



Standing Committee on Environmental Protection, Water and Waste Management

Rate Supported Programs



2019-194

Draft BUDGET 2019

Better roads and transit.
Safer communities.
More housing.

Table of Contents

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

Service Area Summary	1
Drinking Water Services	1
Wastewater Services	3
Stormwater Services	5
Operating Resource Requirement Summary	7
Drinking Water Services	8
Operating Resource Requirement	8
User Fees	9
Wastewater Services	14
Operating Resource Requirement	14
User Fees	15
Stormwater Services	18
Operating Resource Requirement	18
User Fees	19
Capital Program Funding Summary	23
Supplemental Operating & Capital Information	26
Analysis Summary	26
Drinking Water Services	27
Analysis	27
Explanatory Notes	29

Wastewater Services	31
Analysis	31
Explanatory Notes	33
Stormwater Services	34
Analysis	34
Explanatory Notes	36
Capital Budget	37
Project Detail	37
Drinking Water Services	38
Integrated Water & Wastewater	65
Stormwater Services	70
Wastewater Services	93
4 Year Capital Summary	115
Capital Works-In-Progress	120

Public Works & Environmental Services Department

Drinking Water Services

2019 Service Area Summary

Description

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, 17 drinking water pump stations and the 5 communal well systems: Carp Drinking Water System, Munster Hamlet Drinking Water System, Kings Park 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 25,000 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

Public Works & Environmental Services Department

Wastewater Services

2019 Service Area Summary

Description

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 6600 km of sanitary, combined, and storm pipes, 110,000 maintenance holes, 123,000 catch basins, and 1600 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 R.O. Pickard Environmental Centre (ROPEC), where all the City's wastewater is treated
- Sewer Use Bylaw 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

Public Works & Environmental Services Department

Stormwater Services

2019 Service Area Summary

Description

Stormwater Services is responsible for the operational planning, development and management of the City's stormwater management facilities. This includes 133 wet ponds, 100 dry ponds, 83 underground stormwater treatment facilities. This also includes low impact development that supports green infrastructure, emphasizing conservation and protecting water quality and other unique stormwater treatment facilities. The Service Area conducts water quality testing and environmental effects monitoring in accordance with regulatory requirements and oversees inter-department storm water programs and initiatives.

Laboratory Services is an analytical laboratory that provides comprehensive water testing and sampling services including drinking water, solid wastes, effluents, receiving waters and ground waters to ensure environmental compliance.

Municipal Drainage Services is responsible for all aspects of drainage works constructed under the *Drainage Act*. This includes reviewing and inspecting of drain applications, which are sent to Council prior to drain construction or modification.

Programs/Services Offered

Stormwater Services:

- Monitoring of stormwater facilities for water quality

- Operation of a network of rain gauges for detailed rainfall analysis
- Review of stormwater facility designs as part of the development approval process
- Inspection and review of facilities prior to acceptance by the City
- Cleaning stormwater facilities of accumulated sediment
- Respond to internal and external inquiries and complaints

Laboratory Services:

- Managing and maintaining laboratory license requirements & renewals as required through the Ministry of the Environment
- Maintaining laboratory accreditation through the Canadian Association for Laboratory Accreditation (CALA)
- Provide a full range of environmental water sampling and testing including inorganic/organic chemistry and microbiology

Municipal Drainage Services:

- Inspection, repair and maintenance of existing municipal drains
- Construction of new municipal drains
- Management of private property drainage issues - outside the Road Right-of-Way (ROW)
- Advise residents on how to address problems with drainage around their house in established areas
- Administer and investigate drainage complaints on City owned drainage easements

City of Ottawa

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

In Thousands (\$000)

	2017	2018		2019	\$ Change over 2018 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Drinking Water Services	166,320	174,871	178,879	186,445	7,566
Wastewater Services	159,470	154,193	155,635	163,015	7,380
Stormwater Services	30,238	48,313	48,497	54,521	6,024
Gross Expenditure	356,028	377,377	383,011	403,981	20,970
Recoveries & Allocations	-19,468	-18,220	-16,808	-17,408	-600
Revenue	-341,700	-373,090	-366,203	-386,573	-20,370
Net Requirement	-5,140	-13,933	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	54,589	55,879	59,179	60,587	1,408
Overtime	1,849	2,123	2,600	2,652	52
Material & Services	41,910	47,343	49,828	49,828	0
Transfers/Grants/Financial Charges	184,058	198,120	197,481	214,767	17,286
Fleet Costs	4,175	4,587	4,855	4,892	37
Program Facility Costs	0	0	0	0	0
Other Internal Costs	69,447	69,325	69,068	71,255	2,187
Gross Expenditures	356,028	377,377	383,011	403,981	20,970
Recoveries & Allocations	-19,468	-18,220	-16,808	-17,408	-600
Net Expenditure	336,560	359,157	366,203	386,573	20,370
Revenues By Type					
Federal	0	0	0	0	0
Provincial	-169	-306	-145	-145	0
Municipal	0	0	0	0	0
Own Funds	-5,726	-6,671	-6,671	-6,671	0
Fees and Services	-335,805	-366,113	-359,387	-379,757	-20,370
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-341,700	-373,090	-366,203	-386,573	-20,370
Net Requirement	-5,140	-13,933	0	0	0
Full Time Equivalents			593.61	593.61	0.00

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

	2017	2018		2019	\$ Change over 2018 Budget
	Forecast	Forecast	Budget	Estimate	
Expenditures by Program					
Water share of Water Services	51,093	53,138	56,287	57,396	1,109
Technical Innovation & Engineering Support Services	6,427	6,599	6,895	7,019	124
Business & Technical Support Services	1,010	1,322	1,686	1,704	18
Non Departmental	107,790	113,812	114,011	120,326	6,315
Gross Expenditure	166,320	174,871	178,879	186,445	7,566
Recoveries & Allocations	-3,979	-3,548	-2,942	-2,942	0
Revenue	-164,991	-178,560	-175,937	-183,503	-7,566
Net Requirement	-2,650	-7,237	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	29,889	30,374	31,783	32,469	686
Overtime	1,035	1,328	1,718	1,752	34
Material & Services	16,527	17,862	20,082	20,082	0
Transfers/Grants/Financial Charges	86,438	91,599	91,581	97,232	5,651
Fleet Costs	2,603	2,953	3,294	3,225	-69
Program Facility Costs	0	0	0	0	0
Other Internal Costs	29,828	30,755	30,421	31,685	1,264
Gross Expenditures	166,320	174,871	178,879	186,445	7,566
Recoveries & Allocations	-3,979	-3,548	-2,942	-2,942	0
Net Expenditure	162,341	171,323	175,937	183,503	7,566
Revenues By Type					
Federal	0	0	0	0	0
Provincial	0	-134	0	0	0
Municipal	0	0	0	0	0
Own Funds	-1,995	-2,197	-2,197	-2,197	0
Fees and Services	-162,996	-176,229	-173,740	-181,306	-7,566
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-164,991	-178,560	-175,937	-183,503	-7,566
Net Requirement	-2,650	-7,237	0	0	0
Full Time Equivalent			315.43	315.43	0.00

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Water Services Connection							-50
All sizes of Service Pipe							
Cost plus 15%, hourly	138.00	141.00	144.00	2.1%	4.3%	01-May-19	
Additional visit (service connection 20 mm-50 mm) - Cost plus 15%, hourly (new fee)	-	141.00	144.00	2.1%	N/A	01-May-19	
Additional visit (service connection > 50 mm) - Cost plus 15%, hourly (new fee)	-	203.00	207.00	2.0%	N/A	01-May-19	
Private service connection - Cost plus 15%, hourly (new fee)	-	141.00	144.00	2.1%	N/A	01-May-19	
Services							
All Thawing of Services							
Cost plus 15%, hourly	-	169.00	175.00	3.6%	N/A	01-May-19	
Fire Flow Test Support	251.00	256.00	261.00	2.0%	4.0%	01-May-19	
Service Charges							
Turn off water services for non payment or turn on following receipt of payment (per operation)	90.00	92.00	95.00	3.3%	5.6%	01-May-19	
Turn off or on of water services (per operation)	90.00	92.00	95.00	3.3%	5.6%	01-May-19	
Permit for Flusher Hydrant Usage	266.00	271.00	276.00	1.8%	3.8%	01-May-19	
Blanking of Water Services							
All sizes	Cost plus 15% \$3,000.00 deposit	Cost plus 15% \$3,000.00 deposit	Cost plus 15% \$3,000.00 deposit			01-May-19	
Inspection Fees (Inspection of activities connected to the water distribution system)							
All new watermains and services that don't require full disinfection	196.00	200.00	204.00	2.0%	4.1%	01-May-19	
All new watermains and services up to 50m long that require full disinfection	582.00	594.00	606.00	2.0%	4.1%	01-May-19	
All new watermains and services over 50m long that require full disinfection	Cost plus 15%	Cost plus 15%	Cost plus 15%			01-May-19	

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Meter Service Charges							
Inspection/Re-Inspection for New Water Meters (<= 20 mm meter)	94.00	96.00	99.00	3.1%	5.3%	01-Apr-19	
Meter Maintenance Service Call	160.00	164.00	170.00	3.7%	6.3%	01-Apr-19	
Call for Plumbing Repairs	25.00	26.00	27.00	3.8%	8.0%	01-Apr-19	
Water Meter Accuracy Test (<= 25 mm meter)	131.00	135.00	140.00	3.7%	6.9%	01-Apr-19	
Water Meter Accuracy Test (> 25 mm meter) (New in 2019)	-	-	187.00	N/A	N/A	01-Apr-19	
Additional visits (<= 25 mm meter)	62.00	64.00	66.00	3.1%	6.5%	01-Apr-19	
Additional visits (large meters greater than 25 mm)	80.00	85.00	110.00	29.4%	37.5%	01-Apr-19	
Additional visits (fire line meters)	192.00	200.00	206.00	3.0%	7.3%	01-Apr-19	
Manual Meter Reading Fee	21.00	30.00	39.00	30.0%	85.7%	01-Apr-19	
New Water Meters							
Size of Meter							
15 mm Pos. Disp.	353.00	360.00	370.00	2.8%	4.8%	01-Apr-19	
15 mm Pos. Disp.(Carlsbad only)	538.00	549.00	565.00	2.9%	5.0%	01-Apr-19	
20 mm Pos. Disp.	395.00	403.00	415.00	3.0%	5.1%	01-Apr-19	
25 mm Pos. Disp.	464.00	474.00	488.00	3.0%	5.2%	01-Apr-19	
40 mm Pos. Disp.	866.00	883.00	910.00	3.1%	5.1%	01-Apr-19	
50 mm Pos. Disp.	966.00	985.00	1,010.00	2.5%	4.6%	01-Apr-19	
50 mm Turbine	-	1,955.00	2,010.00	2.8%	N/A	01-Apr-19	
50 mm Compound	2,759.00	2,814.00	2,890.00	2.7%	4.7%	01-Apr-19	
75 mm Turbine	2,370.00	2,417.00	2,485.00	2.8%	4.9%	01-Apr-19	
75 mm Compound	3,471.00	3,540.00	3,630.00	2.5%	4.6%	01-Apr-19	
100 mm Turbine	2,898.00	2,956.00	3,035.00	2.7%	4.7%	01-Apr-19	
100 mm Compound	4,558.00	4,649.00	4,775.00	2.7%	4.8%	01-Apr-19	
150 mm Turbine	4,944.00	5,043.00	5,000.00	-0.9%	1.1%	01-Apr-19	
150 mm Compound	7,764.00	7,919.00	7,700.00	-2.8%	-0.8%	01-Apr-19	
Fire Line Meter Assembly - Cost plus 15%, hourly	198.00	202.00	208.00	3.0%	5.1%	01-Apr-19	

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Replacement Water Meters							
Size of Meter							
15 mm Pos. Disp.	256.00	261.00	271.00	3.8%	5.9%	01-Apr-19	
15 mm Pos. Disp.(Carlsbad only)	-	265.00	275.00	3.8%	N/A	01-Apr-19	
20 mm Pos. Disp.	298.00	304.00	313.00	3.0%	5.0%	01-Apr-19	
25 mm Pos. Disp.	367.00	375.00	385.00	2.7%	4.9%	01-Apr-19	
40 mm Pos. Disp.	736.00	751.00	773.00	2.9%	5.0%	01-Apr-19	
50 mm Pos. Disp.	837.00	854.00	877.00	2.7%	4.8%	01-Apr-19	
50 mm Turbine	-	1,731.00	1,780.00	2.8%	N/A	01-Apr-19	
50 mm Compound	2,562.00	2,613.00	2,620.00	0.3%	2.3%	01-Apr-19	
75 mm Turbine	2,242.00	2,287.00	2,350.00	2.8%	4.8%	01-Apr-19	
75 mm Compound	3,273.00	3,338.00	3,430.00	2.8%	4.8%	01-Apr-19	
100 mm Turbine	2,769.00	2,824.00	2,905.00	2.9%	4.9%	01-Apr-19	
100 mm Compound	4,361.00	4,448.00	4,580.00	3.0%	5.0%	01-Apr-19	
150 mm Turbine	4,789.00	4,885.00	4,785.00	-2.0%	-0.1%	01-Apr-19	
150 mm Compound	7,540.00	7,691.00	7,425.00	-3.5%	-1.5%	01-Apr-19	
Temporary removal and installation of meter	132.00	135.00	139.00	3.0%	5.3%	01-Apr-19	
City water meter reading device (new or damaged) replacement	202.00	206.00	212.00	2.9%	5.0%	01-Apr-19	
City water meter reading device and/or water meter reader wire re-location	159.00	162.00	168.00	3.7%	5.7%	01-Apr-19	

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Non Departmental							
Distribution of Drinking Water Per cubic metre rate of drinking water on water bill (based on approx. 81M m3 of water billed)	1.891	1.953	2.007	2.8%	6.1%	01-Apr-19	-6,281
Variable Rate - per cubic meter water consumed							
0 - 6 m3	-	0.78	0.81	3.5%	N/A	01-Apr-19	
>6 - 25 m3	-	1.55	1.60	3.5%	N/A	01-Apr-19	
>25 - 180 m3	-	1.71	1.77	3.5%	N/A	01-Apr-19	
>180 m3	-	1.90	1.97	3.5%	N/A	01-Apr-19	
Daily Fixed Fee Rates - per meter size							
15 mm	-	0.32	0.33	2.1%	N/A	01-Apr-19	
20 mm	-	0.47	0.48	2.1%	N/A	01-Apr-19	
25 mm	-	0.79	0.81	2.1%	N/A	01-Apr-19	
40 mm	-	1.58	1.61	2.1%	N/A	01-Apr-19	
50 mm	-	2.52	2.57	2.1%	N/A	01-Apr-19	
75 mm	-	4.73	4.83	2.1%	N/A	01-Apr-19	
100 mm	-	7.88	8.05	2.1%	N/A	01-Apr-19	
150 mm	-	15.76	16.09	2.1%	N/A	01-Apr-19	
200 mm	-	25.22	25.75	2.1%	N/A	01-Apr-19	
250 mm	-	36.26	37.02	2.1%	N/A	01-Apr-19	
400 mm	-	144.40	147.43	2.1%	N/A	01-Apr-19	
Compound Meter	-	1.45	1.50	3.7%	N/A	01-Apr-19	

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Fire Supply Charge							-255
Annual cost - per meter size							
15 mm meter	44.50	46.28	47.21	2.0%	6.1%	01-Apr-19	
20 mm meter	79.12	82.28	83.93	2.0%	6.1%	01-Apr-19	
25 mm meter	123.63	128.58	131.15	2.0%	6.1%	01-Apr-19	
40 mm meter	316.48	329.14	335.72	2.0%	6.1%	01-Apr-19	
50 mm meter	494.51	514.29	524.58	2.0%	6.1%	01-Apr-19	
75 mm meter	1,112.64	1,157.15	1,180.29	2.0%	6.1%	01-Apr-19	
100 mm meter	1,978.02	2,057.14	2,098.28	2.0%	6.1%	01-Apr-19	
150 mm meter	4,450.55	4,628.57	4,721.14	2.0%	6.1%	01-Apr-19	
200 mm meter	7,912.09	8,228.57	8,393.15	2.0%	6.1%	01-Apr-19	
250 mm meter	12,362.64	12,857.15	13,114.29	2.0%	6.1%	01-Apr-19	
Total Departmental							-6,586

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

	2017	2018		2019	\$ Change over 2018 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Wastewater share of Water Services	43,687	47,479	48,280	48,665	385
Technical Innovation & Engineering Support	4,306	4,928	5,786	6,122	336
Business & Technical Support Services	315	289	257	282	25
Non Departmental	111,162	101,497	101,312	107,946	6,634
Gross Expenditure	159,470	154,193	155,635	163,015	7,380
Recoveries & Allocations	-13,986	-13,130	-12,099	-12,699	-600
Revenue	-175,741	-148,137	-143,536	-150,316	-6,780
Net Requirement	-30,257	-7,074	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	20,195	21,113	22,820	23,443	623
Overtime	793	774	826	843	17
Material & Services	23,946	27,949	27,498	27,498	0
Transfers/Grants/Financial Charges	92,899	83,573	82,963	88,964	6,001
Fleet Costs	1,341	1,414	1,331	1,437	106
Program Facility Costs	0	0	0	0	0
Other Internal Costs	20,296	19,370	20,197	20,830	633
Gross Expenditures	159,470	154,193	155,635	163,015	7,380
Recoveries & Allocations	-13,986	-13,130	-12,099	-12,699	-600
Net Expenditure	145,484	141,063	143,536	150,316	6,780
Revenues By Type					
Federal	0	0	0	0	0
Provincial	0	0	0	0	0
Municipal	0	0	0	0	0
Own Funds	-3,731	-4,474	-4,474	-4,474	0
Fees and Services	-172,010	-143,663	-139,062	-145,842	-6,780
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-175,741	-148,137	-143,536	-150,316	-6,780
Net Requirement	-30,257	-7,074	0	0	0
Full Time Equivalent			231.16	231.16	0.00

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Sanitary Sewer Systems							-50
Sewer Use Program - Disposal Fees							
Septic Tank Strength Liquid Material (per cubic meter)	16.12	16.44	16.77	2.0%	4.0%	01-May-19	
Holding Tank Strength Liquid Material (per cubic metre)	3.46	3.53	3.60	2.0%	4.0%	01-May-19	
Liquid Material Generated Outside the City of Ottawa (per cubic metre)	28.09	28.65	29.22	2.0%	4.0%	01-May-19	
Sewer Use Program - Permit Fees							
Annual Permit Fee	268.42	273.79	279.00	1.9%	3.9%	01-May-19	
Annual Permit Revision Fee	150.86	153.88	157.00	2.0%	4.1%	01-May-19	
Sewer Use Program - Discharge Fees							
Conveyance Fee	1.36	1.43	1.50	5.0%	10.3%	01-May-19	
Treatment Fee	0.85	0.89	0.93	5.0%	10.3%	01-May-19	
Sewer Use Program - Discharge Fees - Parameters in Sewage							
Biochemical Oxygen Demand (per kg)	1.59	1.63	1.66	2.0%	4.0%	01-May-19	
Suspended Solids (per kg)	0.85	0.86	0.88	2.0%	4.0%	01-May-19	
Phenolic Compounds (per kg)	1.59	1.63	1.66	2.0%	4.0%	01-May-19	
Kjeldahl Nitrogen (per kg)	6.34	6.47	6.60	2.0%	4.0%	01-May-19	
Phosphorus (per kg)	2.55	2.60	2.66	2.0%	4.0%	01-May-19	

