work. The outcomes of this work are the inputs of the design and construction phases of the project delivery processes. Post-construction funding is required to address assessments and planned/unexpected adjustments outside the original implementation funding envelopes. Design and construction authority requests will be programmed as part of future capital budgets, once these initiatives are complete and project scope is fully defined.			
909708 2020 Drainage Culverts - Site-Specific		Class of Estimate: C) Planning	2,500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
This program provides the authority to undertake engineering, design and construction of renewal works, that are not budgeted through any other renewal program that arise over the course of the year. Many culvert assets have reached or will reach the end of their service life, thus an increased number of reactive replacements are anticipated.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
909709	2020 Drainage Culverts - CW		Class of Estimate: C) Planning	3,000
Category: Renewal of City Assets		Ward: CW	Year of Completion: 2022	
<p>The City has a significant inventory of drainage culverts ranging from small diameter roadway culverts (typically non-urbanized ditch drainage under roadways and intersections) to larger span drainage structures. This program provides authority to address the most critical needs for this asset group. This project is for design work to be delivered by IS Design & Construction. Construction funding will be included in subsequent years.</p>				
Ward	Project	Location		
	5 Thomas Argue Rd Culvert - 540210	0.65 km S of Donald B Munro		
	5 Upper Dwyer Hill Rd Culvert - 548450	1.70 km N of Vaughan Side Rd		
	5 Bearhill Rd Culvert - 548890	0.5 km S of Vaughn Side Rd		
	9 McClellan Rd Culvert - 118230-1/2	0.50 km W of Greenbank Rd		
	19 Russland Rd Patenaude MD Culvert - 898030	1.47 km W of Garlandside Rd		
	20 Boundary Rd Culvert on Pana Rd MD - 888790	3.45 km N of Victoria Rd [CR6]		
	20 Gregoire Rd Culvert - 888940	0.50 km south of Victoria Rd		
	19 Wall Rd Culvert on Lepage Charbonneau MD -	0.90 km East of Tenth Line Rd		
	5 Old Second Line Rd Culvert - 640680	0.34 km S of March Rd		
	5 Old Second Line Rd Culvert - 640670	0.36 km S of March Rd		
	21 Proven Line Rd Culvert on Talor MD - 868360	2.70 km N of Malakoff Rd		
	20 Parkway Rd Culvert - 880420	1.00 km E of Stagecoach Rd [CR25]		
	20 Gregoire Rd Culvert on Allan-Arcand MD -	0.58 km south of Castor Rd		
	19 Kinsella Dr Culvert - 890170	0.50 km S of Old Montreal Rd [CR 34]		
	19 Regimbald Rd Culvert - 890410	1.45 km W of Dunning Rd		
	5 Richardson Side Rd Culvert - 540370	0.90 km W of Carp Rd		
	20 Dalmeny Rd Culvert - 888020	0.50 km E of River Rd		
	19 Birchgrove Rd Culvert on Dejardins-Morris MD -	0.20 km N of Colonial Rd [CR 28]		
	19 Lafleur Rd Upper Ubald Tasse MD Culvert -	0.78km N of Colonial Rd		
	5 Barlow Cres Culvert - 330620	0.28 km N of Heather St		
	21 Fallowfield Rd Culvert - A112190	0.44 km west of Moodie Dr		
	21 Franktown Rd Culvert - A752180	0.23 km west of Conley Rd		
	21 Dwyer Hill Rd Culvert - A861290	1.33 km north of Flood Rd		
	5 Upper Dwyer Hill Rd Culvert - A541130	0.38 km south of Old Almonte Rd		

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
	Class of Estimate: C) Planning			0
Category:	Ward:	Year of Completion:		
Continued				
Ward	Project	Location		
	3 Cambrian Rd Culvert - L112310	0.01 km east of Borrisokane Rd		
	5 Jacob's Gt Culvert - L543185	0.01 km south of March Rd		
	5 Upper Dwyer Hill Rd Culvert - L431220	1.02 km north of Ritchie Side Rd		
	7 Rifle Rd Culvert - L115450	0.01 km south of Carling Ave		
	5 Carp View Rd Culvert - L543840	0.01 km west of Thomas Argue Ramp		
	21 Green's Rd Culvert - L753450	0.01 km south of Franktown Rd		
20/32	Marionville Rd Culvert on McLean Skuce MD -	0.33 km east of 8th Line Rd		
	5 Thomas Argue Rd Culvert - L545955	0.01 km south of Carp View Rd		
	21 Donnelly Dr Culvert - A862480	0.01 km east of Malakoff Rd		
	5 John Aselford Drwy Culvert - L646790	0.75 km west of Marchurst Rd		
	5 Deewood Dr Culvert - L543020	0.01 km south of Panmure Rd		
	3 Greenbank Rd Culvert - L113245	0.15 km south of Jockvale Rd		
	20 Cartwright Rd Culvert - A882982	0.05 km east of Victoria St		
	10 Swansea Cres Culvert - L050103	0.29 km north of Stevenage Dr		
20/31	Boundary Rd Culvert on Pana MD - A883210	0.82 km south of Pana Rd		
	5 Ridgetop Rd Culvert - L335970	1.17 km north of Dunhaven Dr		
	21 Third Line Rd S Culvert - L871550	0.55 km North of Dilworth Rd		
	21 Roger Stevens Dr Culvert - A862580	0.22 km east of McKenna Rd		
	5 March Rd Culvert - A542040	0.51 km west of Diamondview Rd		
	19 Cox Country Rd Culvert - L893370	0.46 km south of Wilhaven Dr		
	21 Roger Stevens Dr Culvert - A862980	3.51 km west of Malakoff Rd		
	5 Grainger Park Rd Culvert - L432710	0.01 km east of Upper Dwyer Hill Rd		
	19 Devine Rd Culvert - L892100	0.46 km east of Frank Kenny Dr		
	19 Trim Rd Culvert - L891280	0.42 km south of Delson Dr		
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
	Class of Estimate: C) Planning			0
Category:	Ward:	Year of Completion:		
Continued				
Ward	Project	Location		
	19 Devine Rd Culvert on Chartrand Shaw MD -	0.13 km west of Buckland Rd		
	19 Devine Rd Culvert - L892110	0.12 km west of Dunning Rd		
	21 Second Line Rd S Culvert - L873230	0.01 km east of Prince of Wales Dr		
	8 David Dr Culvert - L116100	0.01 km west of Bayne Ave		
	5 Thomas Argue Rd Culvert - L545960	0.02 km north of Carp View Rd		
	5 Craig's Side Rd Culvert - L544410	0.55 km east of Farmland Rd		
	10 Airport Pkwy Culvert - A221413	0.42 km north of Uplands Dr		
	10 Airport Pkwy Culvert - A221415	0.80 km north of Uplands Dr		
	10 Airport Pkwy Culvert - A221417	0.85 km north of Uplands Dr		
	9 Cedarview Rd Culvert - A111950	1.02 km north of West Hunt Club Rd		
	21 Moodie Dr Culvert - A111750	0.55 km north of Fallowfield Rd		
	5 Stoneridge Rd Culvert - L339670	0.01 km north of Thomas A. Dolan Pkwy		
	19 Kevin Cres Culvert - L895164	0.01 km north of Old Montreal Rd		
	10 Park Lane Culvert - L224030	0.01 km west of Conroy Ave		
	20 Tomkins Farm Cres Culvert on Dancy Also	0.01 km south of Emerald Links Dr		
	5 Spruce Ridge Rd Culvert - L543630	0.17 km north of Midvale Dr		
	5 Kedey St Culvert - L433775	0.01 km north of McHugo St		
	22 Ryeburn Dr Culvert - L222879	0.01 km west of River Rd		
20/31	Gregoire Rd Culvert - A883150	0.41 km north of Springhill Rd		
	5 Stoneridge Rd Culvert - L339660	0.01 km north of Thomas A. Dolan Pkwy		
	20 Marco St Culvert - L888898	0.01 km west of Bank St		
	5 March Rd Culvert - A542030	0.66 km west of Diamondview Rd		
	19 Meadow Lane Rd Culvert - L893429	0.01 km east of Meadow Lane Rd		
	5 Machardy Rd Culvert - L431435	1.82 km north of Galetta Side Rd		
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
	Class of Estimate: C) Planning			0
Category:	Ward:	Year of Completion:		
Continued				
Ward	Project	Location		
20	Dalmeny Rd Culvert - A882110	0.32 km east of River Rd		
20	River Rd Culvert - A881360	1.75 km south of Rideau Forest Dr		
20	Scrivens Dr Culvert - L885660	0.01 km west of Bank St		
20	William Lindsay Grove Culvert - L221990	0.01 km north of Mitch Owens Rd		
10	Lester Rd Culvert - A222703	0.08 km west of Albion Rd		
line				
19	Canaan Rd Culvert - 890030	0.10 km N of Colonial Rd [CR28]		
5	Sierra Woods Dr Twin Culvert - 540950	0.35 km east of Bearhill Rd		
20	Yorks Corners Rd Culvert - 880200	0.22km N of Castor Rd [CR4]		
20	Queenscourt Dr Culvert - 880150	0.30 km north of Gough		
21	Fallowfield Rd Culvert - 758480	2.35 km W of Huntley Rd		
21	Century Rd West Culvert - 878370	0.55 km W of Prince of Wales Dr [CR73]		
10	Albion Rd Alexander MD Culvert - 220450	0.05 km S of Lester Rd		
2	Renaud Rd Culvert - 228180	1.80 km W of Navan Rd		
19	Russell Rd Culvert - 228340	0.95 km E of Leitrim Rd		
21	Jock Trail Rd Culvert - 758340-1/2	0.30 km W of Green's Rd		
5	Dunrobin Rd Culvert - 648920	2.10 km N of March Rd		
20	Squire Rd Twin Culvert - 880175-1/2	0.50 km W of Dozois Rd		
10	Russell Rd Culvert - 228620	3.30 km E of Walkley Rd		
5	Donald B Munro Dr Culvert - 548500	8.89 km N of Carp Rd		
7	Corkstown Rd Culvert - 118930	3.45 km E of March Rd		
5	Richardson Side Rd Culvert - 540380	0.20 km W of Carp Rd		
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
909710	2020 Drainage Culverts - Other		Class of Estimate: C) Planning	500
Category:	Renewal of City Assets	Ward: CW	Year of Completion: 2022	
The City has a significant inventory of small diameter roadway drainage culverts (typically non-urbanized ditch drainage under roadways and intersections). This program provides authority to address the most critical needs for this asset group. This project is for work to be delivered by other City departments.				
Ward	Project		Location	
	5	March Valley Rd Culvert - L649480	0.73 km south of Cameron Harvey Dr	
	5	Marchurst Rd Culvert - L647780	0.56 km north of Bradbury Crt	
	5	Pineridge Dr Culvert - L544124	0.51 km north of Glennview Pl	
	5	Holmsteads Rd Culvert - L433670	1.10 km south of Galetta Side Rd	
	20	D'Arcy St Culvert - L883690	0.01 km souh of Cosgrove Ave	
	5	Corkery Rd Culvert - L541590	0.06 km south of Manion Heights Cres	
	21	Fairmile Rd Culvert - L872060	0.36 km south of Donnelly Dr	
	20	White Spruce St Culvert - L881305	0.01 km south of Loyalist St	
	21	Carlisle Cir Culvert - L758850	0.01 km east of Canadian Dr	
	19	Watters Rd Culvert - L898130	1.14 km east of Trim Rd	
	5	Old Carp Rd Culvert - L547110	0.12 km west of Lady Lothead Lane	
	5	Old Carp Rd Culvert - L646200	0.05 km east of Marchbrook Cir	
21/34		Ashton Station Rd Culvert - L751310	1.38 km north of McLinton Rd	
	20	Dalmac RdCulvert - L883710	0.01 km south of McDiarmid Rd	
	5	O'hara Dr Culvert - L649200	0.10 km east of Kerwin Rd	
	5	Ritchie Side Rd Culvert - L436030	0.05 km east of Ivy Acres Rd	
	20	Rodney Farm Dr Culvert - L888595	0.53 km east of 8th Line Rd	
	5	Old Quarry Rd Culvert - L336990	0.45 km west of Torbolton Ridge Rd	
	20	Rowan Dr Culvert - L884240	0.01 km east of Glenwood Dr	
	20	Edgewater Dr Culvert - L884820	0.01 km east of Summerside Dr	
	20	Cooper Hill Rd Culvert - L886730	0.01 km east of Yorks Corners Rd	
	20	Black Stallion Way Culvert - L883580	0.01 km north of Empire Grove St	
	21	Third Line Rd S Culvert - L871510	0.01 km south of Dilworth Rd	
21/34		Ashton Station Rd Culvert - L751230	0.08 km south of Malloch Lane	
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Location/Description	\$000's
	Class of Estimate: C) Planning			0
Category:	Ward:	Year of Completion:		
Continued				
Ward	Project	Location		
20	Cornfield Cres Culvert - L883645	0.55 km north of Greely West Dr		
20	Stanmore St Culvert - L886805	0.08 km east of Back Place Ave		
19	Regimbald Rd Culvert - L896330	0.01 km west of Sarsfield Rd		
5	Becks Rd Culvert - L435340	0.55 km south of Kinburn Side Rd		
20	Cambellcroft Rd Culvert - L885310	0.02 km south of Springhill Rd		
19	Sarsfield Rd Culvert - L895630	0.02 km north of Watson Rd		
19	Gauthier St Culvert - L898670	0.01 km east of Jules Leger Dr		
19	Sabourin Rd Culvert - L892410	0.05 km east of Carlsbad Lane		
5	Old Carp Rd Culvert - L547090	0.40 km south of March Rd		
20	9th Line Rd Culvert - L887590	0.90 km south of Cooper Hill Rd		
20	Forest Green Cres Culvert - L886455	0.51 km east of 8th Line Rd		
20	Doyle Rd Culvert - L884270	1.03 km east of River Rd		
19	Ruissellet Rd Culvert - L897070	0.46 km north of Russell Rd		
19	Ruissellet Rd Culvert - L897090	1.42 km north of Russell Rd		
19	Watters Rd Culvert - L898110	1.03 km east of Trim Rd		
5	Hardwood Dr Culvert - L435420	0.13 km west of Stonecrest Rd		
19	Hall Rd Culvert - L225050	0.40 km south of Piperville Rd		
5	Manion Rd Culvert - L542830	0.01 km west of Howie Rd		
20	Black Stallion Way Culvert - L886565	0.01 km east of Stableview Way		
21	Phelan Rd W Culvert - L874530	0.20 km west of Prince of Wales Dr		
5	Old Carp Rd Culvert - L547070	0.19 km south of March Rd		
5	March Valley Rd Culvert - L649490	0.63 km south of Cameron Harvey Dr		
5	Grierson Lane Culvert - L646360	0.32 km east of Old Second Line Rd		
21	Jock Trl Culvert - L752290	0.95 km west of Green's Rd		
				0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

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City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Financial Details					
909730	2020 Stormwater Master Planning		Class of Estimate:		C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW		Year of Completion: 2022			
The requested funds are to support City-wide stormwater master planning work needed to support growth and maintenance of existing service levels.			2020 Budget		260	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		205	Rate Supported Debt		0
			Develop. Charges		55	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		260	0	0	0
			Spending Plan		260	0	0	0
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Program Information			Financial Details						
Ottawa River Fund-Strategic			Class of Estimate:		Not Applicable				
Dept:	Public Works & Environmental Services Department	Category: Service Enhancements	Ward: Multiple		Year of Completion: Various				
<p>The health of the Ottawa River is directly related to the quality of discharges from its tributaries and the volume, concentration, and frequency of discharges from industrial users and urban communities. In Ottawa, the main sources of discharges to the Ottawa River are: Stormwater run-off (directly from storm sewers and indirectly via local rivers and creeks) Treated effluent from the Robert O. Pickard Environmental Centre (ROPEC) Combined Sewer Overflows (CSOs) during wet weather events.</p> <p>The Ottawa River Action Plan (ORAP) was developed to ensure regulatory compliance with respect to CSO control, optimize recreational use of local beaches, and minimize the impact of direct discharges to the river.</p>			2020 Request		1,000	Projected Yearend Unspent Bal.			0
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		1,000	Rate Supported Debt		0	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		1,000	1,000	500	500	
			Spending Plan		1,000	1,000	500	500	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
 2020 Draft Capital Budget
 Service Area: Stormwater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909815	ORAP-Water Environment Strategy (WES) PH2 - 2020	Class of Estimate:	1,000
Category: Service Enhancements	Ward: CW	Year of Completion: 2021	
Establish a comprehensive and integrated plan in cooperation with other agencies for the management of water environment issues in Ottawa.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Program Information			Financial Details						
Stormwater Management Facilities			Class of Estimate:		Not Applicable				
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>Stormwater Management facilities serve to protect homes, business and the road network from flooding and also mitigate erosion and water quality impacts from the growing city. Currently, the most visible infrastructure the City owns, operates and maintains in this category encompasses over 250 pond facilities. While most SWM ponds appear very natural and simple, these are complicated engineered facilities that include significant hard elements such as concrete hydraulic structures, large valves and flow control gates. Other assets the City is required to maintain under this category include 100 underground treatment tanks, and 25 specialty treatment systems (including 2 right-of-way Low Impact Development gardens).</p> <p>In order to ensure these facilities provide flood protection and environmental impact mitigation, as required by the MOECC and other environmental regulations, major repair or rehab. of hydraulic structures and flow regulation equipment is required as well as; removal/disposal of accumulated contaminants (oil and sediments); odor control and rehab. of constructed wetlands. Specialized monitoring activities to optimize facility performance are conducted on specific facilities to assist the City in meeting compliance goals.</p> <p>Currently, as new development has progressed the number of SWM ponds the City is responsible for has been increasing at the rate of 5-10 per year. In addition, in recent years Council has adopted capital plans to install Stormwater Management Retrofits for large areas of the City developed before 1990's (i.e. Pinecrest SW, Eastern SW) and the MOECC new draft SWM Guidelines which are pending adoption, will also require more diverse Stormwater Management Infrastructure. As such, the demands on City Operations in this portfolio have been increasing at an unprecedented rate.</p>			2020 Request		4,450	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		2,950	Rate Supported Debt		1,500	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		4,450	5,500	2,750	2,750	
			Spending Plan		4,450	5,500	2,750	2,750	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909744	Stormwater Mgmt: Rehab&Enviro Compliance 2020	Class of Estimate: Not Applicable	1,450
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>The City owns, operates and maintains over 350 stormwater facilities (including underground treatment tanks) for the management of stormwater runoff. This number is increasing at the rate of 5-10 per year. The facilities provide flow attenuation and water quality treatment, ensuring that stream corridors and water quality are not degraded. In order to ensure combined compliance with environmental regulations and MOE C. of A. discharge criteria, these facilities require non-maintenance activities such as the removal and disposal of accumulated sediment, along with major repair or rehab. of structures and flow regulation equipment. Specialized monitoring activities to optimize facility performance are conducted on specific facilities to assist the City in meeting the compliance criteria.</p>			
909816	Linear Storm System Improvements	Class of Estimate: Not Applicable	3,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>To fund work completed by wastewater operations staff to rehabilitate stormwater assets. This could include work on any of the City's 102,000 catch basins, 2920 km of piping, 59,300 manholes, 2030 outfalls or 12 stormwater pumping stations.</p>			

City of Ottawa
2020 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Program Information			Financial Details						
Municipal Drains			Class of Estimate:		Not Applicable				
Dept:	Public Works & Environmental Services Department	Category: Regulatory	Ward: Multiple		Year of Completion: Various				
<p>The program is required to address modifications, improvements and construction of Municipal Drains in the City of Ottawa. Under Sections 4 and 78 of the Drainage Act, RSO 1990, the municipality, whose duty it is to maintain and repair drainage works or any part thereof, may with or without a petition, undertake and complete such drainage works. These drainage systems provide legal outlet for a vast majority of the agricultural and rural lands and roads in the City however the impetus for the majority of projects in this program is from land and road development mainly in the rural and suburban areas and as such the timing of the works hinges on the particular development project, which can span several years. In most cases the entire cost of the drainage works, including engineering and construction costs, is paid by the developer and/or landowners and in all cases the costs are recovered by the City once the drainage works are completed.</p>			2020 Request		500	Projected Yearend Unspent Bal.		0	
			Revenues		450	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt			0
			Rate Supported		50	Rate Supported Debt			0
			Develop. Charges		0	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			Forecast		2020	2021	2022	2023	
			Authority		500	500	500	500	
			Spending Plan		500	500	500	500	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
 2020 Draft Capital Budget
 Service Area: Stormwater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909743 Municipal Drain Improvements - 2020		Class of Estimate:	500
Category: Regulatory	Ward: CW	Year of Completion: 2022	
The Drainage Act provides landowners with a tool to help resolve drainage concerns. Once a request is received from a landowner the Drainage Act process is initiated. The project costs are initially paid by the City and are subsequently recovered through provincial funding and landowner assessment as determined by the Engineers Report and By-law.			

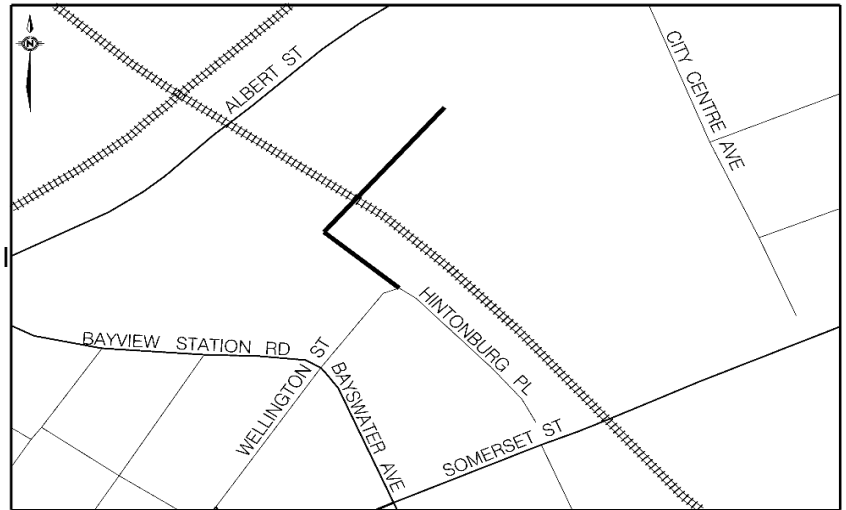
City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
In Thousands (\$000)

Service Area: Wastewater Services											
Category	2020 Capital Budget	Revenues	Tax Supported/ Dedicated Reserves	Rate Supported Reserves	Develop. Charges	Gas Tax	Debt				
							Tax/ Dedicated	Rate	Develop. Charges	Gas Tax	Total Debt
Renewal of City Assets	46,923	0	0	26,203	220	0	0	20,500	0	0	20,500
Growth	13,653	0	0	3,458	9,773	0	0	0	423	0	423
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancements	0	0	0	0	0	0	0	0	0	0	0
Total	60,576	0	0	29,661	9,993	0	0	20,500	423	0	20,923

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Program Information			Financial Details						
Sanitary Sewer Rehabilitation			Class of Estimate:		C) Planning				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The Sanitary Sewer Rehabilitation Program addresses annual rehabilitation requirements for the City's wastewater collection system to extend the life of the infrastructure, provide continued service, mitigate property flooding and prevent failures requiring more extensive reconstruction. The program is focused on:</p> <ul style="list-style-type: none">• Proactive lifecycle renewal and rehabilitation projects.• Level of service initiatives.• System improvements and optimization.• Miscellaneous upgrades and rehabilitation to support growth demand. <p>The funding requests for wastewater costs coordinated with roadway, stormwater or watermain rehabilitation are included within the Integrated Rehabilitation Programs.</p> <p>Program funding requirements to support renewal needs are defined in the Long Range Financial Plan.</p> <p>Detailed information and costs associated with specific stand-alone (non-integrated) components and projects are provided following this program summary page.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>			2020 Request		5,500	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		5,400	Rate Supported Debt		100	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		5,500	0	0	0	
			Spending Plan		2,750	1,650	1,100	0	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			Location/Description	\$000's
909716 Mooney's Bay Trunk Sewer			Class of Estimate: C) Planning	5,500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022		
<p>This funding request provides for the rehabilitation of a section of the Mooney's Bay Sanitary Sewer Collector. A section of 1050mm sewer that crosses the O-Train corridor 150m south of Albert St requires replacement due to poor condition.</p> <p>This funding request provides for all project related costs including but not limited to any required property acquisition.</p>				

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Program Information			Financial Details						
Wet Weather Program			Class of Estimate:		C) Planning				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The Wet Weather Program is a comprehensive Wet Weather Infrastructure Management Plan (WW-IMP) to develop a coordinated approach to wet weather flow management within the urban area. The WW-IMP will develop programs that will focus on managing the capacity of the sewer systems, reduce the risk of property flooding, and reduce impacts related to combined sewer overflows. It will also look at key program supports, such as design guidelines and climate change adaptation. This program supports the overall implementation objectives of the Ottawa River Action Plan and the Infrastructure Master Plan.</p> <p>Detailed information and costs associated with specific non-integrated components and projects are provided following this program summary page.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>			2020 Request		4,000	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		3,680	Rate Supported Debt		100	
			Develop. Charges		220	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		4,000	2,500	2,500	2,500	
			Spending Plan		2,000	2,450	2,800	2,500	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