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Sewer Use Program - Administrative Fees							
Special Discharge Agreement Fee	1,043.00	1,064.00	1,085.00	2.0%	4.0%	01-May-19	
Sanitary Sewer Agreement Fee	743.00	758.00	773.00	2.0%	4.0%	01-May-19	
Compliance Program Fee	1,043.00	1,064.00	1,085.00	2.0%	4.0%	01-May-19	
Combined Agreement Fee	1,043.00	1,064.00	1,085.00	2.0%	4.0%	01-May-19	
Sanitary Discharge Agreement Revision Fee							
	224.00	228.00	233.00	2.2%	4.0%	01-May-19	
Combined Agreement Revision Fee	224.00	228.00	233.00	2.2%	4.0%	01-May-19	
Sanitary Sewer Agreement Revision Fee (per revision)							
	112.00	114.00	116.00	1.8%	3.6%	01-May-19	
Compliance Program Revision Fee (per revision)							
	224.00	228.00	233.00	2.2%	4.0%	01-May-19	
CPI increase to Permit, Discharge & Admin Fees							
Non Departmental							
Sewer Surcharge for Sanitary and Storm Sewer Systems							
For each owner or occupant receiving water supply service:							-6,730
	117%	120%	122%	1.7%	4.3%	01-Apr-19	
Variable Rate - per cubic meter water consumed							
0 - 6 m3	-	0.68	0.71	4.5%	N/A	01-Apr-19	
>6 - 25 m3	-	1.36	1.42	4.5%	N/A	01-Apr-19	
>25 - 180 m3	-	1.50	1.57	4.5%	N/A	01-Apr-19	
>180 m3	-	1.68	1.76	4.5%	N/A	01-Apr-19	

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Daily Fixed Fee Rates - per meter size							
15 mm	-	0.27	0.28	5.0%	N/A	01-Apr-19	
20 mm	-	0.41	0.43	5.0%	N/A	01-Apr-19	
25 mm	-	0.68	0.71	5.0%	N/A	01-Apr-19	
40 mm	-	1.36	1.43	5.0%	N/A	01-Apr-19	
50 mm	-	2.18	2.29	5.0%	N/A	01-Apr-19	
75 mm	-	4.09	4.29	5.0%	N/A	01-Apr-19	
100 mm	-	6.81	7.15	5.0%	N/A	01-Apr-19	
150 mm	-	13.63	14.31	5.0%	N/A	01-Apr-19	
200 mm	-	21.80	22.89	5.0%	N/A	01-Apr-19	
250 mm	-	31.34	32.91	5.0%	N/A	01-Apr-19	
Compound Meter	-	1.36	1.43	5.0%	N/A	01-Apr-19	
Total Departmental							-6,780

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

	2017	2018		2019	\$ Change over 2018 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Stormwater Operations	11,738	10,748	11,320	11,420	100
Technical Innovation & Engineering Support	485	792	409	409	0
Business & Technical Support Services	405	359	354	354	0
Non Departmental	17,610	36,414	36,414	42,338	5,924
Gross Expenditure	30,238	48,313	48,497	54,521	6,024
Recoveries & Allocations	-1,503	-1,542	-1,767	-1,767	0
Revenue	-968	-46,393	-46,730	-52,754	-6,024
Net Requirement	27,767	378	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	4,505	4,392	4,576	4,675	99
Overtime	21	21	56	57	1
Material & Services	1,437	1,532	2,248	2,248	0
Transfers/Grants/Financial Charges	4,721	22,948	22,937	28,571	5,634
Fleet Costs	231	220	230	230	0
Program Facility Costs	0	0	0	0	0
Other Internal Costs	19,323	19,200	18,450	18,740	290
Gross Expenditures	30,238	48,313	48,497	54,521	6,024
Recoveries & Allocations	-1,503	-1,542	-1,767	-1,767	0
Net Expenditure	28,735	46,771	46,730	52,754	6,024
Revenues By Type					
Federal	0	0	0	0	0
Provincial	-169	-172	-145	-145	0
Municipal	0	0	0	0	0
Own Funds	0	0	0	0	0
Fees and Services	-799	-46,221	-46,585	-52,609	-6,024
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-968	-46,393	-46,730	-52,754	-6,024
Net Requirement	27,767	378	0	0	0
Full Time Equivalents			47.02	47.02	0.00

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Laboratory Services (Tests)							
Alkalinity, PH, Conductivity	10.39	10.60	10.81	2.0%	4.0%	01-May-19	
Alkalinity Brinkman (wastewater)	15.64	15.95	16.27	2.0%	4.0%	01-May-19	
Biochemical Oxygen Demand	17.10	17.44	17.79	2.0%	4.0%	01-May-19	
Carbonaceous Biochemical Demand	17.10	17.44	17.79	2.0%	4.0%	01-May-19	
Chloride	11.67	11.90	12.45	4.6%	6.7%	01-May-19	
Chemical Oxygen Demand	11.11	11.33	11.56	2.0%	4.1%	01-May-19	
Conductivity	10.39	10.60	10.81	2.0%	4.0%	01-May-19	
Dissolved Organic Carbon	14.68	14.97	15.27	2.0%	4.0%	01-May-19	
E. coli (wastewater)	11.70	11.93	12.17	2.0%	4.0%	01-May-19	
Fluoride (SIE)	16.77	17.11	17.45	2.0%	4.1%	01-May-19	
Heterotrophic Plate	12.43	12.68	12.93	2.0%	4.0%	01-May-19	
Halo Acetic Acid	133.55	136.22	138.94	2.0%	4.0%	01-May-19	
ICP-OES Industrial Waste - 28 elements	26.42	26.95	27.49	2.0%	4.0%	01-May-19	
ICP-OES Metals Scan - 5 elements	13.69	13.96	14.24	2.0%	4.0%	01-May-19	
ICP-OES Metal Scan - 28 elements	22.90	23.36	23.83	2.0%	4.1%	01-May-19	
ICP/MS Metal Scan SW/DW - 27 elements	36.93	37.67	38.42	2.0%	4.0%	01-May-19	
ICP/MS Lead DW	13.69	13.96	14.24	2.0%	4.0%	01-May-19	
Ammonia - Surface/Waste Water	10.33	10.54	10.81	2.6%	4.6%	01-May-19	
Ion Chromatography	16.77	17.11	17.45	2.0%	4.1%	01-May-19	
Mercury	33.99	34.67	35.36	2.0%	4.0%	01-May-19	
Nitrates	16.77	17.11	12.45	-27.2%	-25.8%	01-May-19	
PH	10.39	10.60	10.81	2.0%	4.0%	01-May-19	
Reactive Phosphorus	10.33	10.54	10.81	2.6%	4.6%	01-May-19	
Soluble Biochemical Oxygen Demand	18.25	18.62	18.79	0.9%	3.0%	01-May-19	
Soluble Carbonaceous Biochemical Oxygen Demand	18.25	18.62	18.79	0.9%	3.0%	01-May-19	
Soluble Chemical Oxygen Demand	11.11	11.33	12.56	10.9%	13.1%	01-May-19	
Specific gravity	21.63	22.06	22.50	2.0%	4.0%	01-May-19	
Sulphate	11.67	11.90	12.45	4.6%	6.7%	01-May-19	
Soluble Phosphorus	15.26	15.57	15.72	1.0%	3.0%	01-May-19	
Soluble Kjeldahl Nitrogen	15.26	15.57	15.72	1.0%	3.0%	01-May-19	

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

	2017 Rate \$	2018 Rate \$	2019 Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Laboratory Services (Tests) cont'd							
Total Coliforms - E-Coli (DC)	10.78	10.99	11.21	2.0%	4.0%	01-May-19	
Total Coliforms - E-Coli (PA)	20.29	20.69	21.10	2.0%	4.0%	01-May-19	
Total Coliforms - E-Coli (MPN)	21.15	21.58	22.01	2.0%	4.1%	01-May-19	
Total Kjeldahl Nitrogen	14.09	14.37	14.72	2.4%	4.5%	01-May-19	
Total Phosphorus	14.09	14.37	14.72	2.4%	4.5%	01-May-19	
Total Solid - Waste Water	10.94	11.16	11.38	2.0%	4.0%	01-May-19	
Total Solid - Solid	10.94	11.16	11.38	2.0%	4.0%	01-May-19	
Total Suspended Solid	10.21	10.42	10.63	2.0%	4.1%	01-May-19	
Trihalomethane/VOC Full Scan	61.80	63.04	64.30	2.0%	4.0%	01-May-19	
Volatile Acids	38.05	38.81	39.59	2.0%	4.0%	01-May-19	
Volatile Solids - Waste Water	11.64	11.87	12.11	2.0%	4.0%	01-May-19	
Volatile Solids - Solids	11.85	12.09	12.33	2.0%	4.1%	01-May-19	
Volatile Suspended Solid (Water)	11.79	12.03	12.27	2.0%	4.1%	01-May-19	
Drinking Water Anion (Chloride, fluoride, nitrite and nitrate, sulphate)	16.77	17.11	17.45	2.0%	4.1%	01-May-19	
Standard Chemistry (Alkalinity, Conductivity, pH)	10.39	10.60	10.81	2.0%	4.0%	01-May-19	
Total Nutrients (Ammonia + Ammonia, Reactive Phosphorus)	11.35	11.58	11.81	2.0%	4.1%	01-May-19	
TKN/TP (Total Kjeldahl Nitrogen, Total Phosphorus)	15.11	15.41	15.72	2.0%	4.0%	01-May-19	
Increase to rates for various lab tests listed above							-10

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

	2019 Phase-In Rate \$	2018 Full Tier Rate \$	2019 Full Tier Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
Non Departmental							
Annual Stormwater Service Fees							-6,014
Residential Connected							
Urban Single/Semi	-	116.85	129.47	10.8%	N/A	01-Jan-19	
Rural Single/Semi	-	116.85	129.47	10.8%	N/A	01-Jan-19	
Urban Townhouse/Apt	-	58.42	64.73	10.8%	N/A	01-Jan-19	
Rural Townhouse/Apt	-	58.42	64.73	10.8%	N/A	01-Jan-19	
Residential Non-Connected (2019 75% Phase-In Rate)							
Urban Single/Semi	67.98	81.79	90.63	10.8%	16.3%	01-Jan-19	
Rural Single/Semi	48.55	58.42	64.73	10.8%	16.3%	01-Jan-19	
Urban Townhouse/Apt	33.99	40.90	45.31	10.8%	16.3%	01-Jan-19	
Rural Townhouse/Apt	24.28	29.21	32.37	10.8%	16.4%	01-Jan-19	
Industrial, Commercial and Institutional (ICI)							
ICI Connected Urban and Rural							
0 to 300K Assessment	-	54.75	60.47	10.4%	N/A	01-Jan-19	
>300K to 1M Assessment	-	259.10	286.16	10.4%	N/A	01-Jan-19	
>1M to 5M Assessment	-	966.44	1,067.39	10.4%	N/A	01-Jan-19	
>5M to 20M Assessment	-	4,236.83	4,679.37	10.4%	N/A	01-Jan-19	
>20M to 50M Assessment	-	12,824.25	14,163.73	10.4%	N/A	01-Jan-19	
>50M to 100M Assessment	-	30,951.19	34,184.02	10.4%	N/A	01-Jan-19	
>100M to 150M Assessment	-	51,918.01	57,340.80	10.4%	N/A	01-Jan-19	
>150M Assessment	-	109,944.41	121,428.02	10.4%	N/A	01-Jan-19	

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

	2019 Phase-In Rate \$	2018 Full Tier Rate \$	2019 Full Tier Rate \$	% Change Over 2018	% Change Over 2017	Effective Date	2019 Revenue (\$000)
ICI Non-Connected - Urban (2019 75% Phase-In Rate)							
0 to 300K Assessment	45.35	54.75	60.47	10.4%	16.0%	01-Jan-19	
>300K to 1M Assessment	214.62	259.10	286.16	10.4%	16.0%	01-Jan-19	
>1M to 5M Assessment	800.55	966.44	1,067.39	10.4%	16.0%	01-Jan-19	
>5M to 20M Assessment	3,509.53	4,236.83	4,679.37	10.4%	16.0%	01-Jan-19	
>20M to 50M Assessment	10,622.80	12,824.25	14,163.73	10.4%	16.0%	01-Jan-19	
>50M to 100M Assessment	25,638.02	30,951.19	34,184.02	10.4%	16.0%	01-Jan-19	
>100M to 150M Assessment	43,005.60	51,918.01	57,340.80	10.4%	16.0%	01-Jan-19	
>150M Assessment	91,071.02	109,944.41	121,428.02	10.4%	16.0%	01-Jan-19	
ICI Non-Connected - Rural (2019 75% Phase-In Rate)							
0 to 300K Assessment	31.74	38.32	42.32	10.4%	15.9%	01-Jan-19	
>300K to 1M Assessment	150.24	181.37	200.31	10.4%	16.0%	01-Jan-19	
>1M to 5M Assessment	560.38	676.51	747.17	10.4%	16.0%	01-Jan-19	
>5M to 20M Assessment	2,456.67	2,965.78	3,275.56	10.4%	16.0%	01-Jan-19	
>20M to 50M Assessment	7,435.96	8,976.97	9,914.61	10.4%	16.0%	01-Jan-19	
>50M to 100M Assessment	17,946.61	21,665.84	23,928.81	10.4%	16.0%	01-Jan-19	
>100M to 150M Assessment	30,103.92	36,342.61	40,138.56	10.4%	16.0%	01-Jan-19	
>150M Assessment	63,749.71	76,961.09	84,999.61	10.4%	16.0%	01-Jan-19	
Total Departmental							-6,024

City Of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands (\$000's)

Project Description	Revenues	Capital Reserve Fund	Gas Tax	Development Charges	Debt Funding	Total
Drinking Water Services						
Renewal of City Assets						
908076 Large Water Meters Changeout Program	-	1,000	-	-	-	1,000
908080 Water Distribution Sys Improvements 2019	-	200	-	-	800	1,000
908082 Communal Well System Rehab 2018	-	2,000	-	-	-	2,000
908614 LRT2 W1 Hwy 174 - Shefford Rd	-	251	-	-	100	351
908615 Leirim Rd (Bank-550m East)	-	200	-	-	500	700
908633 Enhanced Corrosion Control	-	500	-	-	500	1,000
908908 Small Water Meters Changeout Program	-	4,325	-	-	-	4,325
908980 2019 Watermain Improvements	-	3,900	-	-	100	4,000
908981 Lemieux island Pipe Bridge SN 017160	-	200	-	-	300	500
909371 2019 Buildings-Water Services	-	575	-	-	-	575
909392 2019 WM Transmission/Distribution Rehab	-	259	-	-	1,830	2,089
909410 Water Storage Tanks & Reservoir 2019	-	728	-	-	1,000	1,728
909411 Water Sys SCADA & Instrument Rehab 2019	-	1,200	-	-	-	1,200
909412 Water Treatment Rehab 2019	-	11,900	-	-	60	11,960
909415 Water Facilities Roofing 2019	-	293	-	-	-	293
909416 Water Pumping Station Facility Rehab2019	-	1,261	-	-	1,500	2,761
Renewal of City Assets Total	-	28,792	-	-	6,690	35,482
Growth						
900632 Strandherd Road Watermain	-	380	-	3,420	-	3,800
907467 SUC Greenbank	-	380	-	3,420	-	3,800
909071 2018 Off Site Reliability Links	-	-	-	153	-	153
909352 2019 Groundwater Studies	-	623	-	77	-	700
909353 2019 Rural Servicing Strategy	-	175	-	75	-	250
909354 2019 Water & Wastewater EA Studies	-	52	-	208	-	260
Growth Total	-	1,610	-	7,353	-	8,963
Drinking Water Services Total	-	30,402	-	7,353	6,690	44,445
Integrated Roads, Water & Wastewater						
Renewal of City Assets						
906882 Elgin (Lisgar - Isabella)	-	830	-	134	2,006	2,970

City Of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
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In Thousands (\$000's)

Project Description	Revenues	Capital Reserve Fund	Gas Tax	Development Charges	Debt Funding	Total
908139 Montreal Rd (N River Rd-St Laurent Blvd)	-	10,000	-	1,004	4,556	15,560
908141 ORAP Albert St-Bronson Ave-Slater St	-	410	-	51	979	1,440
908142 CWWF McLeod - Florence	-	7,678	-	267	-	7,945
908370 Integrated Departmental Mgmt Plan	-	550	-	-	-	550
908487 2019 Integrated Scoping Pre/Post Eng	-	660	-	-	-	660
908568 Ashburn - Hogan - Wigan - Ness	-	5,895	-	-	2,310	8,205
908569 Borthwick-Quebec-Gardenvale	-	2,570	-	-	1,250	3,820
908570 Byron-Athlone-Highcroft	-	350	-	-	1,190	1,540
908573 Gibson-Denver-Tampa-Orlando	-	2,630	-	-	540	3,170
908574 Grove Ave & Grosvenor	-	450	-	-	430	880
908577 Mailes Ave (Patricia-Oakdale)	-	1,690	-	-	120	1,810
908578 Ryder St - Featherston Dr	-	525	-	-	375	900
908582 N River Rd (Montreal-Dead EndNof Coupal)	-	1,965	-	85	290	2,340
908645 St Denis - Lavergne - Ste Monique	-	8,810	-	-	2,110	10,920
908726 CWWF Vanier Parkway - Presland Rd et al	-	3,280	-	-	-	3,280
908835 Mann-Range-Russell-Templeton	-	5,880	-	-	3,045	8,925
908998 LRT2 R2 Hwy 174 Resurfacing EBL	-	36	-	-	-	36
909012 Bronson Ave (Arlington-Rideau Canal)	-	1,430	-	60	200	1,690
909272 Scott St. (West of Smirle Ave)	-	1,020	-	-	-	1,020
909373 2019 Infrastructure Assess & Data Collec	-	300	-	-	-	300
909374 2019 Road Resurfacing - CW	-	900	-	-	-	900
909394 Arch - Canterbury - Plesser	-	1,470	-	-	60	1,530
909400 Bel-Air Dr, Bedbrooke St et al	-	1,060	-	-	60	1,120
909404 Claymor & Senio	-	1,070	-	-	80	1,150
909405 Hamlet Rd	-	195	-	-	15	210
909475 2019 Surveys & Mapping	-	240	-	-	-	240
909485 Carling Ave - Churchill Ave - Kirkwood	-	1,563	-	57	30	1,650
Renewal of City Assets Total	-	63,457	-	1,658	19,646	84,761
Integrated Roads, Water & Wastewater Total	-	63,457	-	1,658	19,646	84,761
Integrated Water & Wastewater						
Renewal of City Assets						
908997 LRT2 SS1 Sewer Upgrades (Byron Ave)	-	100	-	-	240	340

City Of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands (\$000's)

Project Description	Revenues	Capital Reserve Fund	Gas Tax	Development Charges	Debt Funding	Total
909375 2019 Sewer Access & Outfalls	-	900	-	-	1,100	2,000
909376 2019 Sewer Repairs / Improvements	-	6,810	-	-	3,011	9,821
909377 2019 Sewer Trenchless Rehab	-	4,400	-	-	-	4,400
909403 Chapman Blvd (Dorval-Othello)	-	300	-	-	300	600
909481 2019 Sewer CCTV Engineering	-	1,000	-	-	-	1,000
909492 LRT2 SS2 Richmond Compl Streets	-	3,000	-	-	-	3,000
Renewal of City Assets Total	-	16,510	-	-	4,651	21,161
Integrated Water & Wastewater Total	-	16,510	-	-	4,651	21,161
Stormwater Services						
Renewal of City Assets						
902137 Stormwater Mgmt: Rehab&Enviro Compliance	-	1,620	-	-	-	1,620
903324 Kennedy Burnett SW Pond	-	7,875	-	4,625	-	12,500
908252 Stormwater Mgmt Retrofit Master Plan	-	100	-	-	-	100
909017 LRT2 C1 Hwy 174 Culverts	-	510	-	-	1,500	2,010
909150 2019 Stormwater Improvements	-	500	-	-	-	500
909355 2019 Flood Plain Mapping	-	175	-	-	-	175
909383 2019 Culverts Scoping Pre/Post Eng.	-	510	-	-	-	510
909384 2019 Drainage Culverts - Site-Specific	-	300	-	-	400	700
909385 2019 Drainage Culverts - CW	-	775	-	-	12,000	12,775
909386 2019 Drainage Culverts - Other	-	325	-	-	300	625
Renewal of City Assets Total	-	12,690	-	4,625	14,200	31,515
Growth						
907485 2019 Stormwater Master Planning	-	198	-	53	-	250
909540 DCA- Riverside South Pond 5 Storm Sewers	-	-	-	6,501	-	6,501
Growth Total	-	198	-	6,553	-	6,751
Regulatory						
909351 Municipal Drain Improvements - 2019	432	48	-	-	-	480
Regulatory Total	432	48	-	-	-	480
Stormwater Services Total	432	12,936	-	11,178	14,200	38,746

City Of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands (\$000's)

Project Description	Revenues	Capital Reserve Fund	Gas Tax	Development Charges	Debt Funding	Total
Wastewater Services						
Renewal of City Assets						
906648 ROPEC - Digester Gas Utilization	-	-	-	-	7,412	7,412
907383 ROPEC Digester Flare Expansion	-	6	-	56	50	112
908092 Flow Monitoring System Rehab. 2019	-	400	-	-	-	400
908181 2019 Wastewater Improvements	-	900	-	-	-	900
908445 Wastewater Drainage Roofing 2019	-	180	-	-	-	180
909312 Water Env Protec Short Term Initiat 2019	0	150	0	0	0	150
909313 Linear Sewage System Improve. Prog. 2019	-	2,000	-	-	-	2,000
909330 Sewer Lateral Repairs 2019	-	500	-	-	500	1,000
909331 Sewage Pumping Station Rehab Prog 2019	-	19,100	-	-	-	19,100
909334 ROPEC - Sewage Treatment Rehab Prog 2019	-	1,500	-	-	5,000	6,500
909336 Sewer Use Program Short Term Initiatives	-	50	-	-	-	50
909393 2019 ORAP Wet Weather IMP	-	1,131	-	169	-	1,300
909516 LiDAR Topography Update - CW	-	300	-	-	-	300
Renewal of City Assets Total	-	26,217	-	225	12,962	39,404
Growth						
904986 Tri-Township/March Ridge Replacement	-	-	-	1,303	12,297	13,600
904988 March PS Conversion	-	5,936	-	1,392	3,872	11,200
907107 Acres Road PS Upgrade	-	-	-	700	-	700
907462 Pump Stations Capacity Increase	-	-	-	300	-	300
908247 Richmond PS & Forcemain Expans	-	250	-	750	-	1,000
909357 South Nepean Collector Ph3	-	-	-	7,502	698	8,200
909542 DCA-O/S Half Moon Bay N San Sewer	-	-	-	404	-	404
Growth Total	-	6,186	-	12,351	16,867	35,404
Wastewater Services Total	-	32,403	-	12,576	29,829	74,808
Total	432	155,708	-	32,766	75,016	263,921

Integrated Roads, Water and Wastewater Program does not include the Roads portion of the program.