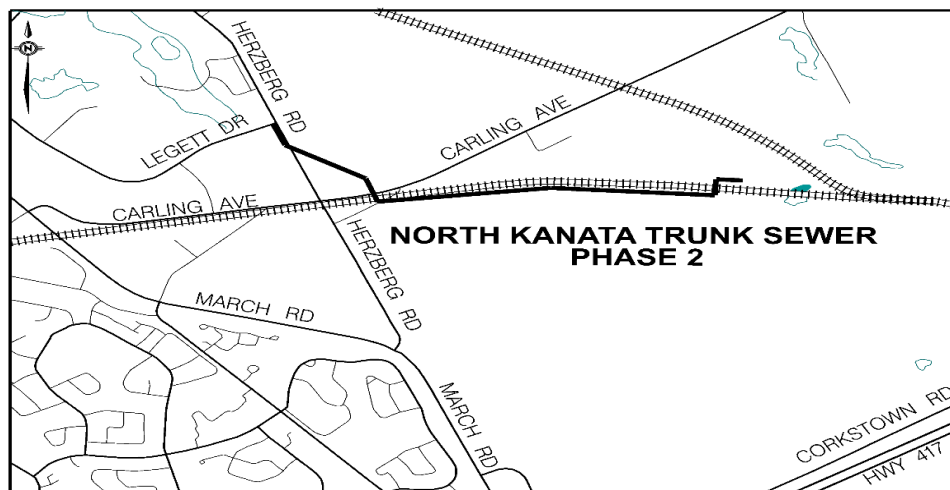
Project(s) within a Program Information			\$000's
909717 2020 ORAP Wet Weather IMP		Class of Estimate: C) Planning	4,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
<p>This project is required for the development of programs and project implementation needed to support the objectives of the Wet Weather Infrastructure Management Plan (WW-IMP). Once developed, these programs will define and prioritize the specific actions to be implemented, which will increase the capacity of the sewer systems, reduce the risk of property flooding, and reduce impacts related to combined sewer overflows. This project is considered for development charge (DC) funding pursuant to the 2014 Development Charge By-Law 2014-229. This project also includes the installation of Inlet Control Devices (ICDs) into catch basins throughout various areas in the City. The intent is to reduce sewer surcharge during major rainfall events, and to diminish the incidences of basement flooding as a result of sewer surcharge.</p>			

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

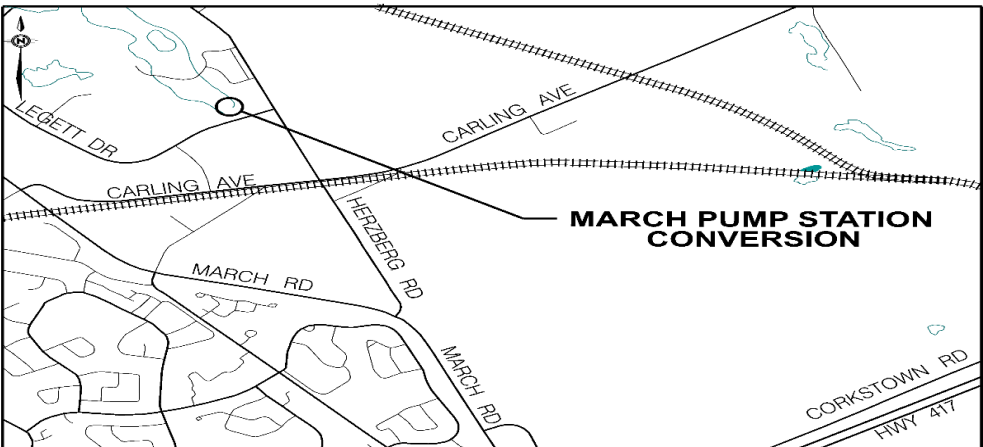
Project Information			Financial Details						
909724 Pump Stations Capacity Renewal			Class of Estimate:		C) Planning				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: 2, 4, 19, 21		Year of Completion: 2027				
This budget is to cover the rehabilitation cost of the 5 Pump Stations: Tenth Line PS, Leitrim PS, Forest Valley PS, Briar Ridge PS, and Manotick PS. The 5 pump stations require rehabilitation/maintenance work in order to meet the existing demands. The 2020 budget request will cover the engineering consultation work required for the rehabilitation of the Tenth Line Pump Station.			2020 Request		200	Projected Yearend Unspent Bal.			0
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		200	Rate Supported Debt		0	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		200	1,020	780	1,020	
			Spending Plan		100	570	736	948	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details		
904985 North Kanata Sewer Ph 2			Class of Estimate: C) Planning		
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 4,7	Year of Completion: 2019	
<p>The North Kanata Collector Sewer Phase 2 is required to provide capacity for the North Kanata growth area and the Village of Carp. This collector sewer is now under construction; however, due to difficult soil condition it has been subject to 12 months delay. Additional funds are needed to cover the increase in consultant contract administration costs.</p> <p>New estimated year of completion 2022.</p>			2020 Request 600		Projected Yearend Unspent Bal. 13,268
			Revenues	0	Debt
			Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt 0
			Rate Supported	600	Rate Supported Debt 0
			Develop. Charges	0	Develop. Charges Debt 0
			Gas Tax	0	Gas Tax Debt 0
			Forecast	2020	2021 2022 2023
			Authority	600	0 0 0
			Spending Plan	6,868	5,000 2,000 0
			FTE's	0	0 0 0
			Operating Impact	0	0 0 0



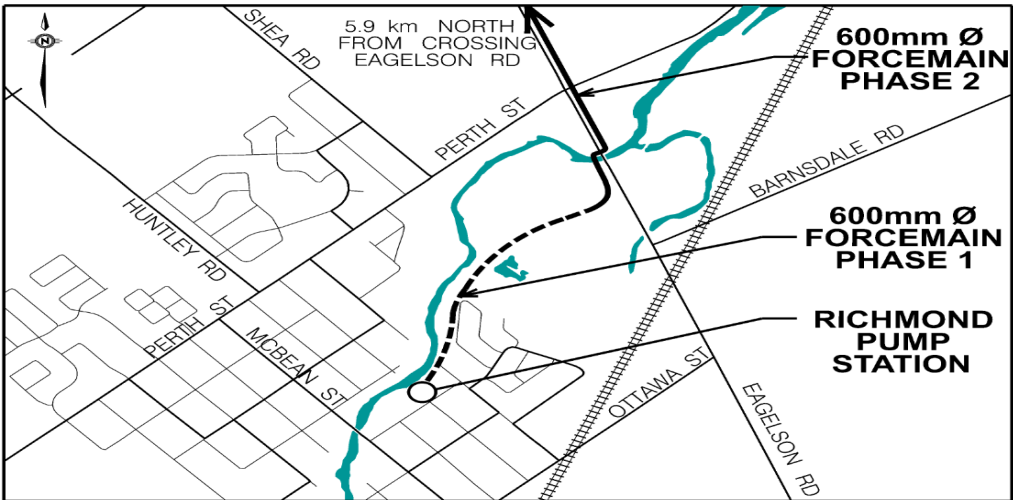
City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details		
904988 March PS Conversion			Class of Estimate: C) Planning		
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 4	Year of Completion: 2021	
<p>Replacement of the March Pump Station is required to service future development in the North Kanata growth area. This project involves conversion of the existing pump station to a "low lift" configuration, which will increase station capacity and reduce operating costs. The timing of the conversion is to coincide with the commissioning of the North Kanata Sewer Phase 2 (project 904985) expected to be completed in Q3 2020. This budget request is for the construction stage of the project based on the most up-to-date Class B design level capital costs estimate.</p>			2020 Request	830	Projected Yearend Unspent Bal. 11,737
			Revenues	0	Debt
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt 0
			Rate Supported	407	Rate Supported Debt 0
			Develop. Charges	0	Develop. Charges Debt 423
			Gas Tax	0	Gas Tax Debt 0
			Forecast	2020	2021 2022 2023
			Authority	830	0 0 0
			Spending Plan	12,567	0 0 0
			FTE's	0	0 0 0
			Operating Impact	0	0 0 0
					

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details					
907462 Pump Stations Capacity Increase			Class of Estimate:		C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 2,4,19,21		Year of Completion: 2028			
<p>This project was identified in the Infrastructure Master Plan and is needed to provide sufficient wastewater pumping capacity to meet the needs of development at various locations across the City. This project include capacity upgrade for 5 Pump Stations: Tenth Line PS, Leirim PS, Forest Valley PS, Briar Ridge PS, and Manotick PS. The project will increase the 5 Pump Stations' capacity from the existing installed capacity, to the full rated capacity in accordance with the original station designs. The 2020 budget request will cover the design work required for the Tenth Line Pump Station. The construction for the Tenth Line Pump Station will be in 2021, hence no budget is allocated in 2020 for the Public art amount.</p>			2020 Request		50	Projected Yearend Unspent Bal.		300
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		0	Rate Supported Debt		0
			Develop. Charges		50	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		50	1,900	1,450	1,890
			Spending Plan		325	965	1,305	1,760
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details			
908247 Richmond PS & Forcemain Expans			Class of Estimate: C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 21	Year of Completion: 2023		
<p>The City completed construction of the Phase 1 forcemain upgrade, which was needed to accommodate first stage of development in the village's Western Development Lands. A functional design study recently completed in Q3 2019 identified required works and staging opportunities to upgrade the existing Richmond pump station and the remainder of the existing forcemain system to accommodate projected village growth. This budget request is to cover Phase 2 of the project.</p> <p>The public art budget for this project is \$45,000.</p>			2020 Request		Projected Yearend Unspent Bal.	
			8,780		1,000	
			Revenues	0	Debt	
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0
			Rate Supported	2,228	Rate Supported Debt	0
			Develop. Charges	6,553	Develop. Charges Debt	0
			Gas Tax	0	Gas Tax Debt	0
			Forecast	2020	2021	2022
			Authority	8,780	0	0
			Spending Plan	5,390	2,634	1,756
			FTE's	0	0	0
			Operating Impact	0	0	0
						

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details					
908624	2017 Infrastructure Master Plan (Sewer)		Class of Estimate:		C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW		Year of Completion: 2020			
Funds required for sanitary sewer system analysis and planning work to support growth.			2020 Request		250	Projected Yearend Unspent Bal.		321
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		223	Rate Supported Debt		0
			Develop. Charges		27	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		250	270	0	0
			Spending Plan		321	270	250	0
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details						
909357 South Nepean Collector Ph3			Class of Estimate: C) Planning						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 3	Year of Completion: 2023					
Phase 3 of the SNC extends about 2000 m westward from the top end of Phase 2, and follows within and/or adjacent to Strandherd Drive. The Phase 3 of the SNC implementation is being completed in conjunction with the design and construction of Strandherd Drive expansion. The current budget authority is related to capital costs for design, contract administration and construction based on the most up-to-date Class A pre-tender cost estimate.			2020 Request		3,143	Projected Yearend Unspent Bal.		8,199	
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		0	Rate Supported Debt		0	
			Develop. Charges		3,143	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		3,143	0	0	0	
			Spending Plan		9,784	951	607	0	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	



City of Ottawa
 2020 Draft Capital Budget
 Service Area: Wastewater Services
 In Thousands (\$000)

Program Information				Financial Details					
Wastewater Services General-Renewal			Class of Estimate:		C) Planning				
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
The wastewater general program consists of sub-programs and projects that support the entire wastewater collection and treatment programs.				2020 Request		100	Projected Yearend Unspent Bal.		0
				Revenues		0	Debt		
				Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
				Rate Supported		100	Rate Supported Debt		0
				Develop. Charges		0	Develop. Charges Debt		0
				Gas Tax		0	Gas Tax Debt		0
				Forecast		2020	2021	2022	2023
				Authority		100	100	100	100
				Spending Plan		100	100	100	100
				FTE's		0	0	0	0
				Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909810	New Vehicles Waste Water - 2020	Class of Estimate: C) Planning	100
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
The construction coordinators are responsible for over 40 capital projects across the City. They frequently drive between construction sites and are currently over the breakeven point for mileage reimbursement. This will provide funding for 2 new vehicles.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Program Information			Financial Details						
Wastewater & Stormwater Collection			Class of Estimate:		C) Planning				
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The City's wastewater and stormwater collection system includes over 5,800 km's of sanitary, storm and combined pipes with a replacement value of over \$10 billion. The Wastewater & Stormwater Collection Rehabilitation Program addresses annual condition assessment, replacement, rehabilitation and capitalized maintenance requirements to preserve and extend the life of the infrastructure, reduce flooding occurrences, and prevent failures requiring more extensive reconstruction. Program funding requirements to support renewal needs are defined in the long range financial plan. The 2020 forecast is based on bulk allocations that will be detailed in future budget submissions.</p> <p>Major 2020 Projects:</p> <ul style="list-style-type: none">- Linear Sewage Systems Improvements- SCADA Rehabilitation and Upgrades (Remote Sewer Facilities)- Sewer Lateral Investigations & Repairs			2020 Request		4,500	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0	
			Rate Supported		4,400	Rate Supported Debt		100	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		4,500	5,500	5,500	5,500	
			Spending Plan		4,500	5,500	5,500	5,500	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909805 Linear Sewage System Improve. Prog. 2020		Class of Estimate: C) Planning	500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022	
On-going repair and rehabilitation of the City sewer system is required to maintain its integrity and its hydraulic capacity, as well as to protect the City's extensive investment in infrastructure. This work consists of a variety of generally smaller projects involving the trunk sewers and related appurtenances (manholes, drop shaft, ladders and landings, etc.)			
909806 Sewer Lateral Repairs 2020		Class of Estimate: C) Planning	4,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
The sewer collection systems includes 237,000 service connections, i.e. the sewer pipe between a building and the sewer main. When a house experiences a sewer backup due to a sewer lateral failure, every effort is made to minimize property damage by unblocking the lateral and putting it back in service. This annual program enables the City to investigate the cause of the failure and properly rehabilitate or replace sewer laterals.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Program Information			Financial Details						
Wastewater Collection Pump Stn			Class of Estimate:		C) Planning				
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various				
<p>The Collection Pumping Station Rehabilitation Program covers all the wastewater pumping stations, odour control, regulators and flow monitoring facilities in the city. The objective of this program is to manage the lifecycle replacement and capitalized maintenance costs of this asset. Projects under this program will maintain or extend the life of the pumping processes and equipment.</p> <p>2020 Major Spending Projects:</p> <ul style="list-style-type: none">-Rehabilitation of Harvard Pumping Station-Implementation of the phase I Tartan pumping station rehab project-Condition Assessment of various Wastewater Collection Assets-Replacement of RPU and PLC SCADA systems			2020 Request		14,150	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		4,050	Rate Supported Debt		10,100	
			Develop. Charges		0	Develop. Charges Debt		0	
			Gas Tax		0	Gas Tax Debt		0	
			Forecast		2020	2021	2022	2023	
			Authority		14,150	14,000	5,135	5,135	
			Spending Plan		4,830	10,190	11,757	6,908	
			FTE's		0	0	0	0	
			Operating Impact		0	0	0	0	