City of Ottawa

Standing Committee on Environmental Protection, Water and Waste Management - Rate Supported - Operating Resource Requirement Analysis
In Thousands (\$000)

	2018 Baseline			2019 Adjustments			2019	\$ Change over 2018 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Expenditures by Program								
Drinking Water Services	174,871	178,879	0	7,566	0	0	186,445	7,566
Wastewater Services	154,193	155,635	0	7,380	0	0	163,015	7,380
Stormwater Services	48,313	48,497	0	6,024	0	0	54,521	6,024
Gross Expenditure	377,377	383,011	0	20,970	0	0	403,981	20,970
Recoveries & Allocations	-18,220	-16,808	0	-600	0	0	-17,408	-600
Revenue	-373,090	-366,203	-850	0	-130	-19,390	-386,573	-20,370
Net Requirement	-13,933	0	-850	20,370	-130	-19,390	0	0
Expenditures by Type								
Salaries, Wages & Benefits	55,879	59,179	0	1,408	0	0	60,587	1,408
Overtime	2,123	2,600	0	52	0	0	2,652	52
Material & Services	47,343	49,828	0	0	0	0	49,828	0
Transfers/Grants/Financial Charges	198,120	197,481	0	17,286	0	0	214,767	17,286
Fleet Costs	4,587	4,855	0	37	0	0	4,892	37
Program Facility Costs	0	0	0	0	0	0	0	0
Other Internal Costs	69,325	69,068	0	2,187	0	0	71,255	2,187
Gross Expenditures	377,377	383,011	0	20,970	0	0	403,981	20,970
Recoveries & Allocations	-18,220	-16,808	0	-600	0	0	-17,408	-600
Net Expenditure	359,157	366,203	0	20,370	0	0	386,573	20,370
Percent of 2018 Net Expenditure Budget			0.0%	5.6%	0.0%	0.0%	5.6%	
Revenues By Type								
Federal	0	0	0	0	0	0	0	0
Provincial	-306	-145	0	0	0	0	-145	0
Municipal	0	0	0	0	0	0	0	0
Own Funds	-6,671	-6,671	0	0	0	0	-6,671	0
Fees and Services	-366,113	-359,387	-850	0	-130	-19,390	-379,757	-20,370
Fines	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Revenue	-373,090	-366,203	-850	0	-130	-19,390	-386,573	-20,370
Percent of 2018 Revenue Budget			0.2%	0.0%	0.0%	5.3%	5.6%	
Net Requirement	-13,933	0	-850	20,370	-130	-19,390	0	0
Percent of 2018 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		593.61	0.00	0.00	0.00	0.00	593.61	0.00
Percent of 2018 FTE's			0.0%	0.0%	0.0%	0.0%	0.0%	

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

	2018 Baseline			2019 Adjustments			2019	\$ Change over 2018 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Expenditures by Program								
Water share of Water Services	53,138	56,287	0	1,109	0	0	57,396	1,109
Technical Innovation & Engineering Support Services	6,599	6,895	0	124	0	0	7,019	124
Business & Technical Support Services	1,322	1,686	0	18	0	0	1,704	18
Non Departmental	113,812	114,011	0	6,315	0	0	120,326	6,315
Gross Expenditure	174,871	178,879	0	7,566	0	0	186,445	7,566
Recoveries & Allocations	-3,548	-2,942	0	0	0	0	-2,942	0
Revenue	-178,560	-175,937	-850	0	-130	-6,586	-183,503	-7,566
Net Requirement	-7,237	0	-850	7,566	-130	-6,586	0	0
Expenditures by Type								
Salaries, Wages & Benefits	30,374	31,783	0	686	0	0	32,469	686
Overtime	1,328	1,718	0	34	0	0	1,752	34
Material & Services	17,862	20,082	0	0	0	0	20,082	0
Transfers/Grants/Financial Charges	91,599	91,581	0	5,651	0	0	97,232	5,651
Fleet Costs	2,953	3,294	0	-69	0	0	3,225	-69
Program Facility Costs	0	0	0	0	0	0	0	0
Other Internal Costs	30,755	30,421	0	1,264	0	0	31,685	1,264
Gross Expenditures	174,871	178,879	0	7,566	0	0	186,445	7,566
Recoveries & Allocations	-3,548	-2,942	0	0	0	0	-2,942	0
Net Expenditure	171,323	175,937	0	7,566	0	0	183,503	7,566
Percent of 2018 Net Expenditure Budget			0.0%	4.3%	0.0%	0.0%	4.3%	

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

	2018 Baseline			2019 Adjustments			2019	\$ Change over 2018 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	-134	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	-176,229	-173,740	-850	0	-130	-6,586	-181,306	-7,566
Fines	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Revenue	-178,560	-175,937	-850	0	-130	-6,586	-183,503	-7,566
Percent of 2018 Revenue Budget			0.5%	0.0%	0.1%	3.7%	4.3%	
Net Requirement	-7,237	0	-850	7,566	-130	-6,586	0	0
Percent of 2018 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalentents (FTE's)		315.43	0.00	0.00	0.00	0.00	315.43	0.00
Percent of 2018 FTE's			0.0%	0.0%	0.0%	0.0%	0.0%	

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

2018 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)			
	Expense	Revenue	Net	
Surplus mainly due to vacancies, increased recoveries from capital for internal resources and savings in repairs, maintenance, utility costs and chemicals, as well as increased revenues due to more cost recovery work and higher growth in fire supply revenues	4,614	2,623	7,237	
Total Surplus / (Deficit)	4,614	2,623	7,237	
2018 Baseline Adjustment / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2018 Changes	FTE Impact
Increase in Fire Supply revenues due to forecasted surplus in 2018 as a result of higher growth than originally anticipated.	0	-850	-850	0.00
Total Adjustments to Base Budget	0	-850	-850	0.00
2019 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2019 Changes	FTE Impact
Maintain Services				
All programs include an adjustment for potential 2019 cost of living, increments and benefit adjustments.	720	0	720	0.00
Inflationary increase to sewer surcharge costs for water purification plant waste discharged into the wastewater collection system and treated at the wastewater treatment plant.	600	0	600	0.00
Reduction in Fleet costs.	-69	0	-69	0.00
Non Departmental				
Increase in interdepartmental cost allocations from PIED for cost of living and benefit increases as well as new FTE's.	664	0	664	0.00
Contribution to Capital - inflationary adjustment.	4,295	0	4,295	0.00
Contribution to Capital - based on Long Range Financial Plan to maintain assets in a good state of repair (ACS2017-CSD-FIN-0023).	1,356	0	1,356	0.00
Total Maintain Services	7,566	0	7,566	0.00

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

2019 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2019 Changes	FTE Impact
Growth				
Non Departmental				
Increase in Fire Supply revenues due to growth in the number of water accounts.	0	-130	-130	0.00
Total Growth	0	-130	-130	0.00
User Fees & Revenues				
See following user fee schedule for details on the specific rates.	0	-6,586	-6,586	0.00
Total User Fees & Revenues	0	-6,586	-6,586	0.00
Total Budget Changes	7,566	-7,566	0	0.00

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

	2018 Baseline			2019 Adjustments			2019	\$ Change over 2018 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Expenditures by Program								
Wastewater share of Water Services	47,479	48,280	0	385	0	0	48,665	385
Technical Innovation & Engineering Support	4,928	5,786	0	336	0	0	6,122	336
Business & Technical Support Services	289	257	0	25	0	0	282	25
Non Departmental	101,497	101,312	0	6,634	0	0	107,946	6,634
Gross Expenditure	154,193	155,635	0	7,380	0	0	163,015	7,380
Recoveries & Allocations	-13,130	-12,099	0	-600	0	0	-12,699	-600
Revenue	-148,137	-143,536	0	0	0	-6,780	-150,316	-6,780
Net Requirement	-7,074	0	0	6,780	0	-6,780	0	0
Expenditures by Type								
Salaries, Wages & Benefits	21,113	22,820	0	623	0	0	23,443	623
Overtime	774	826	0	17	0	0	843	17
Material & Services	27,949	27,498	0	0	0	0	27,498	0
Transfers/Grants/Financial Charges	83,573	82,963	0	6,001	0	0	88,964	6,001
Fleet Costs	1,414	1,331	0	106	0	0	1,437	106
Program Facility Costs	0	0	0	0	0	0	0	0
Other Internal Costs	19,370	20,197	0	633	0	0	20,830	633
Gross Expenditures	154,193	155,635	0	7,380	0	0	163,015	7,380
Recoveries & Allocations	-13,130	-12,099	0	-600	0	0	-12,699	-600
Net Expenditure	141,063	143,536	0	6,780	0	0	150,316	6,780
Percent of 2018 Net Expenditure Budget			0.0%	4.7%	0.0%	0.0%	4.7%	

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

	2018 Baseline			2019 Adjustments			2019	\$ Change over 2018 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	-143,663	-139,062	0	0	0	-6,780	-145,842	-6,780
Fines	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Revenue	-148,137	-143,536	0	0	0	-6,780	-150,316	-6,780
Percent of 2018 Revenue Budget			0.0%	0.0%	0.0%	4.7%	4.7%	
Net Requirement	-7,074	0	0	6,780	0	-6,780	0	0
Percent of 2018 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		231.16	0.00	0.00	0.00	0.00	231.16	0.00
Percent of 2018 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)

2018 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)			
	Expense	Revenue	Net	
Surplus mainly due to vacancies, savings in repairs, maintenance, utility costs and chemicals, as well as increased sewer surcharge revenues.	2,473	4,601	7,074	
Total Surplus / (Deficit)	2,473	4,601	7,074	
2019 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2019 Changes	FTE Impact
Maintain Services				
All programs include an adjustment for potential 2019 cost of living, increments and benefit adjustments.	640	0	640	0.00
Increase in Fleet costs related to inflation on compensation contracts, parts, fuel, contribution to capital reserve and maintenance.	106	0	106	0.00
Increase in sewer use recoveries from Water Production for water purification plant waste discharged into the wastewater collection system and treated at the wastewater treatment plant.	-600	0	-600	0.00
Non Departmental				
Increase in interdepartmental charges from PIED for cost of living and benefit increases as well as new FTE's.	633	0	633	0.00
Increase in debt servicing costs.	300	0	300	0.00
Contribution to Capital - inflationary adjustment.	3,316	0	3,316	0.00
Contribution to Capital - based on Long Range Financial Plan to maintain assets in a good state of repair (ACS2017-CSD-FIN-0023).	2,385	0	2,385	0.00
Total Maintain Services	6,780	0	6,780	0.00
User Fees & Revenues				
See following user fee schedule for details on the specific rates.	0	-6,780	-6,780	0.00
Total User Fees & Revenues	0	-6,780	-6,780	0.00
Total Budget Changes	6,780	-6,780	0	0.00

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

	2018 Baseline			2019 Adjustments			2019	\$ Change over 2018 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	User Fees & Revenues	Estimate	
Expenditures by Program								
Stormwater Operations	10,748	11,320	0	100	0	0	11,420	100
Technical Innovation & Engineering Support	792	409	0	0	0	0	409	0
Business & Technical Support Services	359	354	0	0	0	0	354	0
Non Departmental	36,414	36,414	0	5,924	0	0	42,338	5,924
Gross Expenditure	48,313	48,497	0	6,024	0	0	54,521	6,024
Recoveries & Allocations	-1,542	-1,767	0	0	0	0	-1,767	0
Revenue	-46,393	-46,730	0	0	0	-6,024	-52,754	-6,024
Net Requirement	378	0	0	6,024	0	-6,024	0	0
Expenditures by Type								
Salaries, Wages & Benefits	4,392	4,576	0	99	0	0	4,675	99
Overtime	21	56	0	1	0	0	57	1
Material & Services	1,532	2,248	0	0	0	0	2,248	0
Transfers/Grants/Financial Charges	22,948	22,937	0	5,634	0	0	28,571	5,634
Fleet Costs	220	230	0	0	0	0	230	0
Program Facility Costs	0	0	0	0	0	0	0	0
Other Internal Costs	19,200	18,450	0	290	0	0	18,740	290
Gross Expenditures	48,313	48,497	0	6,024	0	0	54,521	6,024
Recoveries & Allocations	-1,542	-1,767	0	0	0	0	-1,767	0
Net Expenditure	46,771	46,730	0	6,024	0	0	52,754	6,024
Percent of 2018 Net Expenditure Budget			0.0%	12.9%	0.0%	0.0%	12.9%	

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

	2018 Baseline			2019 Adjustments			2019	\$ Change over 2018 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	-172	-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	-46,221	-46,585	0	0	0	-6,024	-52,609	-6,024
Fines	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0
Total Revenue	-46,393	-46,730	0	0	0	-6,024	-52,754	-6,024
Percent of 2018 Revenue Budget			0.0%	0.0%	0.0%	12.9%	12.9%	
Net Requirement	378	0	0	6,024	0	-6,024	0	0
Percent of 2018 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		47.02	0.00	0.00	0.00	0.00	47.02	0.00
Percent of 2018 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)

2018 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Deficit mainly due to less stormwater revenues as a result of delay in implementing the new water, sewer and storm rate structure.	-41	-337	-378
Total Surplus / (Deficit)	-41	-337	-378

2019 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2019 Changes	FTE Impact
Maintain Services All programs include an adjustment for potential 2019 cost of living, increments and benefit adjustments.	100	0	100	0.00
Non Departmental Increase to the interdepartmental charges from PIED due to COLA increases and new FTE's.	290	0	290	0.00
Contribution to Capital - inflationary adjustment.	1,105	0	1,105	0.00
Contribution to Capital - based on Long Range Financial Plan to maintain assets in a good state of repair (ACS2017-CSD-FIN-0023).	4,529	0	4,529	0.00
Total Maintain Services	6,024	0	6,024	0.00
User Fees & Revenues See following user fee schedule for details on the specific rates.	0	-6,024	-6,024	0.00
Total User Fees & Revenues	0	-6,024	-6,024	0.00
Total Budget Changes	6,024	-6,024	0	0.00

Capital Budget

City of Ottawa
 2019 Draft Capital Budget
 Standing Committee on Environmental Protection, Water and Waste Management - Rate
 In Thousands (\$000)

Service Area: Drinking Water Services											
Category	2019 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	33,367	0	0	26,677	0	0	0	6,690	0	0	6,690
Growth	8,963	0	0	1,610	7,353	0	0	0	0	0	0
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancement	0	0	0	0	0	0	0	0	0	0	0
Total	42,330	0	0	28,287	7,353	0	0	6,690	0	0	6,690

City of Ottawa
2019 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>		2019 Request	5,325	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	5,325	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	5,325	3,325	3,375	3,375	
		Spending Plan	5,325	3,325	3,375	3,375	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 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	1,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>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</p> <p>New completion date 2022.</p>			
908908	Small Water Meters Changeout Program	Class of Estimate: Not Applicable	4,325
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>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.</p> <p>New completion date 2024.</p>			

City of Ottawa
2019 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: roof replacement, building preservation, building mechanical and electrical systems, parks playgrounds and property elements, hard landscaping, arena and pool equipment and unplanned emergency work.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions. Project cost group summaries are provided following this program summary.</p> <p>Annual programming provides allocations as required for each of the service areas as follows:</p>			2019 Request		575		Projected Yearend Unspent Bal.	0	
			Revenues		0		Debt		
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0
			Rate Supported		575		Rate Supported Debt		0
			Develop. Charges		0		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			Forecast		2019	2020	2021	2022	
			Authority		575	50	50	50	
			Spending Plan		575	50	50	50	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				
Service Area	Buildings	Parks							
By-Law Services	155								
Child Care Services	370								
Cultural Services	905								
Fire Services	2,000								
General Government	6,125								
Public Library	810								
Long Term Care	645								
Parks & Recreation Facilities	14,659	5,000							
Roads Services	3,645								
Social Services	1,230								
Water Services	575								
Transit Services	3,600								
TOTAL Authority Request	34,719	5,000							

City of Ottawa
2019 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. 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. Detailed information and costs associated with specific stand alone (non-integrated) components and projects directly follow this program summary page.</p>		2019 Request	7,640	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	4,810	Rate Supported Debt			2,830
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	7,640	20,422	14,210	26,050	
		Spending Plan	3,910	12,912	14,580	26,450	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 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	351
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2021	
<p>This project relates to the watermain crossing of Highway 174 at Shefford Rd, part of which will be built in conjunction with LRT2 works.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information		Location/Description	\$000's
908615 Leitrim Rd (Bank-550m East)		Class of Estimate: C) Planning	700
Category: Renewal of City Assets	Ward: 10, 22	Year of Completion: 2019	
<p>This project will provide funding for the rehabilitation of the watermain and associated services in Leitrim Rd from Bank St to 550m east. The existing watermain is in poor condition and must be replaced to improve reliability of the water distribution system. Trench reinstatement with resurfacing will be included in the scope of work. The work will be done in conjunction with the developer driven intersection modifications proposed at Leitrim and Bank.</p> <p>The funding is for all watermain project related costs including design, construction and property (if required).</p> <p>New year of completion 2021.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
908980	2019 Watermain Improvements	Class of Estimate: C) Planning	4,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<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. Candidate projects have not been fully identified however funding will include all project related costs associated with the renewal of the watermain in Springfield Rd from Beechwood Ave to Maple Lane. As well as the renewal of the watermain in Richmond Rd from Cleary Ave to Fraser Ave.</p>			