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
908029 South End Remote Facil. Corrosion/Odour		Class of Estimate: C) Planning	2,500
Category: Renewal of City Assets	Ward: 18	Year of Completion: 2020	
This will provide funding to address corrosion and odour control issues at various sites throughout the city, as identified in the various odour and corrosion control studies.			
909807 Sewage Pumping Station Rehab Prog 2020		Class of Estimate: C) Planning	11,650
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
The City wastewater collection system includes approximately 75 pumping stations and related buildings. This project provides the funding for the operational studies, condition assessment and life-cycle rehabilitation and replacement of critical components such as mechanical, electrical stand-by power and facility odour & corrosion control equipment in order to ensure operational efficiency, continued reliability and environmental protection.			

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Program Information			Financial Details					
Wastewater Treatment-Renewal			Class of Estimate:		C) Planning			
Dept:	Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple		Year of Completion: Various			
<p>The Robert O. Pickard Environmental Center (ROPEC) treats all of the City's wastewater and has a replacement value of over \$1.745 billion. The objective of this program is to manage the lifecycle replacement and capitalized maintenance costs of this asset. Projects under this program will maintain or extend the life of the plant processes and equipment.</p> <p>2020 Major Spending Projects:</p> <ul style="list-style-type: none">-Thickening & Dewatering Polymer System Rehabilitation-Dechlorination Building Rehabilitation-Disinfection Building Rehabilitation-Cogeneration			2020 Request		18,473	Projected Yearend Unspent Bal.		0
			Revenues		0	Debt		
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0
			Rate Supported		8,373	Rate Supported Debt		10,100
			Develop. Charges		0	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2020	2021	2022	2023
			Authority		18,473	15,000	13,500	7,235
			Spending Plan		4,495	14,284	15,395	12,547
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2020 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909808 ROPEC - Sewage Treatment Rehab Prog 2020		Class of Estimate: C) Planning	17,473
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2023	
Ongoing capital investment is required to ensure efficient process operation, maintain asset functionality through equipment overhauls, adapt to changing regulations and take advantage of new technologies. Typical projects include process optimization studies, asset rehabilitation and upgrades to plant processes and systems.			
909809 ROPEC - Concrete Rehab & Repairs 2020		Class of Estimate: C) Planning	1,000
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2023	
This project provides funding for repairs related to the concrete infrastructure at ROPEC. Concrete channels and tanks make up a large component of the treatment plant and condition assessments identify annual repairs to this infrastructure.			

City of Ottawa
2020 Capital Draft Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2020	2021	2022	2023	Total
Drinking Water Services					
Renewal of City Assets					
908076 Large Water Meters Changeout Program	500	1,000	1,000	1,000	3,500
908077 Ops Condition Assess-Critical Sys Links	-	1,500	1,500	1,500	4,500
908613 Bank St (Rideau Rd-Mitch Owens)	7,070	-	-	-	7,070
908614 LRT2 W1 Hwy 174 - Shefford Rd	702	350	-	-	1,052
908633 Enhanced Corrosion Control	2,000	3,118	-	-	5,118
908908 Small Water Meters Changeout Program	2,825	2,375	2,375	1,400	8,975
908909 Advanced Metering Infra. (AMI) Changeout	-	-	2,075	3,000	5,075
908981 Lemieux island Pipe Bridge SN 017160	2,120	-	2,210	-	4,330
909040 New Vehicles Drinking Water - 2018	-	250	250	250	750
909682 2020 Buildings - Water Services	150	50	50	50	300
909713 Water System Improvements	6,000	8,000	10,000	12,751	36,751
909714 2020 WM Transmission/Distribution Rehab	4,087	5,500	6,500	7,000	23,087
909735 Carling Ave (Moodie-Shirleys Bay)	3,000	-	-	-	3,000
909795 Water Distribution Sys Improvements 2020	1,325	1,000	1,000	1,000	4,325
909796 Water Facilities Roofing 2020	250	240	210	200	900
909797 Water Storage Tanks & Reservoir 2020	630	1,350	1,350	1,350	4,680
909798 Water Pumping Station Facility Rehab2020	3,000	2,150	2,150	2,150	9,450
909799 Communal Well System Rehab 2020	1,150	2,500	2,500	2,500	8,650
909800 Water Treatment Rehab 2020	8,550	12,430	13,580	13,685	48,245
909801 Water Sys SCADA & Instrument Rehab 2020	2,770	3,518	3,518	3,524	13,330
909802 Protective Lead Serv Replace Prog 2020	1,250	1,250	1,250	1,250	5,000
909803 Cathodic Protection 2020	1,200	1,200	1,200	1,200	4,800
909804 Critical Links Risk Mitigation Meas 2020	500	500	500	500	2,000
Renewal of City Assets Total	49,079	48,281	53,218	54,310	204,888
Growth					
900632 Strandherd Road Watermain	2,133	-	-	-	2,133
901144 Glen Cairn Reservoir Expansion	-	320	3,390	10,470	14,180
902206 Ottawa South Pumping Station Upgrade	2,650	-	-	-	2,650
904916 DCA-Kanata West Feedermain	320	1,020	-	-	1,340
904918 Limebank Feedermain	-	-	-	3,940	3,940
904972 Glen Cairn PS Upgrade	-	-	-	850	850

City of Ottawa
2020 Capital Draft Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2020	2021	2022	2023	Total
904982 Zone 2W West march Rd 406 to 6	600	1,730	-	-	2,330
905992 Manotick Supply Watermain	9,850	-	16,020	-	25,870
907008 Treatment Plant Process Expansion	-	-	-	5,000	5,000
907099 Carp Reservoir Cell	-	-	-	470	470
907100 Carp Well Capacity Increase	-	-	-	350	350
907101 River Ridge 3C Elevated Tank	-	-	-	3,130	3,130
907453 Britannia WPP Capacity Upgrade	-	-	510	-	510
907456 Manotick North Island Link	6,160	-	-	-	6,160
909671 2020 Infrastructure Master Plan (Water)	510	260	-	-	770
909672 2020 Off Site Reliability Links	160	160	160	160	640
909673 2020 Groundwater Studies	380	370	160	160	1,070
909674 2020 Rural Servicing Strategy	260	200	210	210	880
909725 2020 Water & Wastewater Studies	260	260	260	270	1,050
Growth Total	23,283	4,320	20,710	25,010	73,323
Drinking Water Services Total	72,362	52,601	73,928	79,320	278,211
Integrated Roads, Water & Wastewater					
Renewal of City Assets					
906735 Bank St (Riverside-Ledbury)	-	18,140	-	-	18,140
906900 Main Greenfield Echo Concord et al	-	20,135	-	-	20,135
906901 CWWF ORAP - Loretta Ave N&S - Laurel St	-	3,000	-	-	3,000
908137 CWWF Deerpark-Hilliard-Fisher et al.	22,530	-	-	-	22,530
908138 CWWF Avenue N-O-P-Q-R-S-T-U	8,300	-	-	-	8,300
908139 Montreal Rd (N River Rd-St Laurent Blvd)	4,580	-	-	-	4,580
908140 City Centre Ave & Elm St	870	-	2,480	-	3,350
908141 ORAP Albert St-Bronson Ave-Slater St	-	-	16,800	-	16,800
908567 Alta Vista Dr - Summit Ave	-	2,400	-	10,490	12,890
908569 Borthwick-Quebec-Gardenvale	960	-	-	-	960
908570 Byron-Athlone-Highcroft	-	7,360	-	-	7,360
908572 Fairbairn-Bellwood-Willard-Belmont	5,580	-	-	-	5,580
908574 Grove Ave & Grosvenor	-	4,730	-	-	4,730
908576 Larkin-Larose-Lepage	4,970	-	-	-	4,970
908581 Valley Dr Storm Sewer	-	680	2,170	2,170	5,020

City of Ottawa
2020 Capital Draft Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2020	2021	2022	2023	Total
908646 Integrated Construction - Bulk Prjs	-	-	32,583	74,360	106,943
908726 CWWF Vanier Parkway - Presland Rd et al	1,260	-	-	-	1,260
908998 LRT2 R2 Hwy 174 Resurfacing EBL	72	36	-	-	108
909021 Woodroffe Ave (Saville-Richmond)	-	-	1,090	-	1,090
909272 Scott St. (West of Smirle Ave)	4,810	-	-	-	4,810
909394 Arch - Canterbury - Plesser	-	7,900	-	-	7,900
909400 Bel-Air Dr, Bedbrooke St et al	-	4,630	-	-	4,630
909401 Broadview Ave	240	-	590	-	830
909402 Caroline Ave - Huron Ave N	1,810	-	5,120	-	6,930
909404 Claymor & Senio	5,790	-	-	-	5,790
909405 Hamlet Rd	950	-	-	-	950
909406 Integrated Design - Bulk Prjs	-	21,292	23,020	24,500	68,812
909407 Longpre - Marquette- Michel Cir	2,040	-	5,040	-	7,080
909408 Monk - Oakland - Wilton	1,330	-	3,780	-	5,110
909409 Winona Ave & Wilmont Ave	830	-	2,370	-	3,200
909485 Carling Ave - Churchill Ave - Kirkwood	-	5,945	-	-	5,945
Renewal of City Assets Total	66,922	96,248	95,043	111,520	369,733
Integrated Roads, Water & Wastewater Total	66,922	96,248	95,043	111,520	369,733
Integrated Water & Wastewater					
Renewal of City Assets					
907084 Water & Sewer Utility Billing System	600	-	-	-	600
908580 CWWF Queensway Terrace North Sewer	-	3,960	3,370	3,370	10,700
908997 LRT2 SS1 Sewer Upgrades (Byron Ave)	685	340	-	-	1,025
909492 LRT2 SS2 Richmond Compl Streets	3,000	3,000	-	-	6,000
909694 Hydraulic Structures	1,000	1,000	1,000	200	3,200
909695 2020 Sewer Repairs / Improvements	10,777	12,054	10,000	8,376	41,207
909696 2020 Sewer Trenchless Rehab	1,500	5,000	5,000	4,000	15,500
909697 2020 Sewer CCTV Engineering	-	600	600	600	1,800
Renewal of City Assets Total	17,562	25,954	19,970	16,546	80,032
Integrated Water & Wastewater Total	17,562	25,954	19,970	16,546	80,032
Stormwater Services					

City of Ottawa
2020 Capital Draft Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2020	2021	2022	2023	Total
Renewal of City Assets					
903324 Kennedy Burnett SW Pond	2,810	-	-	-	2,810
908252 Stormwater Mgmt Retrofit Master Plan	-	260	260	-	520
909017 LRT2 C1 Hwy 174 Culverts	4,019	2,010	-	-	6,029
909356 2020 Stormwater Management Retrofit	-	-	1,500	2,000	3,500
909385 2019 Drainage Culverts - CW	9,000	-	-	-	9,000
909707 2020 Culverts Scoping Pre/Post Eng.	600	650	700	750	2,700
909708 2020 Drainage Culverts - Site-Specific	2,500	2,500	1,500	1,000	7,500
909709 2020 Drainage Culverts - CW	3,000	12,500	12,500	12,500	40,500
909710 2020 Drainage Culverts - Other	500	500	500	500	2,000
909715 Beltown Stormwater Improvements	750	-	-	-	750
909744 Stormwater Mgmt. Rhab&Enviro Compl. 2020	1,450	2,000	750	750	4,950
909748 Mud Creek Stream Renewal	370	740	2,940	-	4,050
909749 2020 Flood Plain Mapping	310	200	130	220	860
909750 Storm and Surface Water Rehabilitation	1,500	1,500	1,500	1,500	6,000
909816 Linear Storm System Improvements	3,000	3,500	2,000	2,000	10,500
Renewal of City Assets Total	29,809	26,360	24,280	21,220	101,669
Growth					
909730 2020 Stormwater Master Planning	260	-	-	-	260
Growth Total	260	-	-	-	260
Regulatory					
909743 Municipal Drain Improvements - 2020	500	500	500	500	2,000
Regulatory Total	500	500	500	500	2,000
Service Enhancements					
909815 ORAP-Water Enviro Strgy (WES) PH2 2020	1,000	1,000	500	500	3,000
Service Enhancements Total	1,000	1,000	500	500	3,000
Stormwater Services Total	31,569	27,860	25,280	22,220	106,929
Wastewater Services					
Renewal of City Assets					
907060 ROPEC Secondary Clarifier Upgrades	-	4,054	3,468	-	7,522
907382 ROPEC Aeration Blower Expansion	-	4,426	-	-	4,426
907384 ROPEC Sludge Thickening Centrifuge Expan	-	-	1,788	10,678	12,466

City of Ottawa
2020 Capital Draft Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2020	2021	2022	2023	Total
907386 ROPEC Chlorine Contact Tank Expansion	-	-	-	2,279	2,279
907387 ROPEC Raw Sewage Pumping Station Expan.	-	1,000	5,000	1,000	7,000
908029 Remote Facility Corrosion/Odour	2,500	-	-	-	2,500
908092 Flow Monitoring System Rehab. 2019	-	200	200	200	600
908102 Wastewater Facilities Upgrade	-	500	500	500	1,500
908250 Infrastructure Planning Information Mgmt	-	420	510	540	1,470
908445 Wastewater Drainage Roofing 2019	-	80	50	80	210
908446 Collection System Condition Assess.	-	1,160	1,160	1,165	3,485
908451 Lab Equipment Purchase/Replacement 2018	-	325	350	350	1,025
908455 ROPEC Process Facil - Enviro Sys Upgrade	-	-	-	6,000	6,000
909030 SCADA Rehab & Upgrades-Remote Sewer 2018	-	1,559	1,559	1,313	4,431
909032 ROPEC - SCADA Rehab. & Upgrades 2018	-	2,100	2,100	1,000	5,200
909312 Water Env Protec Short Term Initiat 2019	-	150	150	150	450
909716 Mooney's Bay Trunk Sewer	5,500	-	-	-	5,500
909717 2020 ORAP Wet Weather IMP	4,000	2,500	2,500	2,500	11,500
909724 Pump Stations Capacity Renewal	200	1,020	780	1,020	3,020
909745 Acres Road PS Phase 1 Renewal	-	1,220	-	-	1,220
909746 Acres Road PS Phase 2 Renewal	-	-	1,060	-	1,060
909805 Linear Sewage System Improve. Prog. 2020	500	1,000	1,000	1,000	3,500
909806 Sewer Lateral Repairs 2020	4,000	4,500	4,500	4,500	17,500
909807 Sewage Pumping Station Rehab Prog 2020	11,650	14,000	5,135	5,135	35,920
909808 ROPEC - Sewage Treatment Rehab Prog 2020	17,473	14,000	12,500	6,235	50,208
909809 ROPEC - Concrete Rehab & Repairs 2020	1,000	1,000	1,000	1,000	4,000
909810 New Vehicles Waste Water - 2020	100	100	100	100	400
Renewal of City Assets Total	46,923	55,314	45,410	46,745	194,392
Growth					
904985 North Kanata Sewer Ph 2	600	-	-	-	600
904988 March PS Conversion	830	-	-	-	830
907108 Carp Wastewater PS 2nd FM	-	-	-	1,240	1,240
907390 ROPEC Primary Clarifier Expansion	-	-	8,663	40,465	49,128
907462 Pump Stations Capacity Increase	50	1,900	1,450	1,890	5,290
907463 Stittsville PS Gravity Connect	-	-	230	1,540	1,770
908247 Richmond PS & Forcemain Expans	8,780	-	-	-	8,780

City of Ottawa
2020 Capital Draft Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2020	2021	2022	2023	Total
908555 Richmond PS & Forcemain ExpPh3	-	-	1,040	9,970	11,010
908624 2017 Infrastructure Master Plan (Sewer)	250	270	-	-	520
908626 Signature Ridge PS Expansion -	-	-	-	620	620
909357 South Nepean Collector Ph3	3,143	-	-	-	3,143
909728 Acres Road PS Upgrade Phase 2 Growth	-	-	710	-	710
Growth Total	13,653	2,170	12,093	55,725	83,641
Service Enhancements					
909029 Protective Plumbing Program 2018	-	1,000	1,000	1,000	3,000
Service Enhancements Total	-	1,000	1,000	1,000	3,000
Wastewater Services Total	60,576	58,484	58,503	103,470	281,033
Grand Total	248,991	261,147	272,724	333,076	1,115,938

* Integrated Roads, Water and Wastewater Program includes the Rate portion only for information puposes

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
Drinking Water Services					
900631 Carlington Heights Pumping Stn Expansion	13,918	1,727	12,191	-	12,191
900632 Strandherd Road Watermain	5,698	71	5,627	-	5,627
901139 1W/2W Feedermain Link	42,554	40,594	1,960	-	1,960
901141 Orleans Transmission Main	31,308	30,192	1,116	-	1,116
901142 Barrhaven Pumping Station Expansion	350	290	60	-	60
901144 Glen Cairn Reservoir Expansion	-	-	-	-	-
902206 Ottawa South Pumping Station Upgrade	12,890	1,434	11,456	-	11,456
903295 Brittany Pumping Station	7,616	431	7,185	-	7,185
903298 DCA -Shadow Ridge Exploratory/Well	99	96	3	-	3
904916 DCA-Kanata West Feedermain	2,772	118	2,654	-	2,654
904918 Limebank Feedermain	3,374	-	3,374	-	3,374
904975 Barrhaven PS Conversion to 3C	4,873	4,428	445	-	445
904981 3C/2W Pressure Zone Separation	5,822	4,253	1,569	-	1,569
904982 Zone 2W West march Rd 406 to 6	-	-	-	-	-
905427 Groundwater Management Phase 2	500	415	85	-	85
905428 Groundwater Studies	182	99	83	-	83
905429 DCA-Mer Bleue Rd Reliability Links	1,232	677	555	-	555
905681 Water System SCADA & Instrument Rehab	2,400	2,296	104	-	104
905992 Manotick Supply Watermain	1,305	369	936	-	936
906087 2018 Watermain Improvements	3,900	2,129	1,771	-	1,771
906088 Transmission Main Rehab	2,000	1,624	376	-	376
906197 Water System Facilities Upgrades 2011	1,779	1,268	511	2	509
906199 Condition Assess -Critical Sys Links2011	970	848	122	-	122
906350 Water Treatment Rehab. - 2012	4,550	4,504	46	-	46
906352 Water Storage Tanks & Reservoirs 2014	629	498	131	-	131
906353 Water Facilities Roofing 2016	200	109	91	11	80
906355 Water Efficiency	582	391	191	-	191
906358 Transmission Mains Condition Assessment	1,600	1,374	226	2	225
906539 Large Transmission Mains Risk Mitigation	1,000	366	634	-	634

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
906628 2014 Groundwater Studies	200	71	129	-	129
906629 2015 Rural Servicing Strategy	257	199	58	-	58
906642 Munster Well System Rehab	1,780	357	1,423	-	1,423
906659 Water Facilities Space Upgrades	5,205	5,145	60	16	45
906660 Britannia & Lemieux Intake ScreenRenewal	568	268	300	-	300
906662 CWWF Village/Carp Water Quality TreatFac	8,880	2,586	6,294	-	6,294
906664 Hurdman Bridge PS Renewal	16,491	1,442	15,049	-	15,049
906665 Lemieux WPP Intake Ice Mgmt	16,800	516	16,284	-	16,284
906795 Condition Assess - Critical System Links	5,000	3,917	1,083	13	1,070
906796 Proactive Lead Service Replace 2013-2014	2,000	1,812	188	-	188
906798 Water Distribution Sys Improvements	6,993	5,985	1,008	17	991
906800 Water Treatment Rehabilitation 2013-2014	4,500	4,153	347	0	346
906801 Communal Well System Rehab 2013-2014	599	526	73	-	73
906802 Water Pumping Station Facility Rehab.	2,126	1,992	134	2	132
906836 Critical Sys Links Mitigation Measures	2,090	450	1,640	-	1,640
907007 TSSA Registration and Compliance Upgrade	1,092	730	362	11	351
907008 Treatment Plant Process Expansion	9,100	806	8,294	-	8,294
907101 River Ridge 3C Elevated Tank	514	4	510	-	510
907304 Trenchless Rehab-Water	2,880	431	2,449	-	2,449
907455 Hurdman Bridge/Billings BridgePS Upgrade	1,700	-	1,700	-	1,700
907456 Manotick North Island Link	1,309	226	1,083	-	1,083
907467 SUC Greenbank	4,930	-	4,930	-	4,930
907471 Water Storage Tank & Res Condition Asses	300	17	283	-	283
907472 Water Pumping Stn Condition Assess Prog	150	20	130	-	130
907473 Communal Well Sys Condition Assess Prog	254	232	22	-	22
907476 WPP Chemical Systems Modifications	2,050	800	1,250	9	1,241
907477 TSSA Diesel Compliance Upgrades at WPPS	300	20	280	-	280
907482 2015 Infrastructure Master Plan (Water)	295	153	142	9	134
907568 EAM Maximo Data Optimization	1,004	387	617	-	617
907605 Carlington Heights Reservoir Remediation	400	-	400	-	400

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
907607 Drinking Water Vibration Analysis	200	173	27	-	27
907633 ESD Asset Management Roadmap	510	338	172	-	172
907640 Water Storage Tanks & Reservoir	634	37	597	33	564
907641 Water Storage Tanks & Reservoirs 2015	128	147	(19)	-	(19)
907642 Water Treatment Rehab 2015	2,765	2,714	51	-	51
907643 Water System SCADA & Instrument Rehab	1,010	948	62	-	62
907645 Water Efficiency 2015	582	27	555	-	555
907646 Water Pumping Station Facility Rehab	520	87	433	-	433
907648 Proactive Lead Service Replacement Prog	1,000	682	318	-	318
907652 Cathodic Protection Water System 2015	3,100	3,074	26	-	26
907654 Ops Condition Assess-Critical Sys Links	2,175	48	2,127	13	2,114
907655 Communal Well System Rehab 2018	10,413	258	10,155	2	10,153
907656 Communal Well System Rehab 2017	285	258	27	-	27
907663 Water Pressure Relief Valve Survey	400	2	398	-	398
907672 Remote Station WAFL Assessment/Design	220	15	205	-	205
907726 LeBreton Flats/Fleet St DWS Facilities	190	73	117	-	117
907733 Covered Aqueduct Structural Repairs	3,000	1,820	1,180	-	1,180
907734 Britannia G4	550	497	53	1	52
907773 Transmission Main Rehab	3,188	2,957	231	-	231
907774 Watermain Improvements	2,439	1,159	1,280	-	1,280
907792 CWWF Maplehurst Ave-Carling intersection	1,030	840	190	-	190
907793 Rosebella Ave (Conroy Rd-Albion Rd)	2,700	2,359	341	-	341
907794 Sandridge Rd (Merriman-St Laurent)	1,300	765	535	-	535
907795 Business Technology Opportunities	3,600	189	3,411	-	3,411
907864 2015 Ground Water Studies	155	121	34	-	34
908062 Lifecycle Renewal Fleet - Water Services	296	272	24	-	24
908067 Water Storage Tanks & Reservoirs 2016	50	35	15	-	15
908069 Water Treatment Rehab 2016	270	317	(47)	15	(62)
908071 Water Efficiency 2016	250	-	250	-	250
908073 Water Pumping Station Facility Rehab2017	1,237	63	1,174	-	1,174