City of Ottawa
2019 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	500
Category: Renewal of City Assets	Ward: 15	Year of Completion: 2024	
<p>Funding is required for the project costs related to the rehabilitation of the sub-structure in line with the recommendations obtained from the 2010 Risk Assessment Study and 2013 Seismic Retrofit Feasibility Study.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

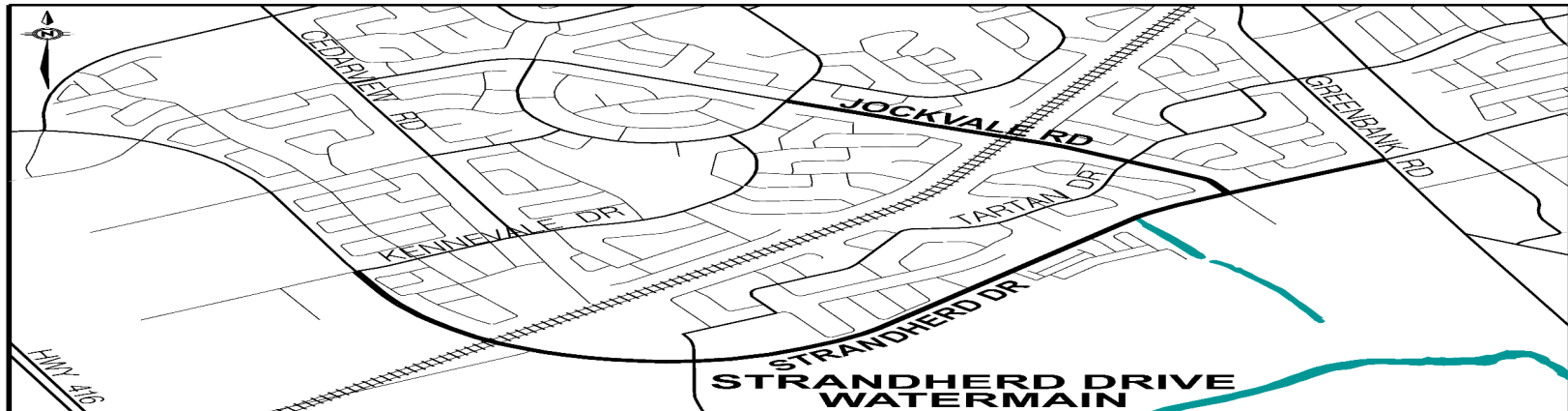
Project(s) within a Program Information			\$000's
909392	2019 WM Transmission/Distribution Rehab	Class of Estimate: C) Planning	2,089
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>The City of Ottawa's water distribution system consists of over 3,000 km of watermains, of which 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
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project Information			Financial Details		
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900632 Strandherd Road Watermain			Class of Estimate: B) Design		
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>	2019 Request		3,800		Projected Yearend Unspent Bal.	1,845
	Revenues	0		Debt		
	Tax Supported/Dedicated	0		Tax Supported/Dedicated Debt	0	
	Rate Supported	380		Rate Supported Debt	0	
	Develop. Charges	3,420		Develop. Charges Debt	0	
	Gas Tax	0		Gas Tax Debt	0	
	Forecast	2019	2020	2021	2022	
	Authority	3,800	0	0	0	
	Spending Plan	2,845	2,040	380	380	
	FTE's	0	0	0	0	
Operating Impact	0	0	0	0		



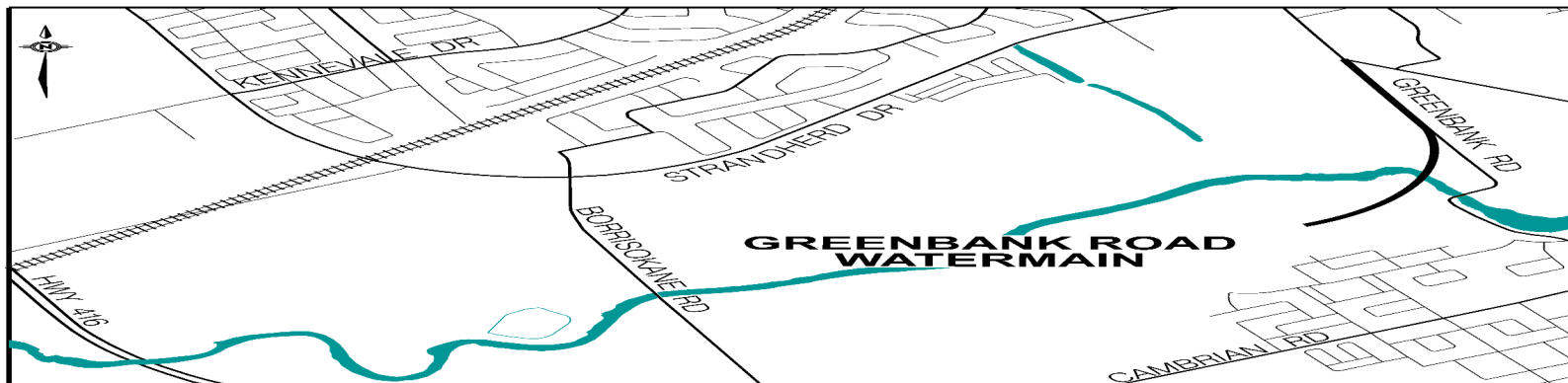
City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details		
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907467	SUC Greenbank		Class of Estimate:	C) Planning	
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Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 3	Year of Completion: 2022	
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<p>Construction of a new watermain on Greenbank Road from Market Place to the south side of the Jock River will improve water supply capacity and reliability needs in the Nepean Town Centre and Barrhaven South areas under future development conditions. Construction is expected to proceed in two or more phases. The initial phases north of the Jock River would be coordinated with development, and the last phase (including the river crossing) will be implemented in coordination with the future Greenbank Road realignment project. This budget request is for construction costs of the initial phase of the watermain north of the Jock River.</p>	2019 Request	3,800	Projected Yearend Unspent Bal.		1,130	
	Revenues	0	Debt			
	Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0		
	Rate Supported	380	Rate Supported Debt	0		
	Develop. Charges	3,420	Develop. Charges Debt	0		
	Gas Tax	0	Gas Tax Debt	0		
	Forecast	2019	2020	2021	2022	
	Authority	3,800	0	0	0	
	Spending Plan	2,530	1,640	380	380	
	FTE's	0	0	0	0	
Operating Impact	0	6	0	0		



City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information			Financial Details						
909071	2018 Off Site Reliability Links		Class of Estimate:		D) Conceptual				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW		Year of Completion: 2020				
<p>This budget request is to cover minor off-site watermain connections needed to improve the reliability of water supply to development areas.</p>			2019 Request		153		Projected Yearend Unspent Bal.	153	
			Revenues		0		Debt		
			Tax Supported/ Dedicated		0		Tax Supported/ Dedicated Debt		0
			Rate Supported		0		Rate Supported Debt		0
			Develop. Charges		153		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			Forecast		2019	2020	2021	2022	
			Authority		153	156	159	162	
			Spending Plan		306	156	159	162	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				
909352	2019 Groundwater Studies		Class of Estimate:		Not Applicable				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW		Year of Completion: 2021				
<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>			2019 Request		700		Projected Yearend Unspent Bal.	0	
			Revenues		0		Debt		
			Tax Supported/ Dedicated		0		Tax Supported/ Dedicated Debt		0
			Rate Supported		623		Rate Supported Debt		0
			Develop. Charges		77		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			Forecast		2019	2020	2021	2022	
			Authority		700	367	374	170	
			Spending Plan		700	367	374	170	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project Information			Financial Details							
909353 2019 Rural Servicing Strategy			Class of Estimate: Not Applicable							
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2021						
<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.</p>			2019 Request		250		Projected Yearend Unspent Bal.	0		
			Revenues		0		Debt			
			Tax Supported/ Dedicated		0		Tax Supported/ Dedicated Debt		0	
			Rate Supported		175		Rate Supported Debt		0	
			Develop. Charges		75		Develop. Charges Debt		0	
			Gas Tax		0		Gas Tax Debt		0	
			Forecast		2019	2020	2021	2022		
			Authority		250	255	218	223		
			Spending Plan		250	255	218	223		
			FTE's		0	0	0	0		
			Operating Impact		0	0	0	0		
			909354 2019 Water & Wastewater EA Studies			Class of Estimate: Not Applicable				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2021						
<p>Funds are required to support Class Environmental Assessments, functional designs, and other area-specific studies that support the planning of water, wastewater, and stormwater projects that are needed to support growth.</p>			2019 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		2019	2020	2021	2022		
			Authority		260	265	270	276		
			Spending Plan		260	265	270	276		
			FTE's		0	0	0	0		
			Operating Impact		0	0	0	0		

City of Ottawa
2019 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 3,090 km of piping, 20,563 fire hydrants, over 47,303 valves and 232,481 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 requirements 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 life cycle renewal and rehabilitation projects; - Level of service initiatives; - System improvements and optimization; - Asset life-cycle upgrades and rehabilitation to support growth demand. Some of the key infrastructure renewal projects for 2019 are as follows: - Large Transmission main condition assessment and risk reducing mitigation projects - Major preventative maintenance and water distribution system improvements - Lead Service Replacement program. 			2019 Request	1,000	Projected Yearend Unspent Bal.		0
			Revenues	0	Debt		
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt		0
			Rate Supported	200	Rate Supported Debt		800
			Develop. Charges	0	Develop. Charges Debt		0
			Gas Tax	0	Gas Tax Debt		0
			Forecast	2019	2020	2021	2022
			Authority	1,000	7,750	7,750	7,750
			Spending Plan	1,000	6,250	6,650	6,650
			FTE's	0	0	0	0
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
908080	Water Distribution Sys Improvements	Class of Estimate: C) Planning	1,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>The City of Ottawa's water distribution system consists of over 3,090 km of watermains, 47,303 valves and 20,563 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 swabbing program (to improve water quality) and system identification improvements for hydrants and valves. These continuing initiatives ensure that the watermain infrastructure (watermains and appurtenances) is added to, replaced and/or upgraded when normal life expectancy is surpassed and to ensure the system performs in accordance with operating strategies and practices, and licencing requirements as set out in the Drinking Water Quality Management Standard (DWQMS).</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Program Information		Financial Details		
Water Systems General		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> <p>The program is comprised of a number of key components which focus on operational issues, system planning and other projects including:</p> <ul style="list-style-type: none"> - Master Drawings Currency Update - Water System SCADA Upgrades - Water System Facility Upgrades - Water Facilities Roofing - TSSA Registration and Compliance Upgrades - Energy Efficiency Initiatives 		2019 Request	293	Projected Yearend Unspent Bal.
		Revenues	0	Debt
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt
		Rate Supported	293	Rate Supported Debt
		Develop. Charges	0	Develop. Charges Debt
		Gas Tax	0	Gas Tax Debt
		Forecast	2019	2020
		Authority	293	250
		Spending Plan	293	250
		FTE's	0	0
		Operating Impact	0	0
			2021	2022
			240	210
			240	210
			0	0
			0	0

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909415		Class of Estimate: C) Planning	293
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>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 eight 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.</p>			

City of Ottawa
2019 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>		2019 Request	1,728	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	728	Rate Supported Debt			1,000
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	1,728	1,350	1,350	1,350	
		Spending Plan	1,728	1,350	1,350	1,350	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909410		Class of Estimate: C) Planning	1,728
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
2019 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>		2019 Request	2,761	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0	
		Rate Supported	1,261	Rate Supported Debt	1,500	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		Forecast	2019	2020	2021	2022
		Authority	2,761	2,150	2,150	2,150
		Spending Plan	2,761	2,150	2,150	2,150
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909416		Class of Estimate: C) Planning	2,761
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<p>To establish a funding envelope for retrofit, rehabilitation or replacement of the infrastructure as it ages. Projects for 2019 include:</p> <ul style="list-style-type: none"> · condition assessments activities, Arc flash hazard review, alterations to diesel stacks and chemical system modifications. 			

City of Ottawa
2019 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 five (5) communal well based drinking water systems. These include systems serving:</p> <ul style="list-style-type: none"> · Munster Hamlet · Richmond – King’s Park 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>		2019 Request	2,000	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0	
		Rate Supported	2,000	Rate Supported Debt	0	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		Forecast	2019	2020	2021	2022
		Authority	2,000	2,500	2,500	2,590
		Spending Plan	2,000	2,500	2,500	2,590
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
908082	Communal Well System Rehab 2016	Class of Estimate: C) Planning	2,000
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 five (5) communal well based drinking water systems serving: Munster Hamlet; Richmond - King's Park 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. Typical projects include: condition assessment; control and instrumentation rehabilitations; water treatment and process upgrades; well condition and capacity testing.</p>			

City of Ottawa
2019 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. The program is comprised of a number of key components that include:</p> <ul style="list-style-type: none"> - Facilities Projects - Process Modifications - Water Quality Improvement Initiatives - Rehabilitation - Electrical infrastructure rehabilitation 			2019 Request	12,045	Projected Yearend Unspent Bal.		0
			Revenues	0	Debt		
			Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
			Rate Supported	11,485	Rate Supported Debt	560	
			Develop. Charges	0	Develop. Charges Debt	0	
			Gas Tax	0	Gas Tax Debt	0	
			Forecast	2019	2020	2021	2022
			Authority	12,045	13,348	14,830	14,580
			Spending Plan	4,592	11,766	13,847	14,484
			FTE's	0	0	0	0
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
908633 Enhanced Corrosion Control			Class of Estimate: C) Planning
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	1,000
<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 anticipation of future Health Canada regulations related to lead levels in drinking water which will require this enhancement.</p>			
909411			Class of Estimate: C) Planning
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	1,200
<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. The existing SCADA system is nearing the end of its lifecycle. Various components of the system either require to be upgraded or replaced to maintain reliability.</p>			
909412			Class of Estimate: C) Planning
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	11,960
<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, pilot plant work, chemical tank replacement/rehab, chemical system control/operational improvements. It also covers the costs related to condition assessment within the water purification plants.</p>			

City of Ottawa
 2019 Draft Capital Budget
 Standing Committee on Environmental Protection, Water and Waste Management - Rate
 In Thousands (\$000)

Service Area: Integrated Water & Wastewater											
Category	2019 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	21,161	0	0	16,510	0	0	0	4,651	0	0	4,651
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 Enhancement	0	0	0	0	0	0	0	0	0	0	0
Total	21,161	0	0	16,510	0	0	0	4,651	0	0	4,651

City of Ottawa
2019 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. Detailed information and costs associated with specific components and projects are provided following this program summary.</p>		2019 Request	21,161	Projected Yearend Unspent Bal.		0
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	16,510	Rate Supported Debt	4,651	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		Forecast	2019	2020	2021	2022
		Authority	21,161	20,285	19,940	16,600
		Spending Plan	12,180	17,140	20,331	20,155
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

City of Ottawa
2019 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	340
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This project provides for sanitary sewer upgrades on Byron Ave and outfall replacement OUT04296, as part of LRT2 work.</p>			
909375	2019 Sewer Access & Outfalls	Class of Estimate: C) Planning	2,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>The authority will provide for the rehabilitation of the City's sewer outfalls and access structures. The funding is for all project related costs which may include design, construction and property acquisition.</p>			
909376	2019 Sewer Repairs / Improvements	Class of Estimate: C) Planning	9,821
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>A number of locations have been identified to resolve surface flooding problems. Work could entail both trenchless and conventional spot 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.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Integrated Water & Wastewater
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909377 2019 Sewer Trenchless Rehab		Class of Estimate: C) Planning	4,400
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>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.</p>			
909403 Chapman Blvd (Dorval-Othello)		Class of Estimate: C) Planning	600
Category: Renewal of City Assets	Ward: 18	Year of Completion: 2021	
<p>This request provides funding for investigation of the sewer infrastructure on Chapman Blvd from Dorval Ave to Othello Ave. The investigation will identify any remedial action required to maintain the level of service and mitigate basement flooding. The funding will also provide for implementation of remedial works including design, construction and all associated costs. Possible recommendations could include sewer lateral lining/repair or sewer mainline repair.</p>			
909481 2019 Sewer CCTV Engineering		Class of Estimate: C) Planning	1,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This project provides funding to ensure the sustained performance of the City's wastewater and stormwater system in support of the capital renewal program. The funding is primarily focused on the Closed Circuit Television (CCTV) inspection of the City's wastewater and stormwater network. The CCTV program is an important tool that inspects the internal conditions of sewers, monitors the performance of pipes, confirms flow conditions and can identify sewer defects.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Integrated Water & Wastewater
 In Thousands (\$000)

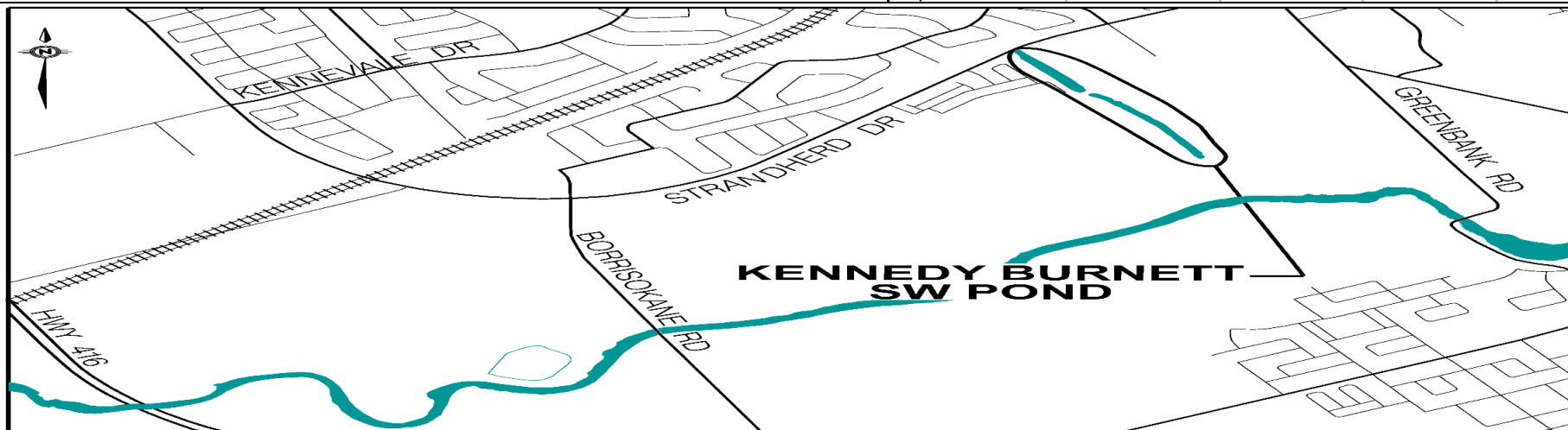
Project(s) within a Program Information			\$000's
909492	LRT2 SS2 Richmond Compl Streets	Class of Estimate: C) Planning	3,000
Category: Renewal of City Assets	Ward: 7	Year of Completion: 2023	
<p>This project will coordinate the rehabilitation of existing infrastructure within the LRT stage-2 limits. 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 watermains 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 rehabilitation is required along the southwest transitway between Baseline Rd and Iris St.</p>			

City of Ottawa
 2019 Draft Capital Budget
 Standing Committee on Environmental Protection, Water and Waste Management - Rate
 In Thousands (\$000)

Service Area: Stormwater Services											
Category	2019 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	31,515	0	0	12,690	4,625	0	0	14,200	0	0	14,200
Growth	6,751	0	0	198	6,553	0	0	0	0	0	0
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancement	480	432	0	48	0	0	0	0	0	0	0
Total	38,746	432	0	12,936	11,178	0	0	14,200	0	0	14,200

City of Ottawa
2019 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: 2019				
<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 is 2021.</p>			2019 Request	12,500	Projected Yearend Unspent Bal.		955	
			Revenues	0	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0		
			Rate Supported	7,875	Rate Supported Debt	0		
			Develop. Charges	4,625	Develop. Charges Debt	0		
			Gas Tax	0	Gas Tax Debt	0		
			Forecast	2019	2020	2021	2022	
			Authority	12,500	0	0	0	
			Spending Plan	6,250	4,705	1,250	1,250	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				



City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Financial Details					
908252 Stormwater Mgmt Retrofit Master Plan			Class of Estimate: Not Applicable					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020				
<p>These funds will support the completion of a City-wide stormwater management (SWM) retrofit master plan to improve water quality, reduce runoff and improve stream health in older urban areas that developed before current SWM requirements were in place. This study will focus on the remaining central area located between two previous SWM retrofit study areas: i) Pinecrest/Westboro and ii) Eastern Subwatersheds.</p> <p>New year of completion is 2022.</p>			2019 Request		100	Projected Yearend Unspent Bal.	1,350	
			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		2019	2020	2021	2022
			Authority		100	510	0	0
			Spending Plan		1,450	510	0	0
			FTE's		0	0	0	0
Operating Impact		0	0	0	0			
909355 2019 Flood Plain Mapping			Class of Estimate: Not Applicable					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021				
<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> <p>New year of completion is 2022.</p>			2019 Request		175	Projected Yearend Unspent Bal.	0	
			Revenues		0	Debt		
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0
			Rate Supported		175	Rate Supported Debt		0
			Develop. Charges		0	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2019	2020	2021	2022
			Authority		175	255	208	133
			Spending Plan		175	255	208	133
			FTE's		0	0	0	0
Operating Impact		0	0	0	0			

City of Ottawa
2019 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>		2019 Request	16,620	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	2,420	Rate Supported Debt			14,200
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	16,620	19,919	16,410	14,950	
		Spending Plan	10,110	16,289	16,480	18,720	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
909383	2019 Culverts Scoping Pre/Post Eng.	Class of Estimate: C) Planning	510
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>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.</p>			
909384	2019 Drainage Culverts - Site-Specific	Class of Estimate: C) Planning	700
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>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.</p>			

City of Ottawa
2019 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	12,775
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 work to be delivered by IS Design & Construction.</p>			
Ward #	Location	Culvert #	
19	Emmett Rd Culvert	L897350	
19	Piperville Rd Culvert	L222810	
19	Cameron St Culvert	A891750	
19	Old Montreal Rd Culvert	A894820	
1	Jeanne D'Arc Blvd N Culvert	L898570	
19	O'Toole Rd Culvert on Arnold Scharfe MD	L893810	
19	Regimbald Rd Culvert on John Smits MD	L896210	
19	O'Toole Rd Culverton Scharfe MD	L893830	
19	Farmers Way Culvert	L223420	
20	Acres Rd Culvert	L885250	
20	Hawthorne Rd Culvert	L221994	
20	Downey Rd Culvert	L221650	
22	Fenton Rd Culvert	L222890	
20	Grey's Creek Rd Culvert	L885470	
20	Parkway Rd Culvert	L888303	
20	Parkway Rd Culvert	L888340	
21	Old Richmond Rd Culvert	A111430	
5	Carp Rd Culvert	A541750	
5	Thomas A.Dolan Pkwy Culvert	A434020	
21	Steeple Hill Cres Culvert	L111730	
5	Panmure Rd Culvert	A432160	
7	Corkstown Rd Culvert	L114105	
5	Kinburn Side Rd Culvert	A434480	
5	Kinburn Side Rd Culvert	A434460	
			0

City of Ottawa
2019 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:		
Drainage Culverts - CW - Continued				
Ward #	Location	Culvert #		
5	Panmure Rd Culvert	A432170		
5	Carp Rd Culvert	A431170		
5	Vance's Side Rd Culvert	L332910		
5	Kinburn Side Rd Culvert	A434300		
5	Upper Dwyer Hill Rd Culvert	A541390		
21	Roger Stevens Dr Culvert	A864080		
21	Century Rd E Culvert	L876710		
21	Malakoff Rd Culvert	L865090		
5	Ferry Rd Culvert	A431550		
5	Thomas A. Dolan Pky Culvert	A332200		
8	Moodie Dr Culvert	A111830		
21	Barnsdale Rd Culvert	L112010		
21	Huntley Rd Culvert	A751830		
21	Mansfield Rd Culvert	L756590		
21	Mansfield Rd Culvert	L756510		
21	Huntley Rd Culvert	A751790		
6	Shea Rd Culvert	L757070		
21	Mansfield Rd Culvert	L756540		
21	Malakoff Rd Culvert	L865230		
5	Constance Creek Dr Culvert	L331040		
21	Malakoff Rd Culvert	L865330		
21	Kelly Marie Dr Culvert	L876360		
21	Southwick Dr Culvert	L876315		
5	Rochon Way Culvert	L646292		
5	Thomas A. Dolan Pky Culvert	A332220		0

City of Ottawa
2019 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:		
Drainage Culverts - CW - Continued				
Ward #	Location	Culvert #		
5	John Shaw Rd Culvert	L433240		
5	John Shaw Rd Culvert	L433260		
21	Roger Stevens Dr Culvert	A872220		
5	Ferry Rd Culvert	A431430		
5	Ferry Rd Culvert	A431450		
5	Ferry Rd Culvert	A431530		
21	Mansfield Rd Culvert on Mansfield MD	L756550		
21	Pollock Rd Culvert on Shouldice MD	L874830		
21	Third Line Rd S Culvert	L871715		
5	Howie Rd Culvert	L543010		
23	Marcasite Rd Culvert	L758920		
9	Merivale Rd Culvert	A113410		
9	Merivale Rd Culvert	A113430		
20	River Rd Culvert	888050		
21	Purdy Rd Twin Culvert	758230-1/2		
9	Cedarview Rd Culvert	118570		
20	Mitch Owens Rd Culvert	228740		
5	Diamondview Rd Culvert	430230		
5	March Rd Culvert	548980		
21	Proven Line Rd Culvert	868380		
21	Malakoff Rd Culvert	868400		
20	Blanchfield Rd Culvert	880550		
20	Blanchfield Rd Culvert	880560		
21	Walgreen Rd West Culvert	540350-1/2		
				0

City of Ottawa
2019 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:		
Drainage Culverts - CW - Continued				
Ward #	Location	Culvert #		
20	River Rd Culvert	888090		
19	Birchgrove Rd Culvert	890870		
21	South Island Park Dr Culvert	228294-1/2		
21	Donnelly Dr Culvert	868170		
19	Watson Rd Culvert	890680		
21	Purdy Rd Twin Culvert	758880-1/2		
19	Ninth Line Rd Culvert	228810		
21	Eagleson Rd Twin Culvert	110380-1/2		
21	Roger Stevens Dr Culvert	868090		
5	Thomas Dolan Pkwy Culvert	438460		
8	Timm Dr Stillwater Creek Culvert	110160		
5	Craig's Side Rd Culvert	540160		
19	Garlandside Rd on Emmet Garland MD	890850		
5	Creek Dr [N] Culvert	438390		
5	Ivy Acres Rd Culvert	438730		
5	Pinhey Rd Culvert	648030		
21	Fallowfield Rd Culvert	758420		
21	Phelan Rd West Culvert	878480		
19	Dunning Rd Culvert	898760		
20	Marionville Rd Culvert	L882095		
19	Devine Rd Culvert	A892000		
19	Kinsella Dr Culvert	L895940		
19	Beckett's Creek Rd Culvert	L897490		
20	Roy Wilson Rd Culvert	L884130		
20	Springhill Rd Culvert	L882670		0

City of Ottawa
2019 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:		
Drainage Culverts - CW - Continued				
	Below the Line			
Ward #	Location	Culvert #		
19	Frank Kenny Rd Culvert	A891370		
19	Frank Kenny Rd Culvert	A891310		
19	Beckett's Creek Rd Culvert	L897450		
20	Albion Rd Culvert	A221533		
21	Roger Stevens Dr Culvert	A862840		
7	Moodie Dr Culvert	A112430		
5	Spruce Ridge Rd Culvert	L543630		
21	Second Line Rd S Culvert	L873170		
5	Old Carp Rd Culvert	L547060		
5	Marchurst Rd Culvert	L647820		
5	Marchurst Rd Culvert	L647840		
5	Marchurst Rd Culvert	L647845		
5	Marchurst Rd Culvert	L647850		
5	Marchurst Rd Culvert	L647930		
5	Marchurst Rd Culvert	L647870		
21	McCaffrey Trl Culvert	L756320		
20	Louiseize Rd Culvert	L222610		
20	8th Line Rd Culvert	L887180		
20	Victoria St Culvert	A882940		
10	Mary Dr Culvert	L224070		
19	Thunder Rd Culvert	L222330		
19	Rockdale Rd Culvert	L893690		
20	Gregoire Rd Culvert	A883150		
19	Russell Rd Culvert	A224100		0

City of Ottawa
2019 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:	
Drainage Culverts - CW - Continued			
	Below the Line		
Ward #	Location	Culvert #	
19	Russell Rd Culvert	A224070	
19	Russell Rd Culvert	A224080	
20	Owen St Culvert on Ferguson Br (line C) MD	L882525	
20	Manotick Station Rd Culvert on Gough Road	L883508	
19	French Hill Rd Culvert	L896575	
5	Bearhill Rd Culvert	L543250	
5	Burnt Lands Rd Culvert	L541340	
5	Fitzroy St Culvert	A436140	
5	Thomas A.Dolan Pkwy Culvert	A434140	
5	Thomas Dolan Pkwy Culvert	A434060	
5	Thomas A.Dolan Pkwy Culvert	A434120	
5	Thomas A.Dolan Pkwy Culvert	A434080	
5	Thomas A. Dolan Pky Culvert	A332060	
4	Schneider Rd Culvert	L649390	
5	Thomas A.Dolan Pkwy Culvert	A434100	
5	Richardson Side Rd Culvert	L542475	
			0

City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Project Information		Location/Description	\$000's
909386 2019 Drainage Culverts - Other		Class of Estimate: C) Planning	625
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>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.</p>			
Ward #	Location	Culvert #	
19	Magladry Rd Culvert	L894410	
19	Birchtree Cres Culvert	L894925	
19	Kevin Cres Culvert	L895164	
2	Hart Rd Culvert	L223260	
19	Meadow Lane Rd Culvert	L893429	
19	Division St Culvert	L892315	
19	Perrault Rd Culvert	L894305	
19	Emmett Rd Culvert	L897330	
19	Sarsfield Rd Culvert	L895610	
19	Indcum Rd Culvert	L892290	
19	Meadow Lane Rd Culvert	L893427	
19	Forest Lea Dr Culvert	L894945	
19	Forced Rd Culvert	L892310	
3	Cedarhill Rd Culvert	L112850	
20	Greely Lane Culvert	L883680	
8	Harris PL Culvert	L116060	
20	Queenscourt Cres Culvert	L888037	
20	Aldergrove Way Culvert	L888545	
20	Brentwood Ave Culvert	L887365	
20	Sunset Blvd Culvert	L888890	
20	Nashdale Dr Culvert	L887490	
20	Cedar Dr Culvert	L884805	
20	Wood Duck Dr Culvert	L884330	
			0

City of Ottawa
2019 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:		
Drainage Culverts - Other - Continued				
Ward #	Location	Culvert #		
20	Pana Rd Culvert	L886305		
20	Donwel Dr Culvert	L883780		
20	Talbot St Culvert	L885710		
21	Malakoff Rd Culvert	L865270		
21	Malakoff Rd Culvert	L865290		
20	Broadway St Culvert	L885730		
20	Broadway St Culvert	L885750		
20	Alfalfa St Culvert	L882390		
20	Alfalfa St Culvert	L882380		
20	Popham St Culvert	L882405		
20	Alfalfa St Culvert	L882370		
21	Pollock Rd Culvert	L864850		
21	Pollock Rd Culvert	L864870		
21	Second Line Rd S Culvert	L873090		
21	Second Line Rd S Culvert	L873190		
20	Ferdinand St Culvert	L882490		
20	Cornfield Cres Culvert	L883650		
20	Heaterlyn Cres Culvert	L887220		
5	John Aselford Drwy Culvert	L646850		
5	Spruce Ridge Rd Culvert	L543590		
21	Bowrin Rd Culvert	L752190		
5	Mantil Side Rd Culvert	L541414		
6	Ralphpark St Culvert	L755642		
6	Bradley St Culvert	L755648		
				0

City of Ottawa
2019 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:		
Drainage Culverts - Other - Continued				
Ward #	Location	Culvert #		
6	Neil Ave Culvert	L758630		
5	Kilkenny Rd Culvert	L332670		
5	Larne Lane Culvert	L335900		
5	Murphy Crt Culvert	L646240		
5	Rochon Way Culvert	L646295		
5	Constance Lake Rd Culvert	L646610		
5	Sherruby Way Culvert	L646241		
5	Early Ave Culvert	L432950		
21	Purdy Rd Culvert	L752030		
21	Purdy Rd Culvert	L752050		
5	Oak Creek Rd Culvert	L547230		
5	Old Carp Rd Culvert	L646140		
21	McCordick Rd Culvert	L867350		
5	William Mooney Dr Culvert	L545890		
5	Sentinel Pine Way Culvert	L542443		
21	Montague Boundary Rd Culvert	L861590		
21	Montague Boundary Rd Culvert	L861525		
5	Connifer Lane Culvert	L438810		
5	Vance's Side Rd Culvert	L333010		
5	Vance's Side Rd Culvert	L333020		
5	Forest Edge Rd Culvert	L543012		
5	Nellie St Culvert	L433870		
				0

City of Ottawa
2019 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; • Proactive life cycle renewal and rehabilitation projects; • Level of service initiatives; • System improvements and optimization; and • 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>		2019 Request	500	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	500	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	500	1,000	1,000	1,140	
		Spending Plan	250	650	900	1,640	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909150	2019 Stormwater Improvements	Class of Estimate: C) Planning	500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This program provides for the rehabilitation of deficient storm sewers at various locations. The funding is for all project related costs which may include design, construction and property acquisition.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Project Information			Financial Details						
907485	2019 Stormwater Master Planning		Class of Estimate:		Not Applicable				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW		Year of Completion: 2025				
The requested funds are to support stormwater master planning work needed to support the upcoming infrastructure master plan update.			2019 Request		250		Projected Yearend Unspent Bal.	0	
			Revenues		0		Debt		
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0
			Rate Supported		198		Rate Supported Debt		0
			Develop. Charges		53		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			Forecast		2019	2020	2021	2022	
			Authority		250	255	0	0	
			Spending Plan		250	255	0	0	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				

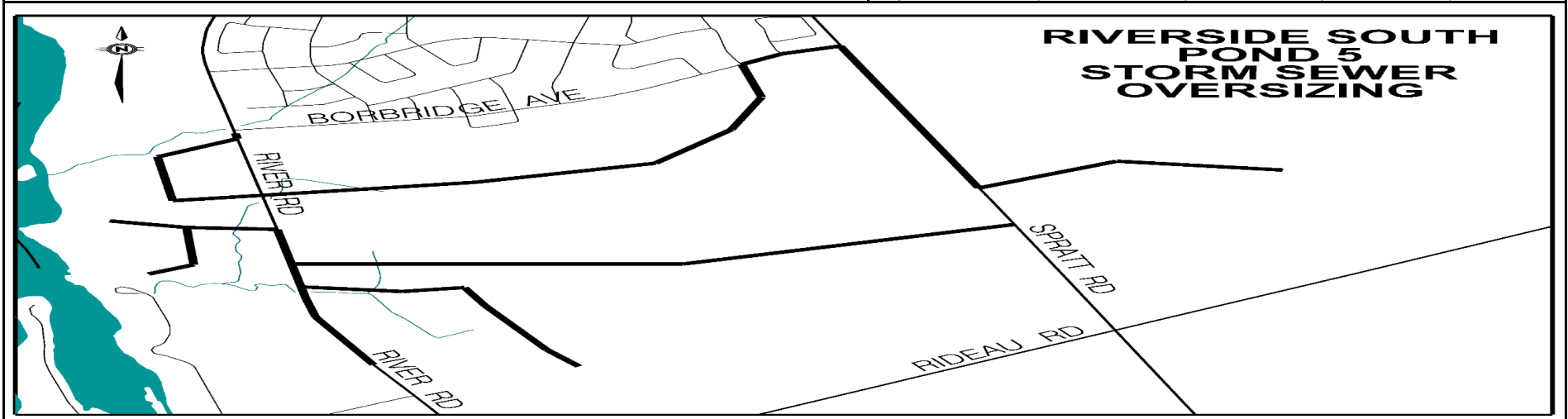
City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
In Thousands (\$000)

Project Information			Financial Details		
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909540 DCA-Riverside South Pond 5 Storm Sewers			Class of Estimate:		
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Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 22	Year of Completion: 2022		
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<p>The Riverside South Community Infrastructure Servicing Study Update - Rideau River Area identified the need to provide trunk storm sewers within the Riverside South Community. These funds are required to reimburse developers for the construction of oversized storm sewers within this system at locations identified on an as needed basis through the development review process.</p>	2019 Request		6,501		Projected Yearend Unspent Bal.	0
	Revenues	0		Debt		
	Tax Supported/Dedicated	0		Tax Supported/Dedicated Debt	0	
	Rate Supported	0		Rate Supported Debt	0	
	Develop. Charges	6,501		Develop. Charges Debt	0	
	Gas Tax	0		Gas Tax Debt	0	
	Forecast	2019	2020	2021	2022	
	Authority	6,501	0	0	0	
	Spending Plan	6,501	0	0	0	
	FTE's	0	0	0	0	
Operating Impact	0	0	0	0		



City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Program Information		Financial Details					
Stormwater Management Facilities		Class of Estimate: D) Conceptual					
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, 25 specialty treatment systems, 10 pumping stations and 25 underground flow diversion structures.</p> <p>In order to ensure these facilities provide flood protection and environmental impact mitigation, as required by the MOECP 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. Pincrest SW, Eastern SW) and the MOECP 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>		2019 Request		1,620	Projected Yearend Unspent Bal.		0
		Revenues		0	Debt		
		Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0
		Rate Supported		1,620	Rate Supported Debt		0
		Develop. Charges		0	Develop. Charges Debt		0
		Gas Tax		0	Gas Tax Debt		0
		Forecast		2019	2020	2021	2022
		Authority		1,620	1,450	706	712
		Spending Plan		1,620	1,450	706	712
		FTE's		0	0	0	0
Operating Impact		0	0	0	0		

City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
902137	Stormwater Mgmt: Rehab&Enviro Compliance 2019	Class of Estimate: D) Conceptual	1,620
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The City owns, operates and maintains over 200 stormwater facilities 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 MOECP 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>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Program Information			Financial Details						
Municipal Drains			Class of Estimate: B) Design						
Dept: Public Works & Environmental Services Department	Category: Service Enhancement	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>			2019 Request		480		Projected Yearend Unspent Bal.	0	
			Revenues		432		Debt		
			Tax Supported/ Dedicated		0		Tax Supported/ Dedicated Debt		0
			Rate Supported		48		Rate Supported Debt		0
			Develop. Charges		0		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			Forecast		2019	2020	2021	2022	
			Authority		480	500	500	500	
			Spending Plan		480	500	500	500	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				

City of Ottawa
2019 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909351 Municipal Drain Improvements - 2019		Class of Estimate: B) Design	
Category: Regulatory	Ward: 21	Year of Completion: 2021	
<p>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.</p>			

City of Ottawa
 2019 Draft Capital Budget
 Standing Committee on Environmental Protection, Water and Waste Management - Rate
 In Thousands (\$000)