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
908074 Cathodic Protection Water System 2016	2,200	2,041	159	-	159
908076 Large Water Meters Changeout Program	2,550	717	1,833	-	1,833
908077 Ops Condition Assess-Critical Sys Links	250	157	93	-	93
908078 Proactive Lead Service Replace Prog 2017	1,250	330	920	-	920
908080 Water Distribution Sys Improvements 2019	1,000	32	968	-	968
908082 Communal Well System Rehab 2018	2,000	-	2,000	-	2,000
908172 2016 Transmission Main Rehab	3,550	1,213	2,337	-	2,337
908173 2016 Watermain Improvements	1,794	1,500	294	-	294
908175 Crichton St (Keefer-Dufferin)	1,150	749	401	-	401
908176 Marquis Ave (Naskapi-Mulberry)	1,050	1,002	48	-	48
908177 Brittany Dr-Bangs St-Chelsea Dr	3,500	2,439	1,061	-	1,061
908178 Goth Ave (Albion-Fortier)	2,500	1,998	502	-	502
908179 CWWF Glynn Ave (Edith-Lola)	1,309	750	559	-	559
908180 CWWF Helena St (Clarendon-Mayfair)	2,300	996	1,304	-	1,304
908257 O/S Kanata West Transmission Mains	907	-	907	-	907
908326 Britannia Chem System Mods - DWS	25	1	24	-	24
908327 Lemieux Chem System Mods - DWS	150	143	7	-	7
908372 Ammonia Rm Ventilation Lemieux-Britannia	250	8	242	-	242
908375 WPP Diesel Exhaust Stack Upgrades	710	670	40	-	40
908376 Montreal Road PS Lifecycle Replacements	4,200	2,723	1,477	-	1,477
908377 Britannia WPP Basin Railings Replacement	307	358	(51)	-	(51)
908378 Britannia HLPump #5 Motor & Starter Repl	-	-	-	-	-
908379 Britannia WPP Expansion Joint Rehab	200	-	200	-	200
908384 Tenth Line Feedermain	1,400	777	623	-	623
908432 Water Sys SCADA & Instrument Rehab 2017	581	105	476	0	475
908433 Water Treatment Rehab 2017	268	328	(60)	3	(63)
908435 Water Facilities Roofing	150	-	150	-	150
908474 2017 Buildings-Water Services	50	48	2	-	2
908479 Carp Diesel Pump Upgrades	1,255	981	274	-	274
908509 2017 Transmission Main Rehab	1,000	565	435	-	435

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
908511 2017 Watermain Improvements	1,836	727	1,109	-	1,109
908613 Bank St (Rideau Rd-Mitch Owens)	1,000	270	730	-	730
908614 LRT2 W1 Hwy 174 - Shefford Rd	448	-	448	-	448
908615 Leitrim Rd (Bank-550m East)	1,700	-	1,700	-	1,700
908616 Redenda Cres (Higgins)	1,250	746	504	-	504
908617 Sherbourne Rd (Knightsbridge-Dovercourt)	1,100	740	360	-	360
908620 2017 Groundwater Studies	150	-	150	-	150
908621 2017 Infrastructure Master Plan (Water)	250	-	250	-	250
908622 2017 Rural Servicing Strategy	200	23	177	-	177
908623 2017 Water & Wastewater EA Studies	250	27	223	-	223
908633 Enhanced Corrosion Control	1,000	-	1,000	-	1,000
908643 Fleet Growth 2017	250	-	250	-	250
908743 CWWF Drinking Water Plants Lighting Upgr	800	363	437	-	437
908744 CWWF Lemieux Island High Lift Stn HVAC	1,417	945	472	-	472
908745 CWWF [Design] Lemieux Island WPP Intake	2,400	1,017	1,383	3	1,380
908746 CWWF Drinking Water Pumping Stn Lighting	300	60	240	-	240
908747 CWWF Billings Bridge PS Diesel System Up	1,920	1,876	44	9	36
908748 CWWF [Construct] Munster PS Generator Up	1,500	1,355	145	-	145
908749 FEA2016-Kanata West Feedermain	5,788	5,529	259	-	259
908798 Lemieux High Lift Vault & Tunnels Rehab.	1,365	994	371	-	371
908801 Britannia Medium Voltage Maintenance	1,120	848	272	-	272
908818 Britannia HLPS HVAC Upgrade Design Build	1,090	541	549	-	549
908825 Lemieux Sludge Line Repairs	250	148	102	-	102
908842 Vars Reliability & Process Upgrades	1,000	97	903	-	903
908866 DWS Concrete Repairs	150	42	108	-	108
908908 Small Water Meters Changeout Program	9,650	-	9,650	-	9,650
908911 Britannia Compressed Air Improvements	30	15	15	-	15
908931 2018 Buildings-Water Services	1,000	679	321	0	321
908978 2018 Transmission/Distribution WM Rehab	1,090	197	893	-	893
908980 2019 Watermain Improvements	4,000	574	3,426	-	3,426

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
908981 Lemieux island Pipe Bridge SN 017160	1,520	179	1,341	-	1,341
908996 Meter Service Mobility	700	-	700	-	700
909003 DWS Ladder Trolley & Rail System Upgrade	600	65	535	-	535
909035 Water Sys SCADA & Instrument Rehab 2018	970	-	970	-	970
909036 Water Treatment Rehab 2018	670	634	36	10	26
909037 Water Pumping Station Facility Rehab2018	1,000	-	1,000	-	1,000
909039 Proactive Lead Service Replace Prog 2018	400	18	382	-	382
909040 New Vehicles Drinking Water - 2018	65	54	11	-	11
909071 2018 Off Site Reliability Links	306	-	306	-	306
909132 2018 Rural Servicing Strategy	205	14	191	-	191
909133 2018 Water & Wastewater EA Studies	255	-	255	-	255
909134 2018 Infrastructure Master Plan (Water)	150	-	150	-	150
909135 2018 Groundwater Studies	153	14	139	-	139
909175 Britannia G4 Engine Supervise Sys Upgrade	600	569	31	-	31
909189 Britannia Highlift Flowmeters	959	51	908	11	897
909191 DWS SCADA secondary network replacement	650	71	579	-	579
909198 Shadow Ridge - 2 Deep Wells	251	-	251	-	251
909208 Lemieux & Britannia G2 Generator Design	2,125	596	1,529	-	1,529
909220 Stittsville Tank Remediation	768	338	430	-	430
909265 Britannia Window/Roof Repairs	300	12	288	-	288
909266 Britannia North Parking Lot Expansion	315	-	315	-	315
909267 Britannia Lime Tower Chimney Rehab	250	-	250	-	250
909288 Britannia Lime Tower Chimney Rehab	200	1	199	-	199
909352 2019 Groundwater Studies	700	9	691	-	691
909353 2019 Rural Servicing Strategy	250	-	250	-	250
909354 2019 Water & Wastewater EA Studies	260	-	260	-	260
909371 2019 Buildings-Water Services	575	9	566	-	566
909392 2019 WM Transmission/Distribution Rehab	2,089	697	1,392	-	1,392
909410 Water Storage Tanks & Reservoir 2019	1,728	-	1,728	-	1,728
909411 Water Sys SCADA & Instrument Rehab 2019	1,200	-	1,200	-	1,200

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
909412 Water Treatment Rehab 2019	9,854	71	9,783	8	9,775
909415 Water Facilities Roofing 2019	293	-	293	-	293
909416 Water Pumping Station Facility Rehab2019	2,761	-	2,761	-	2,761
909573 DWS SCADA Network Upgrade	785	-	785	-	785
909574 DWS SCADA HMI Upgrade	585	0	585	-	585
909576 Lemieux Settled Water Ducts & Outfall Re	1,000	-	1,000	-	1,000
909595 WPP Arc Flash Hazard Studies	300	-	300	-	300
909596 Lemieux Waste Management Building Roof R	100	-	100	-	100
909598 Kings Park Well 1 Electrical Service Upg	120	1	119	-	119
909648 Lemieux Protective Relays Upgrades	250	-	250	-	250
Drinking Water Services Total	416,489	195,968	220,521	200	220,321
Integrated Roads, Water & Wast					
907344 Woodcrest (Kilborn-Kilborn)	2,991	2,184	808	-	808
Integrated Roads, Water & Wast Total	2,991	2,184	808	-	808
Integrated Water & Wastewater					
906899 Sewer Access & Outfalls	25,610	7,020	18,590	-	18,590
907084 Water & Sewer Utility Billing System	10,800	9,969	831	-	831
907468 EAM Maximo Sustainment	3,294	3,067	227	-	227
907469 ITX Historical Reporting	300	-	300	-	300
907500 Ontario 1 Call	750	310	440	-	440
907501 SAP Integration & Mobility Deployment	6,105	4,718	1,387	-	1,387
908145 2016 Sewer & Water Repairs/Improvements	4,983	4,523	460	-	460
908147 2016 Trenchless Rehab - Sanitary & Storm	4,400	3,882	518	-	518
908424 Environmental Time Series Database	1,490	-	1,490	-	1,490
908484 2017 Sewer & Water Repairs/Improvements	2,920	1,913	1,007	-	1,007
908486 2017 Trenchless Rehab - Sanitary & Storm	2,610	1,499	1,111	-	1,111
908580 CWWF Queensway Terrace North Sewer	800	453	347	-	347
908720 CWWF 2017 Trenchless Sewer Rehabilitate	500	402	98	-	98

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
908721 CWWF 2017 Sewer Access Structure Upgrade	500	342	158	-	158
908722 CWWF 2017 Buried Infrastruct-Bld & Parks	1,250	772	478	-	478
908942 2018 Sewer & Water Repairs/Improvements	5,000	1,028	3,972	-	3,972
908944 2018 Trenchless Rehab - Sanitary & Storm	4,006	399	3,607	-	3,607
908997 LRT2 SS1 Sewer Upgrades (Byron Ave)	475	-	475	-	475
909279 Watermain: Albert-Slater (Bay to Elgin)	100	-	100	-	100
909403 Chapman Blvd (Dorval-Othello)	600	-	600	-	600
909481 2019 Sewer CCTV Engineering	1,000	-	1,000	-	1,000
909492 LRT2 SS2 Richmond Compl Streets	3,000	-	3,000	-	3,000
909599 2019 Spring Freshet Emergency	-	1,073	(1,073)	-	(1,073)
Integrated Water & Wastewater Total	80,493	41,370	39,123	-	39,123
Stormwater Services					
900812 DCA-Cardinal Creek-Stormwater Facility	24,856	22,543	2,313	-	2,313
900814 DCA-EUC SW Pond 1	7,810	7,254	556	-	556
900820 Foster SWMF Expansion & Ditch	10,200	9,461	739	-	739
902137 Stormwater Mgmt: Rehab&Enviro Compliance	1,620	-	1,620	-	1,620
903223 Cardinal Creek Erosion Monitor	1,403	1,146	257	-	257
903230 DCA-SWM Ponds E 1&2 Shirley's Brook	3,250	2,482	768	-	768
903250 DCA-Storm Water Pond - Monahan Drain	8,147	7,074	1,074	-	1,074
903324 Kennedy Burnett SW Pond	13,500	347	13,153	-	13,153
903328 DCA-Area W-2 Shirleys Brook W SWM Pond 1	1,284	780	503	-	503
903940 Carp River Restoration	6,361	5,261	1,100	12	1,088
904470 LI-Britannia Villge-OttRivr FloodProtect	1,945	1,875	70	-	70
905004 ORAP-Ottawa River Quality Model	422	304	118	-	118
905555 Sawmill Creek SWM Pond	500	-	500	-	500
905653 ORAP-Stormwater Mgmt Retrofit MasterPlan	2,360	1,633	727	-	727
905757 Monahan Constructed Wetland Rehab.	5,750	5,481	269	-	269
905762 ORAP-Monitoring & Source Control Program	520	503	17	-	17
905792 Manotick Special Des Area SW Monitoring	74	-	74	-	74

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
905816 Const. to David Adams Municipal Drain	880	756	124	-	124
905993 Richmond Village Stormwater Retrofit	185	1	184	-	184
906194 Municipal Drain Improvements	258	136	122	-	122
906632 Flood Plain Mapping	1,809	1,499	310	-	310
907102 2013 Infrastruct Master Plan(Stormwater)	250	148	102	-	102
907103 2013 Stormwater Managment Retrofit	2,000	984	1,016	-	1,016
907115 2013 Stormwater Master Planning	300	273	27	-	27
907395 Municipal Drain Improvements - 2016	145	113	32	-	32
907483 2014 Infrastruct Master Plan(Stormwater)	300	210	90	-	90
907484 2015 Stormwater Management Retrofit	9,243	3,988	5,255	-	5,255
907485 2019 Stormwater Master Planning	250	-	250	-	250
907486 Van Gaal Municipal Drain	132	84	48	-	48
907528 DCA-Riverside South SW Treatment Chamber	421	244	177	-	177
907529 DCA-Leitrim SW Pond 2	18,607	-	18,607	-	18,607
907535 DCA-Leitrim Pond 2 Trunk Storm Sewer	4,389	0	4,388	-	4,388
907536 DCA-Riverside South SW Pond 3	18,797	-	18,797	-	18,797
907537 DCA-Riverside S. Pond3 Trunk Storm Sewer	10,051	-	10,051	-	10,051
907538 DCA-Riverside South - Tributary No. 3	1,165	-	1,165	-	1,165
907539 DCA-Riverside South - Tributary No. 4	499	-	499	-	499
907540 DCA-Riverside South - Tributary No. 7A	403	-	403	-	403
907541 DCA-Riverside South - Tributary No. 7B	876	-	876	-	876
907542 DCA-Riverside South - Tributary No. 10	1,489	-	1,489	-	1,489
907543 DCA-Riverside South - Fish Habitat	2,809	-	2,809	-	2,809
907558 DCA-N5 Ultimate SW Pond	14,229	9,485	4,744	-	4,744
907560 DCA-EUC SW Pond 1 Trunk Sewers	11,045	-	11,045	-	11,045
907561 DCA-EUC SW Pond 3 Trunk Sewers	1,700	554	1,146	-	1,146
907562 DCA-Leitrim SW Pond 1 Trunk Sewers	9,055	6,745	2,310	-	2,310
907563 DCA-Riverside South SW Pond2 Trunk Sewer	5,306	381	4,925	-	4,925
907570 Hazeldean Municipal Drain	51	11	41	-	41
907572 Arbuckle Municipal Drain	661	439	222	-	222