Service Area: Wastewater Services											
Category	2019 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	39,404	0	0	26,217	225	0	0	12,962	0	0	12,962
Growth	35,404	0	0	6,186	12,351	0	0	8,024	8,843	0	16,867
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancement	0	0	0	0	0	0	0	0	0	0	0
Total	74,808	0	0	32,403	12,576	0	0	20,986	8,843	0	29,829

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project Information			Financial Details					
909516	LiDAR Topography Update - CW		Class of Estimate: Not Applicable					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021				
Update high-resolution topography information used in majority of infrastructure planning and design studies, drainage and flood plain mapping studies.			2019 Request	300	Projected Yearend Unspent Bal.		0	
			Revenues	0	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
			Rate Supported	300	Rate Supported Debt			0
			Develop. Charges	0	Develop. Charges Debt			0
			Gas Tax	0	Gas Tax Debt			0
			Forecast	2019	2020	2021	2022	
			Authority	300	0	0	0	
			Spending Plan	300	0	0	0	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Program Information		Financial Details					
Wet Weather Program		Class of Estimate: D) Conceptual					
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>		2019 Request	1,300	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	1,131	Rate Supported Debt			0
		Develop. Charges	169	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	1,300	2,000	2,000	2,000	
		Spending Plan	650	1,390	1,860	2,400	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909393	2019 ORAP Wet Weather IMP	Class of Estimate: D) Conceptual	1,300
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This project is required for the development of programs 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
2019 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. Detailed information and costs associated with specific stand-alone (nonintegrated) 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>		2019 Request	900	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	900	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	900	4,000	4,000	3,110	
		Spending Plan	450	2,270	3,380	4,180	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
908181	2019 Wastewater Improvements	Class of Estimate: C) Planning	900
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This program provides for the rehabilitation of deficient sanitary sewers at various locations. The funding is for all project related costs which may include design, construction and property acquisition.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

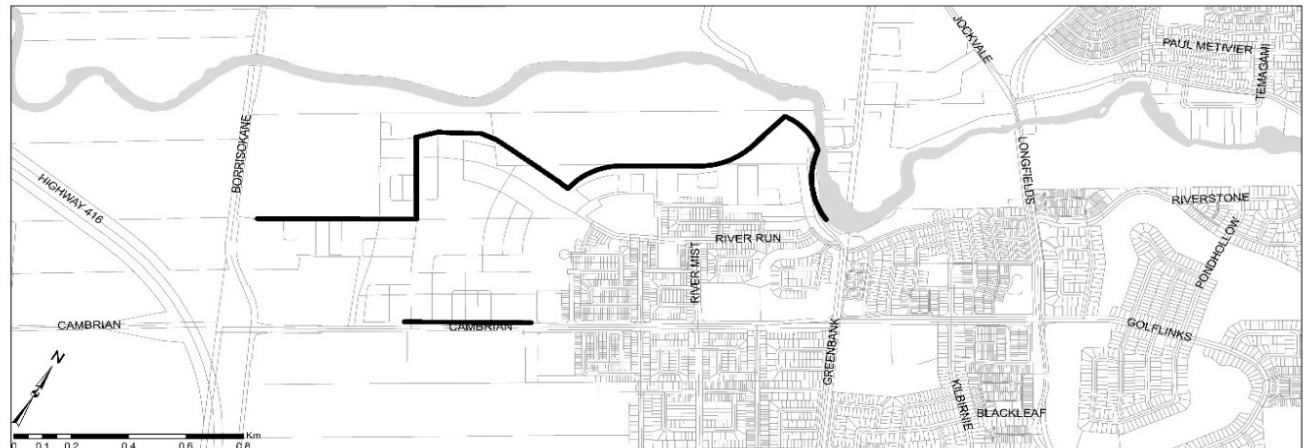
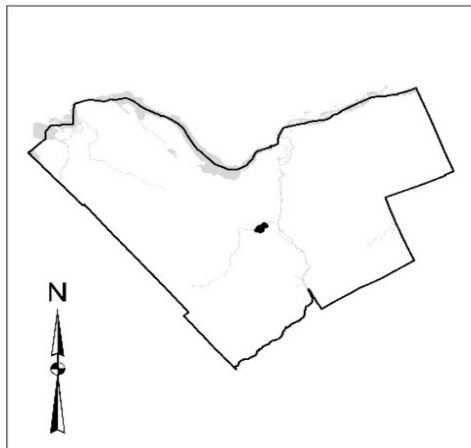
Project Information		Financial Details		
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909542	DCA - O/S Half Moon Bay N San Sewer	Class of Estimate:	C) Planning	
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Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 3	Year of Completion: 2022
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The Barrhaven South Master Servicing Study identified the need to provide trunk sanitary sewers within the Barrhaven South Community. These funds are required to reimburse developers for the construction of oversized sanitary sewers within this system at locations identified on an as needed basis through the development review process.

2019 Request	404	Projected Yearend Unspent Bal.			0
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt		0	
Rate Supported	0	Rate Supported Debt		0	
Develop. Charges	404	Develop. Charges Debt		0	
Gas Tax	0	Gas Tax Debt		0	
Forecast	2019	2020	2021	2022	
Authority	404	0	0	0	
Spending Plan	404	0	0	0	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	



City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details		
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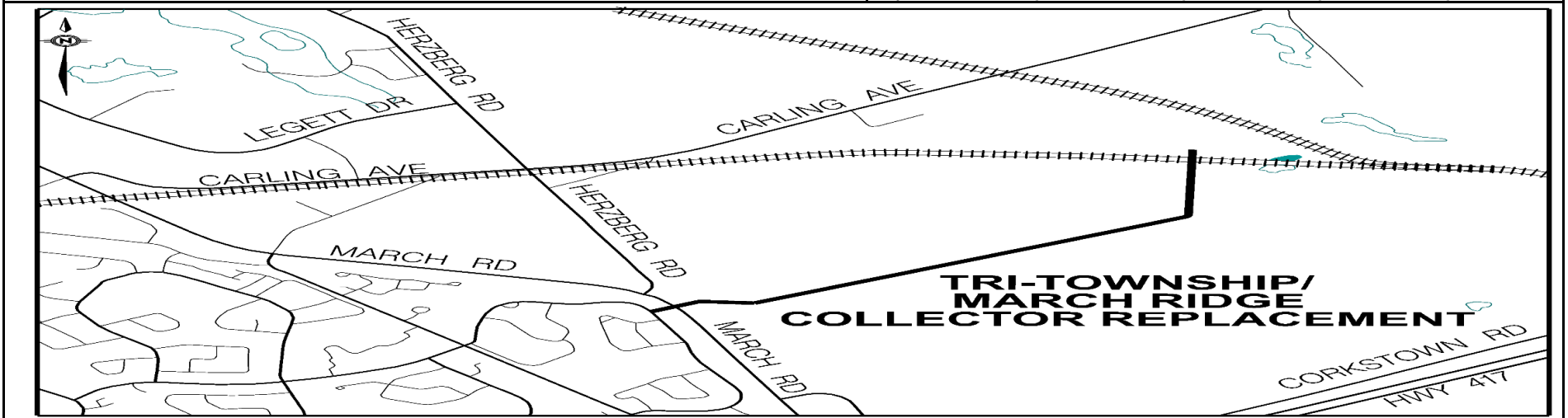
904986 Tri-Township/March Ridge Replacement **Class of Estimate: B) Design**

Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 7	Year of Completion: 2019		
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With the Kanata West and Fernbank Lands development there is a need to replace the March Ridge and Tri-Township collectors as the existing sewers cannot accommodate the future wastewater flows. In addition, these existing sewers are in poor structural condition and require rehabilitation. This budget request is for the construction stage of the project.

New year of completion is 2022.

2019 Request	13,600	Projected Yearend Unspent Bal.			5,615
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0		
Rate Supported	0	Rate Supported Debt	8,024		
Develop. Charges	1,303	Develop. Charges Debt	4,273		
Gas Tax	0	Gas Tax Debt	0		
Forecast	2019	2020	2021	2022	
Authority	13,600	0	0	0	
Spending Plan	9,415	7,080	1,360	1,360	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	



City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

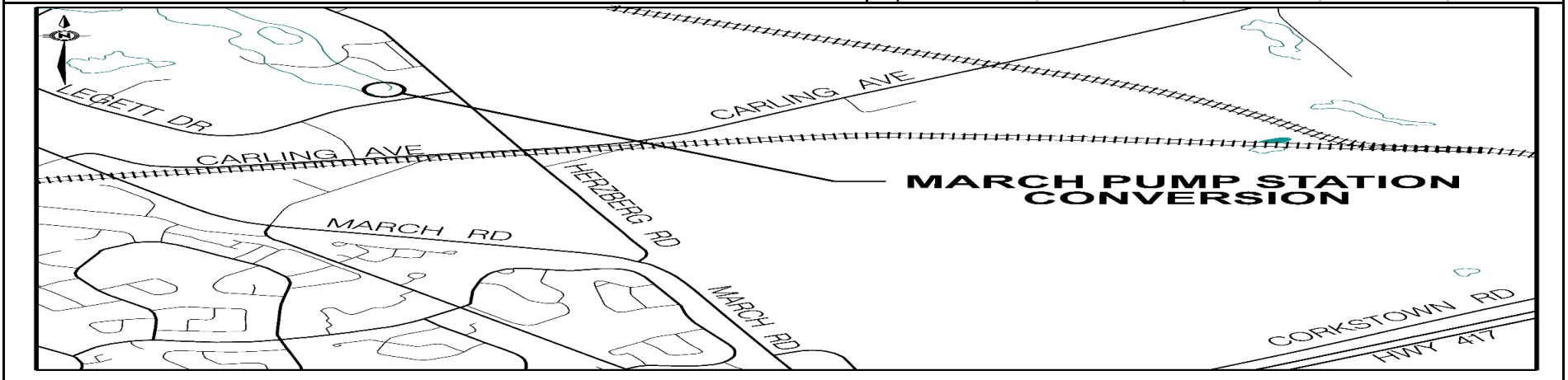
Project Information			Financial Details		
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904988 March PS Conversion			Class of Estimate: B) Design		
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Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 4	Year of Completion: 2021		
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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 operating 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). This budget request is for the construction stage of the project.

2019 Request	11,200	Projected Yearend Unspent Bal. 765		
Revenues	0	Debt		
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0	
Rate Supported	5,936	Rate Supported Debt	0	
Develop. Charges	1,392	Develop. Charges Debt	3,872	
Gas Tax	0	Gas Tax Debt	0	
Forecast	2019	2020	2021	2022
Authority	11,200	0	0	0
Spending Plan	9,830	1,564	572	0
FTE's	0	0	0	0
Operating Impact	0	0	0	0



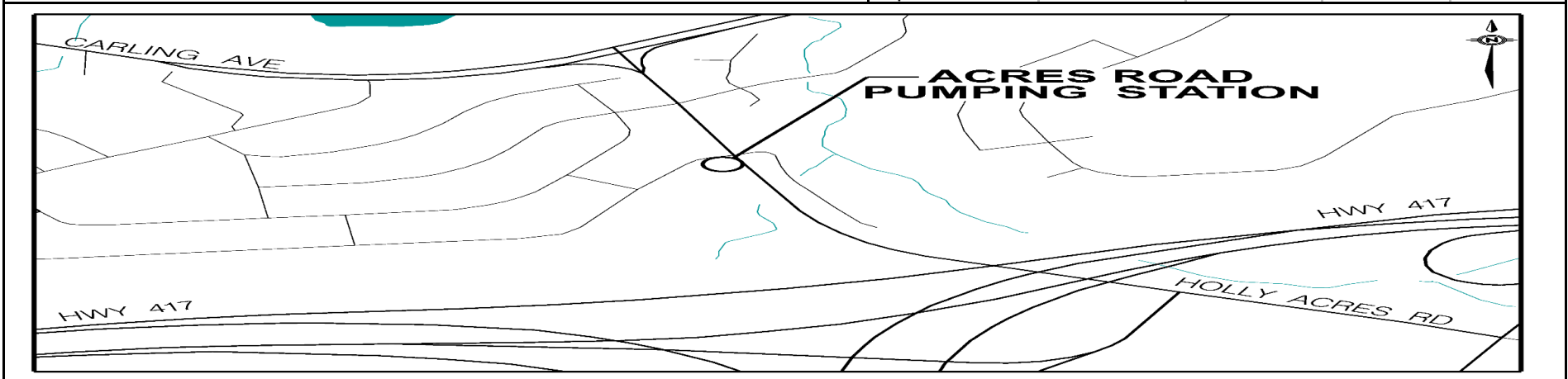
City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details		
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907107 Acres Road PS Upgrade			Class of Estimate: D) Conceptual		
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Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 7	Year of Completion: 2021		
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<p>The need to upgrade the existing capacity of the Acres Road Pump Station has been identified to accommodate flows from new development in the West Urban Community. The functional design study to upgrade the Acres Road PS to its rated capacity is currently under way. This budget request is related to the detailed design phase of the project.</p>	2019 Request		700		Projected Yearend Unspent Bal.	285
	Revenues	0		Debt		
	Tax Supported/ Dedicated	0		Tax Supported/ Dedicated Debt	0	
	Rate Supported	0		Rate Supported Debt	0	
	Develop. Charges	700		Develop. Charges Debt	0	
	Gas Tax	0		Gas Tax Debt	0	
	Forecast	2019	2020	2021	2022	
	Authority	700	3,570	0	0	
	Spending Plan	700	2,427	1,428	0	
	FTE's	0	0	0	0	
Operating Impact	0	0	0	0		



City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project Information			Financial Details					
907462	Pump Stations Capacity Increase		Class of Estimate:		D) Conceptual			
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 capacity to meet the needs of development. The project will increase the station capacities from the existing installed capacity to the full rated capacity in accordance with the original station designs.</p>			2019 Request	300	Projected Yearend Unspent Bal.		0	
			Revenues	0	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0		
			Rate Supported	0	Rate Supported Debt	0		
			Develop. Charges	300	Develop. Charges Debt	0		
			Gas Tax	0	Gas Tax Debt	0		
			Forecast	2019	2020	2021	2022	
			Authority	300	337	468	477	
			Spending Plan	300	337	468	477	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

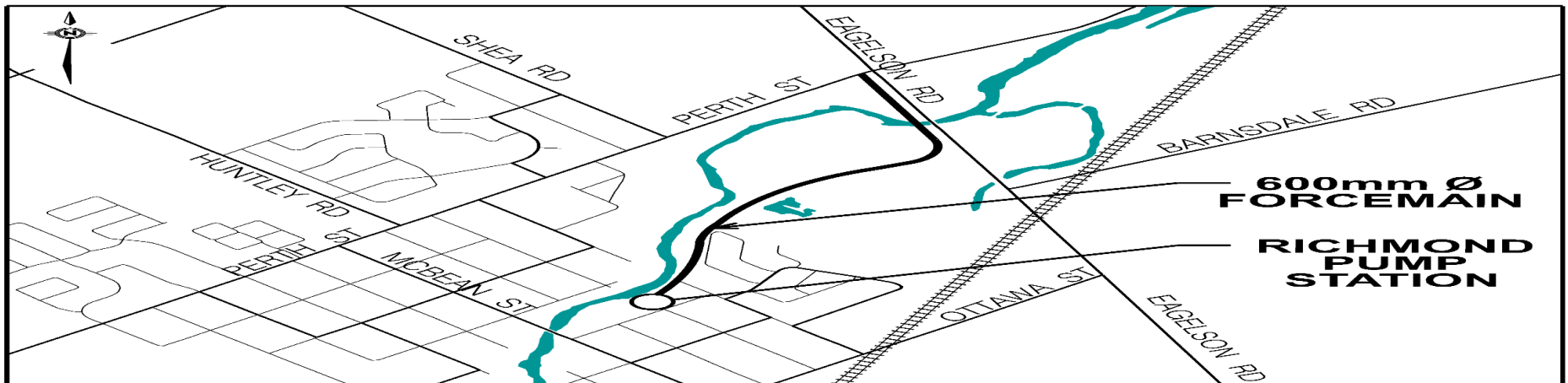
City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details		
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908247 Richmond PS & Forcemain Expans			Class of Estimate: D) Conceptual		
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Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 21	Year of Completion: 2023		
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<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 is currently under way to identify 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 the detailed design stage of the anticipated Phase 2 upgrade recommendations.</p>	2019 Request		1,000		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	750	Develop. Charges Debt	0		
	Gas Tax	0	Gas Tax Debt	0		
	Forecast	2019	2020	2021	2022	
	Authority	1,000	8,670	0	0	
	Spending Plan	1,000	4,335	2,601	867	
	FTE's	0	0	0	0	
Operating Impact	0	0	0	0		



City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

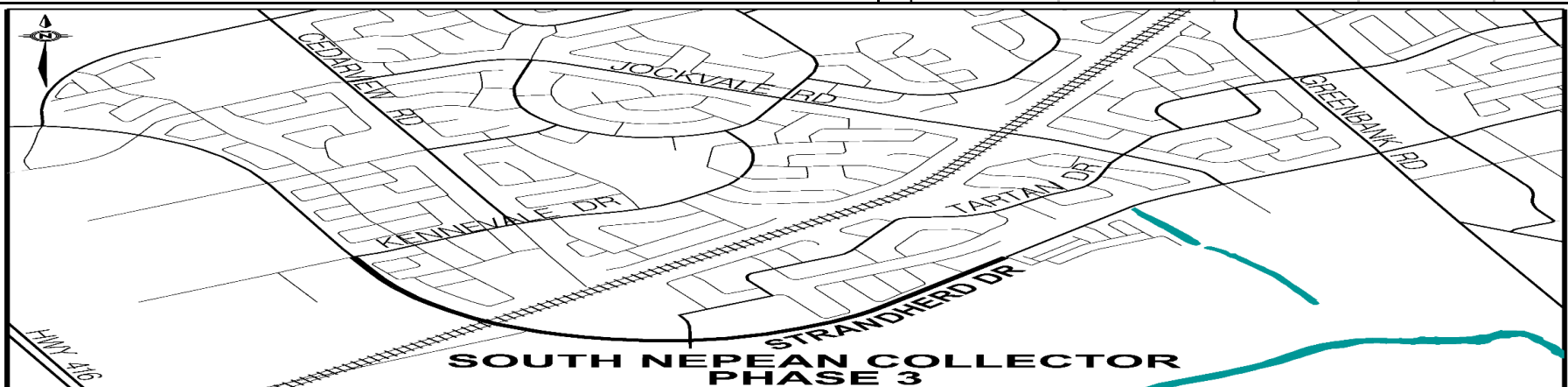
Project Information		Financial Details	
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909357	South Nepean Collector Ph3	Class of Estimate:	C) Planning
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Dept:	Planning, Infrastructure & Economic Development Department	Category:	Growth	Ward	3	Year of Completion:	2023
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The South Nepean Collector (SNC) is required to service growth in the South Nepean community and is being implemented in three major phases. Phases 1 and 2 of the sewer have already been constructed. This budget request is for the construction stage of the SNC Phase 3 sewer along Strandherd Drive up to the Kennevale Drive. The project will be coordinated with the Strandherd Road widening project.

2019 Request	8,200	Projected Yearend Unspent Bal.			0
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
Rate Supported	0	Rate Supported Debt			0
Develop. Charges	7,502	Develop. Charges Debt			698
Gas Tax	0	Gas Tax Debt			0
Forecast	2019	2020	2021	2022	
Authority	8,200	0	0	0	
Spending Plan	4,100	2,460	820	820	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	



City of Ottawa
2019 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				
<p>The wastewater general program consists of sub-programs and projects that support the entire wastewater collection and treatment programs. Examples of these are the Residential Protective Plumbing Program and the Drainage Roofing Rehab Program.</p>		2019 Request	330	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	330	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	330	260	230	200	
		Spending Plan	330	260	230	200	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
908445 Wastewater Drainage Roofing 2019		Class of Estimate: C) Planning	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>The City of Ottawa owns and operates 137 Wastewater Collection and Treatment facilities, made up of 17 major operating buildings and 120 remote sites in support of the wastewater management program. Roof replacements at the end of their life span typically on a 20 to 25 year cycle, form part of the planned maintenance of these wastewater treatment facilities and pumping stations. The up-keep and replacement of these roofs is paramount in ensuring that the work environment of these facilities is kept safe, warm and dry.</p>			
909312 Water Environment Protection: Short Term Initiatives - 2019		Class of Estimate: C) Planning	
Category: Service Enhancement	Ward: 11	Year of Completion: 2021	
<p>This initiative provides for the investigation and ongoing evaluation of water resource management approaches and monitoring technologies to recommend cost effective rehabilitation solutions and implementation strategies in support of the Ottawa River Action Plan. Projects include: - eco-system monitoring of city tributaries; - Monitoring of emerging parameters/contaminates of concern. Environment Effects Monitoring of the ROPEC effluent and combined sewer overflow sites required by Environment Canada and MOE Regulations (F5.5); Studies to investigate upstream pollution sources at city beaches.</p>			

City of Ottawa
2019 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 5,600 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. The program is focused on:</p> <ul style="list-style-type: none"> • Flood Mitigation; • Proactive life cycle renewal and rehabilitation projects; • Level of service initiatives; • System improvements and optimization; • 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. The 2019 forecast is based on bulk allocations that will be detailed in future budget submissions.</p> <p>Major 2019 Projects:</p> <ul style="list-style-type: none"> Collection System Condition Assessment Linear Sewage Systems Improvements SCADA Rehabilitation and Upgrades - Remote Sewer Facilities Sewer Lateral Investigations & Repairs 		2019 Request	3,400	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	2,900	Rate Supported Debt			500
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	3,400	6,700	6,700	6,700	
		Spending Plan	5,900	6,700	6,700	6,700	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
908092 Flow Monitoring System Rehab. 2019		Class of Estimate: C) Planning	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This project focuses on the installation of flow monitoring elements within the existing wastewater collection system so that operating staff will have a better understanding of the dynamics of the wastewater collection system to permit more informed decision-making on system operations. It will be particularly useful during periods of high flow. The project also allows for future replacement and upgrading of existing key flow measurement elements.</p>			
909313 Linear Sewage System Improve. Prog. 2019		Class of Estimate: C) Planning	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>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.)</p>			
909330 Sewer Lateral Repairs 2019		Class of Estimate: C) Planning	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>The sewer collection systems includes 210,000 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.</p>			

City of Ottawa
2019 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 Program covers all the wastewater pumping stations and associated forcemains 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>2019 Major Spending Projects:</p> <ul style="list-style-type: none"> - Gas monitoring and Rehab program - SCADA Rehabilitation and Upgrades - Various Pumping Station Mechanical & Electrical Rehabilitation - Various Pumping Station Health & Safety Improvements 		2019 Request	19,100	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	19,100	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2019	2020	2021	2022	
		Authority	19,100	5,530	9,135	9,135	
		Spending Plan	3,320	11,066	8,465	8,414	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909331	Sewage Pumping Station Rehab Prog 2019	Class of Estimate: C) Planning	19,100
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>The City wastewater collection system currently includes 85 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.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Drinking Water 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 \$1.2 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>2019 Major Spending Projects:</p> <ul style="list-style-type: none"> - HVAC upgrades at various plant buildings - Rehabilitation of Digesters - Sewage Treatment Rehabilitation Program - SCADA Rehabilitation and Upgrades, including cybersecurity - Raw Sewage Pumping Station Rehabilitation 		2019 Request	14,074	Projected Yearend Unspent Bal.		0
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	1,556	Rate Supported Debt	12,462	
		Develop. Charges	56	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		Forecast	2019	2020	2021	2022
		Authority	14,074	11,050	17,285	21,285
		Spending Plan	3,468	10,709	12,879	16,838
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
906648	ROPEC - Digester Gas Utilization	Class of Estimate: C) Planning	7,412
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2018	
<p>A new co-generation plant is required to replace the existing plant, which is at its end of life, take advantage of excess digester gas that is currently being flared and modify the plant's electrical distribution system for increased reliability. The co-generated power will be used more effectively thereby minimizing imported power. The new estimated completion date is 2021.</p>			
907383	ROPEC Digester Flare Expansion	Class of Estimate: C) Planning	112
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2019	
<p>As identified in the ROPEC Development Plan, 2013, expansion of this process is required to meet growth-related increases in plant volumes and loadings while also improving process reliability. The new estimated completion date is 2021.</p>			
909334	ROPEC - Sewage Treatment Rehab Prog 2019	Class of Estimate: C) Planning	6,500
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2021	
<p>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.</p>			

City of Ottawa
2019 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
909336	Sewer Use Program Short Term Initiatives	Class of Estimate: C) Planning	50
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This program funds the purchase and implementation of the new Sewer Use Industrial Waste database.</p>			

City of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Forecast Summary
In Thousands (000's)

Project Description	2019	2020	2021	2022	Total
Drinking Water Services					
Renewal of City Assets					
907654 Ops Condition Assess-Critical Sys Links	-	2,500	2,500	2,500	7,500
907795 Business Technology Opportunities	-	1,000	-	1,000	2,000
908076 Large Water Meters Changeout Program	1,000	1,000	1,000	1,000	4,000
908080 Water Distribution Sys Improvements 2019	1,000	1,000	1,000	1,000	4,000
908432 Water Sys SCADA & Instrument Rehab 2017	-	1,113	1,118	1,118	3,349
908436 Cathodic Protection 2019	-	1,250	1,250	1,250	3,750
908614 LRT2 W1 Hwy 174 - Shefford Rd	351	702	350	-	1,403
908615 Leitrim Rd (Bank-550m East)	700	-	-	-	700
908621 2017 Infrastructure Master Plan (Water)	-	265	270	-	535
908633 Enhanced Corrosion Control	1,000	5,118	-	-	6,118
908908 Small Water Meters Changeout Program	4,325	2,325	2,375	2,375	11,400
908980 2019 Watermain Improvements	4,000	7,000	7,000	7,000	25,000
908981 Lemieux island Pipe Bridge SN 017160	500	2,120	2,160	14,350	19,130
909039 Proactive Lead Service Replace Prog 2018	-	1,500	1,500	1,500	4,500
909040 New Vehicles Drinking Water - 2018	-	250	250	250	750
909279 Watermain: Albert-Slater (Bay to Elgin)	-	8,000	-	-	8,000
909371 2019 Buildings-Water Services	575	50	50	50	725
909392 2019 WM Transmission/Distribution Rehab	2,089	4,700	4,700	4,700	16,189
909410 Water Storage Tanks & Reservoir 2019	1,728	1,350	1,350	1,350	5,778
909411 Water Sys SCADA & Instrument Rehab 2019	1,200	2,400	2,400	2,400	8,400
909412 Water Treatment Rehab 2019	11,960	5,830	12,430	12,180	42,400
909415 Water Facilities Roofing 2019	293	250	240	210	993
909416 Water Pumping Station Facility Rehab2019	2,761	2,150	2,150	2,150	9,211
906642 Munster Well System Rehab	-	-	-	-	-
Renewal of City Assets Total	35,482	61,773	48,093	60,473	205,821
Growth					
900632 Strandherd Road Watermain	3,800	-	-	-	3,800
901144 Glen Cairn Reservoir Expansion	-	337	-	3,714	4,051
902206 Ottawa South Pumping Station Upgrade	-	-	-	-	-
904916 DCA-Kanata West Feedermain	-	1,122	-	-	1,122
904918 Limebank Feedermain	-	-	-	3,607	3,607

City of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Forecast Summary
In Thousands (000's)

Project Description	2019	2020	2021	2022	Total
904972 Glen Cairn PS Upgrade	-	-	-	-	-
904982 Zone 2W West march Rd 406 to 6	-	612	1,872	-	2,484
905992 Manotick Supply Watermain	-	9,588	-	7,321	16,909
907008 Treatment Plant Process Expansion	-	-	-	-	-
907099 Carp Reservoir Cell	-	-	-	467	467
907101 River Ridge 3C Elevated Tank	-	-	-	3,395	3,395
907453 Britannia WPP Capacity Upgrade	-	-	541	-	541
907456 Manotick North Island Link	-	6,018	-	-	6,018
907467 SUC Greenbank	3,800	-	-	-	3,800
909071 2018 Off Site Reliability Links	153	156	159	162	630
909352 2019 Groundwater Studies	700	367	374	170	1,611
909353 2019 Rural Servicing Strategy	250	255	218	223	946
909354 2019 Water & Wastewater EA Studies	260	265	270	276	1,071
Growth Total	8,963	18,720	3,434	19,335	50,452
Regulatory					
908434 Water Efficiency - 2017	-	400	400	400	1,200
Regulatory Total	-	400	400	400	1,200
Drinking Water Services Total	44,445	80,893	51,927	80,208	257,473
Integrated Roads, Water & Wastewater					
Renewal of City Assets					
906735 Bank St (Riverside-Ledbury)	-	-	18,140	-	18,140
906882 Elgin (Lisgar - Isabella)	2,970	-	-	-	2,970
906900 Main Greenfield Echo Concord et al	-	17,575	-	-	17,575
906901 CWWF ORAP - Loretta Ave N&S - Laurel St	-	-	3,000	-	3,000
908137 CWWF Deerpark-Hilliard-Fisher et al.	-	20,300	-	-	20,300
908138 CWWF Avenue N-O-P-Q-R-S-T-U	-	6,760	-	-	6,760
908139 Montreal Rd (N River Rd-St Laurent Blvd)	15,560	-	-	-	15,560
908140 City Centre Ave & Elm St	-	680	-	2,720	3,400
908141 ORAP Albert St-Bronson Ave-Slater St	1,440	-	-	16,800	18,240
908142 CWWF McLeod - Florence	7,945	-	-	-	7,945
908370 Integrated Departmental Mgmt Plan	550	-	-	-	550
908487 2019 Integrated Scoping Pre/Post Eng	660	850	850	850	3,210

City of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Forecast Summary
In Thousands (000's)

Project Description	2019	2020	2021	2022	Total
908567 Alta Vista Dr - Summit Ave	-	2,400	9,700	-	12,100
908568 Ashburn - Hogan - Wigan - Ness	8,205	-	-	-	8,205
908569 Borthwick-Quebec-Gardenvale	3,820	-	-	-	3,820
908570 Byron-Athlone-Highcroft	1,540	-	7,570	-	9,110
908571 Catherine St (Bronson-Elgin)	-	-	-	4,300	4,300
908572 Fairbairn-Bellwood-Willard-Belmont	-	5,330	-	-	5,330
908573 Gibson-Denver-Tampa-Orlando	3,170	-	-	-	3,170
908574 Grove Ave & Grosvenor	880	-	3,620	-	4,500
908575 Isabella-Chamberlain	-	-	-	1,900	1,900
908576 Larkin-Larose-Lepage	-	4,050	-	-	4,050
908577 Mailes Ave (Patricia-Oakdale)	1,810	-	-	-	1,810
908578 Ryder St - Featherston Dr	900	-	3,500	-	4,400
908581 Valley Dr Storm Sewer	-	18,700	-	-	18,700
908582 N River Rd (Montreal-Dead EndNof Coupal)	2,340	-	-	-	2,340
908645 St Denis - Lavergne - Ste Monique	10,920	-	-	-	10,920
908646 Integrated Construction - Bulk Prjs	-	-	-	26,000	26,000
908726 CWWF Vanier Parkway - Presland Rd et al	3,280	-	-	-	3,280
908835 Mann-Range-Russell-Templeton	8,925	-	-	-	8,925
908998 LRT2 R2 Hwy 174 Resurfacing EBL	36	72	36	-	144
909012 Bronson Ave (Arlington-Rideau Canal)	1,690	-	-	14,480	16,170
909021 Woodroffe Ave (Saville-Richmond)	-	-	1,100	-	1,100
909156 Wastewater LRFP V Recovery	-	(27,900)	-	(36,600)	(64,500)
909272 Scott St. (West of Smirle Ave)	1,020	4,510	-	-	5,530
909373 2019 Infrastructure Assess & Data Collec	300	300	300	300	1,200
909374 2019 Road Resurfacing - CW	900	1,650	1,800	1,950	6,300
909394 Arch - Canterbury - Plesser	1,530	6,080	-	-	7,610
909400 Bel-Air Dr, Bedbrooke St et al	1,120	5,590	-	-	6,710
909401 Broadview Ave	-	170	-	680	850
909402 Caroline Ave - Huron Ave N	-	1,360	-	5,520	6,880
909404 Claymor & Senio	1,150	4,600	-	-	5,750
909405 Hamlet Rd	210	840	-	-	1,050
909406 Integrated Design - Bulk Prjs	-	7,960	25,470	25,470	58,900
909407 Longpre - Marquette- Michel Cir	-	1,100	-	4,420	5,520

City of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Forecast Summary
In Thousands (000's)

Project Description	2019	2020	2021	2022	Total
909408 Monk - Oakland -Wilton	-	850	-	3,230	4,080
909409 Winona Ave & Wilmont Ave	-	590	-	2,210	2,800
909475 2019 Surveys & Mapping	240	270	240	255	1,005
909485 Carling Ave - Churchill Ave - Kirkwood	1,650	-	6,560	-	8,210
Renewal of City Assets Total	84,761	84,687	81,886	74,485	325,819
Integrated Roads, Water & Wastewater Total	84,761	84,687	81,886	74,485	325,819
Integrated Water & Wastewater					
Renewal of City Assets					
908580 CWWF Queensway Terrace North Sewer	-	-	20,000	-	20,000
908997 LRT2 SS1 Sewer Upgrades (Byron Ave)	340	685	340	-	1,365
909375 2019 Sewer Access & Outfalls	2,000	1,000	1,000	1,000	5,000
909376 2019 Sewer Repairs / Improvements	9,821	10,000	10,000	10,000	39,821
909377 2019 Sewer Trenchless Rehab	4,400	5,000	5,000	5,000	19,400
909403 Chapman Blvd (Dorval-Othello)	600	-	-	-	600
909481 2019 Sewer CCTV Engineering	1,000	600	600	600	2,800
909492 LRT2 SS2 Richmond Compl Streets	3,000	3,000	3,000	-	9,000
Renewal of City Assets Total	21,161	20,285	39,940	16,600	97,986
Integrated Water & Wastewater Total	21,161	20,285	39,940	16,600	97,986
Stormwater Services					
Renewal of City Assets					
902137 Stormwater Mgmt: Rehab&Enviro Compliance	1,620	1,450	706	712	4,488
903324 Kennedy Burnett SW Pond	12,500	-	-	-	12,500
908252 Stormwater Mgmt Retrofit Master Plan	100	510	-	-	610
908618 CWWF Convent Glen North Storm Sewer	-	-	-	20,600	20,600
909017 LRT2 C1 Hwy 174 Culverts	2,010	4,019	2,010	-	8,039
909150 2019 Stormwater Improvements	500	1,000	1,000	1,140	3,640
909355 2019 Flood Plain Mapping	175	255	208	133	771
909356 2020 Stormwater Management Retrofit	-	2,040	2,080	3,183	7,303
909383 2019 Culverts Scoping Pre/Post Eng.	510	600	600	600	2,310
Growth					
907485 2019 Stormwater Master Planning	250	255	-	-	505
909540 DCA- Riverside South Pond 5 Storm Sewers	6,501	-	-	-	6,501

City of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Forecast Summary
In Thousands (000's)

Project Description	2019	2020	2021	2022	Total
Growth Total	6,751	255	-	-	7,006
Regulatory					
909351 Municipal Drain Improvements - 2019	480	500	500	500	1,980
Regulatory Total	480	500	500	500	1,980
Service Enhancement					
909026 ORAP-Water Environment Strategy (WES)PH2	-	1,000	1,000	1,000	3,000
Service Enhancement Total	-	1,000	1,000	1,000	3,000
Stormwater Services Total	38,746	26,929	21,904	42,218	129,797
Wastewater Services					
Renewal of City Assets					
906648 ROPEC - Digester Gas Utilization	7,412	-	-	-	7,412
907060 ROPEC Secondary Clarifier Upgrades	-	-	4,054	3,468	7,522
907382 ROPEC Aeration Blower Expansion	-	1,300	6,000	1,300	8,600
907383 ROPEC Digester Flare Expansion	112	-	-	-	112
907384 ROPEC Sludge Thickening Centrifuge Expan	-	-	-	1,788	1,788
907386 ROPEC Chlorine Contact Tank Expansion	-	-	-	-	-
907387 ROPEC Raw Sewage Pumping Station Expan.	-	-	1,000	5,000	6,000
907388 ROPEC Disinfection Expansion	-	-	-	-	-
907675 New Vehicles Waste Water - 2016	-	100	100	100	300
908029 South End Remote Facil. Corrosion/Odour	-	2,500	-	-	2,500
908092 Flow Monitoring System Rehab. 2019	400	200	200	200	1,000
908097 ROPEC - Concrete Rehab & Repairs 2019	-	1,000	1,000	1,000	3,000
908102 Wastewater Facilities Upgrade	-	505	510	510	1,525
908181 2019 Wastewater Improvements	900	4,000	4,000	3,110	12,010
908250 Infrastructure Planning Information Mgmt	-	153	312	318	783
908445 Wastewater Drainage Roofing 2019	180	110	80	50	420
908446 Collection System Condition Assess.	-	1,160	1,160	1,160	3,480
908451 Lab Equipment Purchase/Replacement 2018	-	325	325	350	1,000
908454 ROPEC Ops & Technical Bldg Space Upgrade	-	-	-	-	-
908455 ROPEC Process Facil - Enviro Sys Upgrade	-	-	-	-	-
908659 ROPEC Amonia Removal	-	-	-	-	-
908683 Old Digester Decommissioning	-	-	-	-	-

City of Ottawa
2019 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Forecast Summary
In Thousands (000's)

Project Description	2019	2020	2021	2022	Total
909030 SCADA Rehab & Upgrades-Remote Sewer 2018	-	1,838	1,559	1,559	4,956
909032 ROPEC - SCADA Rehab. & Upgrades 2018	-	2,100	2,100	2,100	6,300
909312 Water Env Protec Short Term Initiat 2019	150	150	150	150	600
909313 Linear Sewage System Improve. Prog. 2019	2,000	2,000	2,000	2,000	8,000
909330 Sewer Lateral Repairs 2019	1,000	4,500	4,500	4,500	14,500
909331 Sewage Pumping Station Rehab Prog 2019	19,100	5,530	9,135	9,135	42,900
909334 ROPEC - Sewage Treatment Rehab Prog 2019	6,500	11,000	17,235	21,235	55,970
909336 Sewer Use Program Short Term Initiatives	50	50	50	50	200
909393 2019 ORAP Wet Weather IMP	1,300	2,000	2,000	2,000	7,300
909516 LiDAR Topography Update - CW	300	-	-	-	300
Renewal of City Assets Total	39,404	40,521	57,470	61,083	198,478
Growth					
904986 Tri-Township/March Ridge Replacement	13,600	-	-	-	13,600
904988 March PS Conversion	11,200	-	-	-	11,200
907107 Acres Road PS Upgrade	700	3,570	-	-	4,270
907390 ROPEC Primary Clarifier Expansion	-	-	-	8,663	8,663
907462 Pump Stations Capacity Increase	300	337	468	477	1,582
908247 Richmond PS & Forcemain Expans	1,000	8,670	-	-	9,670
908555 Richmond PS & Forcemain ExpPh3	-	-	-	1,167	1,167
908624 2017 Infrastructure Master Plan (Sewer)	-	265	270	-	535
909072 Leitrim Sanitary Pump Station Expansion	-	184	-	-	184
909357 South Nepean Collector Ph3	8,200	-	-	-	8,200
909542 DCA-O/S Half Moon Bay N San Sewer	404	-	-	-	404
Growth Total	35,404	13,026	738	10,307	59,475
Service Enhancement					
909029 Protective Plumbing Program 2018	-	1,000	1,000	1,000	3,000
Service Enhancement Total	-	1,000	1,000	1,000	3,000
Wastewater Services Total	74,808	54,547	59,208	72,390	260,953
Grand Total	263,921	267,341	254,865	285,901	1,072,028

Integrated Roads, Water and Wastewater Program does not include the Roads portion of the program.