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
907602 DCA-Glou. EUC SWM Pond 1 Modification	6,864	-	6,864	-	6,864
907603 DCA-Glou. EUC SWM Pond 1 Fish Habitat	1,132	-	1,132	-	1,132
907618 Stormwater Storage Tanks Rehab	170	-	170	-	170
907671 Nepean Crk MTSS Forebay Sediment Removal	125	84	41	-	41
907680 Stream Restoration Projects - 2016	846	71	775	11	764
907718 Kizell Municipal Drain	1,816	187	1,629	-	1,629
907720 Cranberry Creek Municipal Drain	2,385	307	2,078	-	2,078
907805 DCA-Riverside South Pond 5	10,354	581	9,773	-	9,773
907900 DCA-Mud Creek Erosion Monito E3 Glou EUC	250	-	250	-	250
907952 DCA-Monahan Drain Strmwtr FacilityRehab	2,400	908	1,492	-	1,492
908084 ORAP-Water Environment Strategy (WES)PH2	2,011	630	1,381	2	1,379
908085 Cassidy Municipal Drain	42	-	42	-	42
908087 John Taylor Municipal Drain	50	18	32	-	32
908101 Stormwater Mgmt: Rehab &Enviro Complince	440	388	52	-	52
908165 2016 Scoping Pre/Post Drn Culverts	1,500	1,441	59	-	59
908166 2016 Drainage Culverts (1m-3m)	5,685	4,739	946	-	946
908167 2016 Drainage Culverts (<=1m)	3,815	3,491	324	-	324
908168 2016 Drainage Culverts (<=1m) Resur	1,400	1,198	202	-	202
908169 2016 Drainage Culverts - Site-Speci	1,800	1,601	199	-	199
908185 2016 Inlet Control Devices - CW	400	161	239	-	239
908246 2016 Stormwater Management Retrofit	1,000	18	982	-	982
908252 Stormwater Mgmt Retrofit Master Plan	1,450	4	1,446	-	1,446
908360 Eastboro Municipal Drain	177	74	102	-	102
908361 Seabrook Municipal Drain	63	40	23	-	23
908385 Utman Park Stormwater Facility	463	0	463	-	463
908386 Taylor Creek Erosion Works Phase 2	279	-	279	-	279
908426 Hawkins Municipal Drain	68	17	52	-	52
908427 Thomas Baxter Municipal Drain	72	12	60	-	60
908440 ORAP-Water Environment Strategy (WES)PH2	1,000	252	748	-	748
908443 Municipal Drain Improvements - 2017	-	-	-	-	-

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
908497 2017 Drn Culverts - Site-Specific	835	731	104	-	104
908498 2017 Drn Culverts (<=1m)	1,271	635	636	-	636
908499 2017 Drn Culverts (<=1m) Resurfacing	1,985	1,745	240	-	240
908500 2017 Drn Culverts (1m-3m)	4,493	3,855	638	-	638
908501 2017 Drn Culverts-Scoping Pre/Post Eng	835	707	128	-	128
908512 2017 Joint CA/City Renewal Activities	200	187	13	-	13
908618 CWWF Convent Glen North Storm Sewer	1,425	851	574	-	574
908619 Graham Creek Storm Sewer	16,756	453	16,303	-	16,303
908625 2017 Stormwater Management Retrofit	2,810	-	2,810	9	2,801
908723 CWWF 2017 Drainage Culvert Renewal	13,250	10,665	2,585	2	2,583
908724 CWWF 2017 Drainage Culvert Renew-Design	1,500	777	723	-	723
908725 CWWF Stillwater Creek Storm Sewer Upgrad	300	271	29	-	29
908733 CWWF SW Retrofit - Hemmingwood Way	118	94	24	-	24
908734 CWWF SW Retrofit - Navaho Drive	72	-	72	-	72
908736 CWWF Didsbury Stormwater Facility Rehab.	100	100	-	-	-
908737 CWWF Graham Creek Slope Stabilization	250	200	50	-	50
908738 CWWF Mud Creek Bank Stabilization	100	81	19	-	19
908739 CWWF Shields Creek/Findlay Creek Rehab	50	50	-	-	-
908816 Flowing Creek Municipal Drain	37	19	18	-	18
908817 McKinnons Creek Municipal Drain	159	59	99	-	99
908852 Bilberry Creek - Slope Stabilization	5,800	5,269	531	-	531
908855 Sprucewood Slope Stabilization	145	71	74	-	74
908972 2018 Scoping Pre/Post Drn Culverts	1,060	749	311	-	311
908973 2018 Drainage Culverts (<=1m)	5,089	2,411	2,678	-	2,678
908974 2018 Drainage Culverts (1m-3m)	7,575	5,125	2,450	-	2,450
908975 2018 Drainage Culverts pre Resurfacing	3,425	1,389	2,036	-	2,036
908976 2018 Drainage Culverts - Site-Specific	1,040	738	302	-	302
908982 2018 Joint CA/City Renewal Activiti	200	-	200	-	200
909001 Hobbs Municipal Drain	160	69	91	-	91
909002 Tompkins Diversion Municipal Drain	75	17	58	-	58

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
909017 LRT2 C1 Hwy 174 Culverts	2,207	-	2,207	-	2,207
909026 ORAP-Water Environment Strategy (WES)PH2	1,000	-	1,000	-	1,000
909027 Stormwater Mgmt: Rehab&Enviro Compliance	2,442	1,189	1,253	8	1,245
909028 Municipal Drain Improvements - 2018	352	-	352	-	352
909131 2018 Stormwater Management Retrofit	2,000	70	1,930	-	1,930
909150 2019 Stormwater Improvements	500	6	494	-	494
909152 SNDC - Chapman Mills SW Pond	827	-	827	-	827
909153 Wilson-Cowan Municipal Drain	81	1	80	-	80
909170 Kilroe Municipal Drain	75	5	70	-	70
909171 Thomas Gamble Municipal Drain	75	11	64	-	64
909172 Tasse-Regimbald Municipal Drain	75	11	64	-	64
909173 O'Keefe (Sec 78) Municipal Drain	100	10	90	-	90
909184 Regimbald Municipal Drain	180	69	110	-	110
909195 Simpson Municipal Drain	155	62	93	-	93
909196 Wilson-Johnston Municipal Drain	235	46	189	-	189
909216 Cassidy 2018 Municipal Drain	144	24	120	-	120
909305 Buckles Municipal Drain	80	4	76	-	76
909355 2019 Flood Plain Mapping	175	-	175	-	175
909383 2019 Culverts Scoping Pre/Post Eng.	510	-	510	-	510
909384 2019 Drainage Culverts - Site-Specific	700	-	700	-	700
909385 2019 Drainage Culverts - CW	12,775	591	12,184	-	12,184
909386 2019 Drainage Culverts - Other	625	480	145	-	145
909540 DCA- Riverside South Pond 5 Storm Sewers	6,501	-	6,501	-	6,501
Stormwater Services Total	358,288	148,313	209,975	44	209,931
Wastewater Services					
902200 Servicing Studies Development Program	2,645	2,699	(54)	-	(54)
903252 DCA-Sanitary Sewer Oversizing Program	1,816	605	1,211	-	1,211
903345 Kanata West Pump Station & Forcemain	55,716	53,657	2,059	4	2,055
903437 ROPEC West Boiler Plant Replacement	670	347	323	-	323

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
903438 ROPEC East Boiler Plant Upgrade	200	-	200	-	200
903439 ROPEC Outfall	1,250	-	1,250	-	1,250
904752 DCA-Barhaven S. O/S(South of Jock River)	1,100	496	604	-	604
904755 2018 Infrastructure Master Plan (Sewer)	525	29	496	-	496
904939 ORAP-Wet Weather IMP - Flow Reduction	8,005	6,917	1,088	-	1,088
904984 South Nepean Collector Ph2& Decommission	9,428	8,476	952	-	952
904985 North Kanata Sewer Ph 2	22,482	9,214	13,268	-	13,268
904986 Tri-Township/March Ridge Replacement	19,222	29	19,193	-	19,193
904987 Fernbank Collector Sewer & Oversizing	2,823	2,764	59	-	59
904988 March PS Conversion	12,419	682	11,737	-	11,737
905421 DCA-O/S Orleans S Business Park SanSewer	843	-	843	-	843
905423 DCA-O/S - Riverside S Community Sanitary	1,439	0	1,439	-	1,439
905424 DCA-O/S -BarrhavenS Oversize NJock River	600	1	599	-	599
905425 DCA-O/S - Kanata Town Centre Trunk Sewer	349	-	349	-	349
905705 ORAP-Combined Sewage Overflow Storage	209,700	152,748	56,952	18	56,935
905745 Compassionate Grant Program	200	51	149	-	149
905806 Flow Monitoring System Rehab. Program	1,088	37	1,051	-	1,051
905964 DCA-O/S Jackson Trails Sewer	252	-	252	-	252
905990 DCA-O/S Kanata Lakes North	59	-	59	-	59
906022 DCA-O/S KW Collector Sewers	4,338	3,855	483	-	483
906099 Trunk Sewer Reliability	3,500	1,566	1,934	-	1,934
906100 2018 Sanitary Sewer Improvements	930	723	207	-	207
906186 ROPEC - Sewage Treatment Rehab. Program	7,043	7,040	3	-	3
906645 ROPEC - Primary Clarifier Upgrades	13,100	10,380	2,720	-	2,720
906646 ROPEC Aeration Piping & Diffusers Replace	570	38	532	-	532
906647 ROPEC Primary Clarifier Rehab Phase 2	16,000	1,258	14,742	-	14,742
906648 ROPEC - Digester Gas Utilization	10,423	12	10,411	-	10,411
906650 ROPEC - Process Facility - Environ. Sys	9,676	9,176	500	2	498
906670 ROPEC Treatment Facility Develop. Plan	832	769	63	-	63
906671 Collection Sys. Condition Assesment Prog	2,020	2,007	13	-	13

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
906842 TSSA Registration & Compliance Upgrades	2,293	1,496	797	17	780
907060 ROPEC Secondary Clarifier Upgrades	8,296	3,124	5,172	-	5,172
907061 ROPEC Concrete Rehab & Repairs	825	742	83	-	83
907106 2014 Servicing Studies Development	200	29	171	-	171
907107 Acres Road PS Upgrade Phase 1 Growth	1,009	147	862	-	862
907114 Stittsville/Fernbank Intercept-Diversion	20,000	1,588	18,412	-	18,412
907381 Wastewater Facilities Upgrades 2014	2,400	2,115	285	17	268
907382 ROPEC Aeration Blower Expansion	1,265	7	1,258	-	1,258
907383 ROPEC Digester Flare Expansion	748	-	748	-	748
907384 ROPEC Sludge Thickening Centrifuge Expan	500	-	500	-	500
907391 ROPEC WAS Pumps Expansion	275	-	275	-	275
907392 Raw Sewage Pumping Station Upgrade	9,206	8,152	1,054	1	1,053
907393 ROPEC Condition Assessment Program	500	157	343	10	333
907462 Pump Stations Capacity Increase	300	-	300	-	300
907596 Hazeldean Pumping Station HVAC Rehab	1,610	1,291	319	-	319
907597 WWS Remote Pump Stns Arc Flash Study	350	301	49	-	49
907598 Tartan Pumping Station Generator Rehab	610	588	22	-	22
907599 Richmond Pumping Station Rehab	180	-	180	-	180
907615 Don B. Munroe Pumping Station Rehab	252	224	28	-	28
907616 Decommission Cathcart Regulator	200	65	135	-	135
907617 Critical Manholes- Electrical / Mechanic	480	15	465	-	465
907620 Keefer Odour Control Fac.Modification	4,400	3,965	435	-	435
907623 West End Remote Facility Corrosion/Odour	400	-	400	-	400
907624 Wastewater Effluent Water Grid Rehab	2,750	1,531	1,219	-	1,219
907627 WW Pumping Stations Inflow / Infiltrate	100	-	100	-	100
907629 ROPEC-Sub#1 Switchgear & Sub#2 Transform	261	223	38	-	38
907630 ROPEC-High Volt Transform Replace/Rehab	200	-	200	-	200
907658 ROPEC-Working Safely Above Floor Level	1,800	62	1,738	-	1,738
907667 Wastewater Drainage Roofing 2015	40	26	14	-	14
907676 Protective Plumbing Program 2015	1,000	972	28	-	28

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
907678 Linear Sewage System Improve Prog 2015	500	266	234	-	234
907679 Sewer Lateral Repairs 2015	7,058	6,347	710	-	710
907682 Wastewater Facilities Upgrade 2015	212	211	1	-	1
907683 Lab Equipment Purchase/Replacement 2016	600	452	148	-	148
907684 ROPEC-Sewage Treatment Rehab Prog 2015	5,708	5,366	342	-	342
907685 ROPEC-Concrete Rehab & Repairs 2015	150	45	105	-	105
907688 Collection System Condition Assessment	1,000	800	200	-	200
907689 Flow Monitoring Rehab Program	675	147	528	-	528
907716 ROPEC Rehab of Digester	16,115	5,162	10,953	-	10,953
907777 Trenchless Rehab - Sanitary	2,100	1,599	501	-	501
907807 N5 Sanitary Pumping Station Overflow	949	-	949	-	949
907808 DCA-O/S - Cardinal Creek Village San Sew	379	381	(2)	-	(2)
907809 Richmond PS & Forcemain Expansion Phase1	4,503	2,481	2,022	-	2,022
907840 FEA2018 Shea Road Pump Station	3,566	3,188	378	-	378
907897 DCA-Cardinal Creek East Sanitary Ovrsize	75	-	75	-	75
907912 ROPEC Gas Flare Piping Project	600	221	379	-	379
907928 Thare Crescent Pumping Station Decommiss	300	163	137	-	137
907932 Richmond Forcemain Construction	5,800	5,122	678	-	678
907940 ROPEC RAS / WAS Ferrous Platform Rehab	168	4	164	-	164
907941 Remote Operations - Station Modification	620	135	485	-	485
907942 Keefer Blofilter Upgrades & Media Replac	360	358	2	-	2
907961 East End Odour and Corrosion Study	400	154	246	-	246
908029 South End Remote Facil. Corrosion/Odour	400	-	400	-	400
908083 Wastewater Drainage Roofing 2016	250	218	32	-	32
908089 Protective Plumbing Program 2016	1,000	42	958	-	958
908090 Water Env Protec Short Term Initiatives	150	-	150	-	150
908091 Collection System Condition Assess. 2016	1,000	21	979	-	979
908092 Flow Monitoring System Rehab. 2019	400	-	400	-	400
908093 Linear Sewage System Improve. Prog. 2016	2,000	69	1,931	-	1,931
908094 SCADA Rehab & Upgrades - Remote Sewer	1,000	-	1,000	-	1,000

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

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908095 Sewer Lateral Repairs 2016	5,000	3,547	1,453	-	1,453
908096 Tartan PS Reliability Improvements	2,250	293	1,957	-	1,957
908098 ROPEC - SCADA Rehab. & Upgrades 2016	-	-	-	-	-
908099 ROPEC - Sewage Treatment Rehab Prog 2016	1,137	1,050	87	9	78
908102 Wastewater Facilities Upgrade	500	-	500	-	500
908105 2016 Infrastructure Master Plan (Sewer)	284	220	64	-	64
908107 ROPEC Process Facil - Enviro Sys Upgrade	3,787	1,576	2,211	-	2,211
908108 ROPEC Ops & Technical Bldg Space Upgrade	210	41	169	-	169
908181 2019 Wastewater Improvements	900	-	900	-	900
908182 2016 Sanitary Sewer Improvements	2,000	1,696	304	-	304
908183 Tri-Township Collector	1,500	986	514	-	514
908184 2016 ORAP-Wet Weather IMP - Flow Reduct.	1,500	535	965	-	965
908247 Richmond PS & Forcemain Expans	1,000	-	1,000	-	1,000
908250 Infrastructure Planning Information Mgmt	1,230	173	1,057	-	1,057
908280 Kanata West Pump Station (KWOG)	948	426	521	-	521
908330 RS-PS HVAC Boilers & SCADA Upgrade Const	9,609	9,055	554	-	554
908367 Lees Ave SCADA Tower Rehab	435	40	395	-	395
908368 WWC PS Gas Monitoring Rehab & Upgrade	6,300	582	5,718	-	5,718
908425 ROPEC Screen & Degrit Repairs-Construct.	3,355	2,970	385	-	385
908429 ROPEC Digester 5 & 6 Mixing Pump Upgrade	1,000	235	765	-	765
908444 Protective Plumbing Program 2017	1,000	-	1,000	-	1,000
908445 Wastewater Drainage Roofing 2019	180	-	180	-	180
908446 Collection System Condition Assess.	1,000	106	894	-	894
908447 Linear Sewage System Improve. Prog.	800	-	800	-	800
908448 SCADA Rehab & Upgrades-Remote Sewer 2017	2,250	91	2,159	-	2,159
908449 Sewer Lateral Repairs 2018	4,000	1,521	2,479	-	2,479
908450 Sewage Pumping Station Rehab Prog 2017	2,525	674	1,851	-	1,851
908451 Lab Equipment Purchase/Replacement 2018	300	-	300	-	300
908452 ROPEC - SCADA Rehab. & Upgrades 2017	1,489	110	1,379	-	1,379
908453 ROPEC - Sewage Treatment Rehab Prog 2017	2,313	2,207	106	13	93

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

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908454 ROPEC Ops & Technical Bldg Space Upgrade	250	-	250	-	250
908455 ROPEC Process Facil - Enviro Sys Upgrade	500	-	500	-	500
908476 Cumberland #1 PS Decommissioning	300	87	213	-	213
908513 CWWF Inlet Control - Bilberry/Chatelaine	500	446	54	-	54
908514 2017 ORAP Wet Weather IMP - Flow Reduct.	1,870	1,227	643	-	643
908521 ROPEC Electrical Master Plan	690	434	256	-	256
908558 O/S N5 Trunk Sewer Oversizing	60	-	60	-	60
908624 2017 Infrastructure Master Plan (Sewer)	513	192	321	-	321
908658 Chemical System Upgrades - Remote WW PS	2,445	1,783	662	-	662
908660 Sewer Use Prog-Short Term Initiatives	200	74	126	-	126
908727 CWWF Inlet Control Devices -Bridlewood N	500	399	101	-	101
908728 CWWF Inlet Control Devices - Craig Henry	1,600	1,011	589	-	589
908729 CWWF Inlet Control Device -Flood Protect	75	42	33	-	33
908730 CWWF Flood Protection - Bilberry/Chatela	2,600	2,311	289	-	289
908731 CWWF Flood Protection - Bridlewood North	3,250	3,279	(29)	-	(29)
908732 CWWF Flood Protection - Craig Henry	3,200	2,879	321	-	321
908740 CWWF Wastewater Pumping Stations Light	300	124	176	-	176
908741 CWWF ROPEC Lighting Upgrades	1,250	1,329	(79)	-	(79)
908742 CWWF [Construct] ROPEC Thicken & Dewater	28,310	21,371	6,939	-	6,939
908767 FEA2018-Richmond Sanitary Trunk Sewer	2,838	2,279	559	-	559
908785 Cyrville Rd. Pumping Station Upgrades	350	338	12	4	8
908790 Glen Cairn Water Reservoir SCADA Tower	260	204	56	-	56
908799 ROPEC Substation Structural Rehab.	150	134	16	-	16
908834 WWS SCADA LAN/WAN Standards Rehab.	935	254	681	11	670
908836 Pumping Station Capitalized Maintenance	1,100	762	338	25	313
908843 Delorme PS & FM Upgrades	6,500	641	5,859	-	5,859
908845 ROPEC Digester 5 Condition Assessmnt Pln	275	137	138	-	138
908860 Walkley Biofilter Replacement	1,690	1,496	194	-	194
908874 ROPEC Fire Damper Rehab	500	311	189	-	189
908892 ROPEC Activated Sludge Screws Overhaul	2,450	935	1,515	-	1,515

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

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908902 Shadow Ridge Station Upgrades	2,000	78	1,922	-	1,922
908904 Decommission West End Pump Stns & Manhole	2,802	1,419	1,382	2	1,380
908906 Wastewater SCADA Standards Development	480	-	480	-	480
908912 Woodroffe PS Improvements	485	426	59	-	59
908983 2018 ORAP Wet Weather IMP - Flow Reducti	500	-	500	-	500
909029 Protective Plumbing Program 2018	600	-	600	-	600
909030 SCADA Rehab & Upgrades-Remote Sewer 2018	1,500	-	1,500	-	1,500
909031 Sewage Pumping Station Rehab Prog 2018	245	125	120	12	108
909032 ROPEC - SCADA Rehab. & Upgrades 2018	2,100	-	2,100	-	2,100
909033 ROPEC - Sewage Treatment Rehab Prog 2018	1,690	1,422	268	36	233
909034 ROPEC HVAC Phase 3	400	-	400	-	400
909072 Leitrim Sanitary Pump Station Expansion	90	-	90	-	90
909128 ROPEC Digester 5&6 Expansion Joint Repl.	635	318	317	-	317
909136 CW Flood Risk Profile	259	209	51	-	51
909148 Harvard Pumping Station Upgrade Concept.	250	72	178	-	178
909149 Acres & Hazeldean Odour Control	400	32	368	-	368
909158 ROPEC RSPS Motor & Drive Rehab.	1,000	227	773	-	773
909166 Hazeldean PS Primary Switch Replacement	310	81	229	-	229
909176 Jackson Trail Pump Station Upgrades	720	-	720	-	720
909183 Remote Station PLC Upgrades	250	66	184	-	184
909187 ROPEC Screen & Degrit Conveyor Replacmnt	250	89	161	-	161
909199 Johnwoods Bypass Sanitary Sewer	199	-	199	-	199
909200 Crystal Beach Pump Station Duct Bank	390	137	253	-	253
909203 Tech Services Bldg Chiller Piping Repl.	200	56	144	-	144
909204 Munster Forcemain and Lagoon Upgrades	183	142	41	-	41
909215 ROPEC Floor Load Study	150	91	59	-	59
909217 Pumping Stn HVAC & Isolation Valve Rehab	1,690	57	1,633	-	1,633
909218 ROPEC Master Schedule-Revey	300	39	261	-	261
909219 Munster 2 Reliability Improvements	1,496	133	1,363	-	1,363
909225 Primary Clarifiers Odour Control System	1,750	81	1,669	-	1,669

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

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909226 Flow Through Station Rehabs	850	193	657	-	657
909245 Forcemain Condition Assessment & Rehab	1,750	252	1,498	-	1,498
909251 ROPEC RAS/WAS Ferrous System Replacement	750	-	750	-	750
909258 ROPEC RSPS Interior Wall Condition Asses	350	11	339	2	337
909270 ROPEC Sub#1 Transformers Replacement	200	71	129	-	129
909273 Harvard PS Detailed Design & Contract Ad	500	25	475	-	475
909276 ROPEC diesel generators maint. contract	250	63	187	-	187
909295 Screen and Degrit Hydraulic Study	200	-	200	-	200
909312 Water Env Protec Short Term Initiat 2019	150	-	150	-	150
909313 Linear Sewage System Improve. Prog. 2019	2,000	-	2,000	-	2,000
909323 WWC Medium Voltage Maintenance	1,300	140	1,160	-	1,160
909330 Sewer Lateral Repairs 2019	1,000	-	1,000	-	1,000
909331 Sewage Pumping Station Rehab Prog 2019	10,222	-	10,222	-	10,222
909334 ROPEC - Sewage Treatment Rehab Prog 2019	5,094	6	5,088	-	5,088
909336 Sewer Use Program Short Term Initiatives	50	-	50	-	50
909341 ROPEC PolymerPipe ConditionAssess-repair	465	0	465	-	465
909342 ROPEC Sodium Bisulphate Piping CondAsses	181	29	152	-	152
909357 South Nepean Collector Ph3	8,200	1	8,199	-	8,199
909375 2019 Sewer Access & Outfalls	2,000	14	1,986	-	1,986
909376 2019 Sewer Repairs / Improvements	9,821	0	9,821	-	9,821
909377 2019 Sewer Trenchless Rehab	4,400	2	4,398	-	4,398
909393 2019 ORAP Wet Weather IMP	1,057	-	1,057	-	1,057
909491 ROPEC Disinfection Bldg Rehab	1,492	-	1,492	-	1,492
909516 LiDAR Topography Update - CW	300	-	300	-	300
909542 DCA-O/S Half Moon Bay N San Sewer	404	-	404	-	404
909560 Britannia LLP & HLP Motors and Drives	2,500	-	2,500	-	2,500
909567 Dogwood Pump Station Rehab	665	-	665	-	665
909568 Hemlock Pumping Station Rehab	150	-	150	-	150
909572 Britannia Roofs Rehab	820	13	807	-	807
909585 Leonard Laporte & St.Joseph PS rehab	200	9	191	-	191

City of Ottawa
2020 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported
Works-In-Progress
In Thousands \$(000's)

Project Description	Authority	Expenditures as of August 31, 2019	August 31 2019 Unspent Cash Balance	Total Contractual Obligations	Unspent Balance Including Contractual Obligations
909594 ROPEC Glycol Loop Extension	700	10	690	-	690
909602 Cumberland 2-3-4 PS Rehab	250	-	250	-	250
909617 ROPEC Medium Voltage Mtce Phase2	436	0	436	-	436
909623 Cambridge St - Sewer Replacement	243	-	243	-	243
Wastewater Services Total	748,287	414,101	334,186	182	334,004
Grand Total	1,606,549	801,935	804,614	427	804,187