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
Drinking Water Services					
Renewal of City Assets					
900631 Carlington Heights Pumping Stn Expansion	13,918,000	1,726,440	12,191,560	1,270,358	10,921,202
901139 1W/2W Feedermain Link	42,554,000	40,755,776	1,798,224	310,727	1,487,497
901141 Orleans Transmission Main	31,308,000	30,191,867	1,116,133	887,737	228,395
904981 3C/2W Pressure Zone Separation	5,822,000	3,936,925	1,885,075	476,046	1,409,028
905681 Water System SCADA & Instrument Rehab	2,400,000	2,287,821	112,179	118,010	(5,831)
906087 2018 Watermain Improvements	2,000,000	153,041	1,846,959	1,526,568	320,391
906088 Transmission Main Rehab	2,000,000	1,614,666	385,334	97,320	288,013
906197 Water System Facilities Upgrades 2011	1,779,000	1,265,073	513,927	458,015	55,911
906199 Condition Assess -Critical Sys Links2011	970,000	848,325	121,675	-	121,675
906350 Water Treatment Rehab. - 2012	4,550,000	4,460,578	89,422	95,950	(6,528)
906352 Water Storage Tanks & Reservoirs 2014	629,000	470,788	158,212	49,982	108,230
906353 Water Facilities Roofing 2016	200,000	2,951	197,049	34,802	162,247
906358 Transmission Mains Condition Assessment	1,600,000	1,359,031	240,969	-	240,969
906539 Large Transmission Mains Risk Mitigation	1,000,000	358,407	641,593	36,062	605,531
906642 Munster Well System Rehab	1,780,000	323,545	1,456,455	8,231	1,448,225
906659 Water Facilities Space Upgrades	5,205,000	4,922,372	282,628	277,356	5,272
906660 Britannia & Lemieux Intake ScreenRenewal	568,000	267,697	300,303	-	300,303
906662 CWWF Village/Carp Water Quality TreatFac	8,880,000	814,445	8,065,555	4,900,490	3,165,064
906664 Hurdman Bridge PS Renewal	16,491,300	1,389,258	15,102,042	1,962,214	13,139,827
906665 Lemieux WPP Intake Ice Mgmt	17,300,000	516,307	16,783,693	-	16,783,693
906795 Condition Assess - Critical System Links	5,000,000	3,412,332	1,587,668	1,372,571	215,098
906796 Proactive Lead Service Replace 2013-2014	2,000,000	1,705,308	294,692	79,437	215,255
906798 Water Distribution Sys Improvements	6,993,000	4,379,270	2,613,730	2,506,961	106,769
906800 Water Treatment Rehabilitation 2013-2014	4,500,000	3,884,069	615,931	475,912	140,019
906801 Communal Well System Rehab 2013-2014	599,000	526,369	72,631	46,394	26,237
906802 Water Pumping Station Facility Rehab.	2,126,000	1,916,413	209,587	22,621	186,966
906836 Critical Sys Links Mitigation Measures	2,090,000	-	2,090,000	-	2,090,000

City of Ottawa

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

Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
907007 TSSA Registration and Compliance Upgrade	1,092,000	677,770	414,230	-	414,230
907304 Trenchless Rehab-Water	2,880,000	410,629	2,469,371	70,605	2,398,766
907471 Water Storage Tank & Res Condition Asses	300,000	17,363	282,637	-	282,637
907472 Water Pumping Stn Condition Assess Prog	150,000	20,321	129,679	-	129,679
907473 Communal Well Sys Condition Assess Prog	254,000	176,706	77,294	93,356	(16,062)
907476 WPP Chemical Systems Modifications	1,850,000	542,220	1,307,780	577,433	730,347
907477 TSSA Diesel Compliance Upgrades at WPPS	300,000	15,306	284,694	5,402	279,292
907568 EAM Maximo Data Optimization	1,160,000	390,148	769,852	16,286	753,567
907605 Carlington Heights Reservoir Remediation	400,000	-	400,000	-	400,000
907640 Water Storage Tanks & Reservoir	634,000	1,730	632,270	-	632,270
907641 Water Storage Tanks & Reservoirs 2015	128,000	143,301	(15,301)	-	(15,301)
907642 Water Treatment Rehab 2015	2,800,000	2,687,342	112,658	69,170	43,488
907643 Water System SCADA & Instrument Rehab	2,145,000	859,316	1,285,684	42,014	1,243,670
907646 Water Pumping Station Facility Rehab	520,000	-	520,000	-	520,000
907648 Proactive Lead Service Replacement Prog	1,000,000	554,933	445,067	316,431	128,636
907652 Cathodic Protection Water System 2015	3,100,000	3,046,580	53,420	-	53,420
907654 Ops Condition Assess-Critical Sys Links	2,175,000	-	2,175,000	-	2,175,000
907655 Communal Well System Rehab 2018	10,413,000	14,828	10,398,172	98,728	10,299,444
907656 Communal Well System Rehab 2017	490,000	228,623	261,377	3,612	257,765
907663 Water Pressure Relief Valve Survey	400,000	1,715	398,285	-	398,285
907672 Remote Station WAFL Assessment/Design	220,000	14,653	205,347	-	205,347
907726 LeBreton Flats/Fleet St DWS Facilities	190,000	72,969	117,031	-	117,031
907733 Covered Aqueduct Structural Repairs	3,000,000	1,820,293	1,179,707	197,465	982,242
907734 Britannia G4	550,000	496,131	53,869	7,055	46,814
907773 Transmission Main Rehab	3,188,000	2,948,134	239,866	132,065	107,801
907774 Watermain Improvements	2,439,000	1,144,161	1,294,839	748,062	546,777
907792 CWWF Maplehurst Ave-Carling intersection	1,030,000	840,118	189,882	83,973	105,909
907793 Rosebella Ave (Conroy Rd-Albion Rd)	2,700,000	2,357,665	342,335	57,831	284,504
907794 Sandridge Rd (Merriman-St Laurent)	1,300,000	763,680	536,320	340,696	195,624

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
907795 Business Technology Opportunities	3,600,000	29,765	3,570,235	-	3,570,235
908062 Lifecycle Renewal Fleet - Water Services	296,000	250,183	45,817	45,705	112
908067 Water Storage Tanks & Reservoirs 2016	50,000	35,365	14,635	-	14,635
908069 Water Treatment Rehab 2016	270,000	227,361	42,639	19,530	23,109
908073 Water Pumping Station Facility Rehab2017	1,237,000	41,219	1,195,781	48,565	1,147,216
908074 Cathodic Protection Water System 2016	2,200,000	1,170,346	1,029,654	7,210	1,022,444
908076 Large Water Meters Changeout Program	1,550,000	267,455	1,282,545	-	1,282,545
908077 Ops Condition Assess-Critical Sys Links	250,000	14,666	235,334	165,551	69,783
908078 Proactive Lead Service Replace Prog 2017	1,250,000	190,379	1,059,621	432,335	627,286
908172 2016 Transmission Main Rehab	3,550,000	1,178,506	2,371,494	218,136	2,153,358
908173 2016 Watermain Improvements	1,794,000	598,052	1,195,948	29,904	1,166,043
908175 Crichton St (Keefer-Dufferin)	1,150,000	738,736	411,264	19,307	391,958
908176 Marquis Ave (Naskapi-Mulberry)	1,050,000	1,001,641	48,359	43,583	4,776
908177 Brittany Dr-Bangs St-Chelsea Dr	3,500,000	2,353,853	1,146,147	212,788	933,358
908178 Goth Ave (Albion-Fortier)	2,500,000	1,997,302	502,698	200,465	302,233
908179 CWWF Glynn Ave (Edith-Lola)	1,308,788	747,265	561,523	48,621	512,902
908180 CWWF Helena St (Clarendon-Mayfair)	2,300,000	929,099	1,370,901	203,912	1,166,989
908326 Britannia Chem System Mods - DWS	25,000	434	24,566	-	24,566
908327 Lemieux Chem System Mods - DWS	150,000	142,833	7,167	-	7,167
908372 Ammonia Rm Ventilation Lemieux-Britannia	250,000	7,825	242,175	-	242,175
908375 WPP Diesel Exhaust Stack Upgrades	710,000	634,773	75,227	49,965	25,262
908376 Montreal Road PS Lifecycle Replacements	4,200,000	615,710	3,584,290	2,475,984	1,108,306
908377 Britannia WPP Basin Railings Replacement	307,000	8,623	298,377	332,155	(33,778)
908378 Britannia HLPump #5 Motor & Starter Repl	150,000	-	150,000	-	150,000
908379 Britannia WPP Expansion Joint Rehab	200,000	-	200,000	-	200,000
908432 Water Sys SCADA & Instrument Rehab 2017	1,166,000	42,038	1,123,962	89,056	1,034,906
908433 Water Treatment Rehab 2017	268,000	215,223	52,777	109,958	(57,181)
908435 Water Facilities Roofing	150,000	-	150,000	-	150,000
908474 2017 Buildings-Water Services	50,000	48,183	1,817	-	1,817

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908479 Carp Diesel Pump Upgrades	1,170,000	737,764	432,236	376,356	55,881
908509 2017 Transmission Main Rehab	1,000,000	564,806	435,194	-	435,194
908511 2017 Watermain Improvements	1,836,000	308,645	1,527,355	704,451	822,904
908613 Bank St (Rideau Rd-Mitch Owens)	1,000,000	111,093	888,907	257,240	631,667
908614 LRT2 W1 Hwy 174 - Shefford Rd	97,000	-	97,000	-	97,000
908615 Leitrim Rd (Bank-550m East)	1,000,000	-	1,000,000	-	1,000,000
908616 Redenda Cres (Higgins)	1,250,000	158,160	1,091,840	773,251	318,590
908617 Sherbourne Rd (Knightsbridge-Dovercourt)	1,100,000	193,662	906,338	534,190	372,149
908620 2017 Groundwater Studies	150,000	-	150,000	2,686	147,314
908621 2017 Infrastructure Master Plan (Water)	250,000	-	250,000	-	250,000
908643 Fleet Growth 2017	250,000	-	250,000	-	250,000
908743 CWWF Drinking Water Plants Lighting Upgr	800,000	12,836	787,164	523,496	263,668
908744 CWWF Lemieux Island High Lift Stn HVAC	1,417,000	945,059	471,941	-	471,941
908745 CWWF [Design] Lemieux Island WPP Intake	1,900,000	489,652	1,410,348	1,019,355	390,993
908746 CWWF Drinking Water Pumping Stn Lighting	300,000	6,360	293,640	150,034	143,606
908747 CWWF Billings Bridge PS Diesel System Up	1,920,000	1,313,237	606,763	571,541	35,222
908748 CWWF [Construct] Munster PS Generator Up	1,500,000	1,355,010	144,990	-	144,990
908798 Lemieux High Lift Vault & Tunnels Rehab.	1,365,000	810,862	554,138	180,292	373,847
908801 Britannia Medium Voltage Maintenance	1,120,000	714,883	405,117	62,101	343,016
908818 Britannia HLPs HVAC Upgrade Design Build	1,090,000	-	1,090,000	571,531	518,469
908825 Lemieux Sludge Line Repairs	250,000	-	250,000	128,330	121,670
908842 Vars Reliability & Process Upgrades	1,000,000	62,210	937,790	-	937,790
908866 DWS Concrete Repairs	150,000	4,455	145,545	97,030	48,515
908908 Small Water Meters Changeout Program	5,325,000	-	5,325,000	-	5,325,000
908911 Britannia Compressed Air Improvements	30,000	-	30,000	22,359	7,641
908931 2018 Buildings-Water Services	1,000,000	459,184	540,816	118,200	422,616
908978 2018 Transmission/Distribution WM Rehab	2,090,000	-	2,090,000	-	2,090,000
908981 Lemieux island Pipe Bridge SN 017160	1,020,000	-	1,020,000	59,832	960,168
908996 Meter Service Mobility	700,000	-	700,000	-	700,000

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
909003 DWS Ladder Trolley & Rail System Upgrade	600,000	5,097	594,903	-	594,903
909035 Water Sys SCADA & Instrument Rehab 2018	970,000	-	970,000	-	970,000
909036 Water Treatment Rehab 2018	4,605,000	235,660	4,369,340	16,022	4,353,318
909037 Water Pumping Station Facility Rehab2018	1,000,000	-	1,000,000	-	1,000,000
909039 Proactive Lead Service Replace Prog 2018	400,000	-	400,000	-	400,000
909040 New Vehicles Drinking Water - 2018	65,000	-	65,000	-	65,000
909134 2018 Infrastructure Master Plan (Water)	150,000	-	150,000	-	150,000
909175 Britannia G4 Engine Supervise Sys Upgrade	600,000	302,367	297,633	266,698	30,935
909189 Britannia Highlift Flowmeters	510,000	-	510,000	105,738	404,262
909191 DWS SCADA secondary network replacement	500,000	22,823	477,177	179,167	298,010
909208 Lemieux & Britannia G2 Generator Design	2,125,000	-	2,125,000	662,246	1,462,754
909220 Stittsville Tank Remediation	768,000	-	768,000	49,781	718,219
909265 Britannia Window/Roof Repairs	300,000	-	300,000	-	300,000
909266 Britannia North Parking Lot Expansion	315,000	-	315,000	-	315,000
909267 Britannia Lime Tower Chimney Rehab	250,000	-	250,000	-	250,000
909279 Watermain: Albert-Slater (Bay to Elgin)	1,000,000	-	1,000,000	-	1,000,000
909288 Britannia Lime Tower Chimney Rehab	200,000	-	200,000	-	200,000
Renewal of City Assets Total	312,990,088	156,036,373	156,953,715	32,058,602	124,895,113
Growth					
900632 Strandherd Road Watermain	1,898,000	52,773	1,845,227	-	1,845,227
901142 Barrhaven Pumping Station Expansion	350,000	289,696	60,304	-	60,304
902206 Ottawa South Pumping Station Upgrade	12,890,000	1,206,202	11,683,798	158,589	11,525,209
903295 Brittany Pumping Station	7,616,000	228,986	7,387,014	411,915	6,975,098
904916 DCA-Kanata West Feedermain	2,772,000	118,383	2,653,617	-	2,653,617
904918 Limebank Feedermain	3,374,000	-	3,374,000	-	3,374,000
904975 Barrhaven PS Conversion to 3C	4,873,000	4,424,161	448,839	276,309	172,530
905429 DCA-Mer Bleue Rd Reliability Links	1,232,000	677,323	554,677	1,019	553,658
905992 Manotick Supply Watermain	1,305,000	220,027	1,084,973	128,031	956,941
906629 2015 Rural Servicing Strategy	257,000	192,842	64,158	57,323	6,836

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
907008 Treatment Plant Process Expansion	9,100,000	345,899	8,754,101	117,774	8,636,328
907101 River Ridge 3C Elevated Tank	514,000	4,442	509,558	-	509,558
907455 Hurdman Bridge/Billings BridgePS Upgrade	1,700,000	-	1,700,000	-	1,700,000
907456 Manotick North Island Link	1,309,000	184,770	1,124,230	-	1,124,230
907467 SUC Greenbank	1,130,000	-	1,130,000	-	1,130,000
908257 O/S Kanata West Transmission Mains	907,000	-	907,000	-	907,000
908384 Tenth Line Feedermain	1,400,000	770,138	629,862	63,385	566,477
908622 2017 Rural Servicing Strategy	200,000	-	200,000	11,104	188,896
908623 2017 Water & Wastewater EA Studies	250,000	-	250,000	38,563	211,437
908749 FEA2016-Kanata West Feedermain	5,788,000	-	5,788,000	-	5,788,000
909071 2018 Off Site Reliability Links	153,000	-	153,000	-	153,000
909132 2018 Rural Servicing Strategy	205,000	13,575	191,425	1,357	190,068
909133 2018 Water & Wastewater EA Studies	255,000	-	255,000	-	255,000
909135 2018 Groundwater Studies	153,000	-	153,000	-	153,000
909198 Shadow Ridge - 2 Deep Wells	251,000	-	251,000	-	251,000
Growth Total	59,882,000	8,729,218	51,152,782	1,265,369	49,887,412
Service Enhancement					
903298 DCA -Shadow Ridge Exploratory/Well	99,000	95,819	3,181	-	3,181
905427 Groundwater Management Phase 2	500,000	405,573	94,427	94,427	0
905428 Groundwater Studies	182,000	98,872	83,128	81,421	1,707
906628 2014 Groundwater Studies	200,000	57,086	142,914	142,914	-
907482 2015 Infrastructure Master Plan (Water)	295,000	146,876	148,124	49,612	98,512
907607 Drinking Water Vibration Analysis	200,000	170,713	29,287	33,813	(4,526)
907633 ESD Asset Management Roadmap	510,000	275,264	234,736	11	234,725
907864 2015 Ground Water Studies	155,000	6,767	148,233	139,801	8,432
Service Enhancement Total	2,141,000	1,256,970	884,030	542,000	342,030
Regulatory					
906355 Water Efficiency	582,000	358,627	223,373	18,489	204,884
907645 Water Efficiency 2015	582,000	-	582,000	-	582,000

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908071 Water Efficiency 2016	250,000	-	250,000	-	250,000
Regulatory Total	1,414,000	358,627	1,055,373	18,489	1,036,884
Drinking Water Services Total	376,427,088	166,381,187	210,045,900	33,884,460	176,161,440
Integrated Roads, Water & Wast					
Renewal of City Assets					
907344 Woodcrest (Kilborn-Kilborn)	2,991,400	2,183,538	807,862	364,730	443,132
908139 Montreal Rd (N River Rd-St Laurent)	2,510,000	829,875	1,680,125	593,716	1,086,409
Renewal of City Assets Total	5,501,400	3,013,413	2,487,987	958,447	1,529,540
Integrated Roads, Water & Wast Total	5,501,400	3,013,413	2,487,987	958,447	1,529,540
Integrated Water & Wastewater					
Renewal of City Assets					
906899 Sewer Access & Outfalls	25,610,000	6,046,910	19,563,090	2,596,973	16,966,117
907084 Water & Sewer Utility Billing System	10,800,000	7,306,284	3,493,716	994,640	2,499,075
907468 EAM Maximo Sustainment	3,090,000	2,975,139	114,861	104,572	10,289
907469 ITX Historical Reporting	300,000	-	300,000	-	300,000
907500 Ontario 1 Call	750,000	309,821	440,179	-	440,179
907501 SAP Integration & Mobility Deployment	6,153,000	3,843,363	2,309,637	96,207	2,213,430
908145 2016 Sewer & Water Repairs/Improvements	4,983,000	4,136,193	846,807	758,425	88,382
908147 2016 Trenchless Rehab - Sanitary & Storm	4,400,000	3,879,343	520,657	228,506	292,151
908424 Environmental Time Series Database	1,490,000	-	1,490,000	-	1,490,000
908484 2017 Sewer & Water Repairs/Improvements	2,920,000	1,094,122	1,825,878	690,715	1,135,163
908486 2017 Trenchless Rehab - Sanitary & Storm	2,610,000	1,299,731	1,310,269	754,393	555,876
908580 CWWF Queensway Terrace North Sewer	800,000	355,171	444,829	253,461	191,369
908581 Valley Dr Storm Sewer	19,882,000	430,521	19,451,479	1,828,845	17,622,634
908720 CWWF 2017 Trenchless Sewer Rehabilitate	500,000	322,463	177,537	120,380	57,158
908721 CWWF 2017 Sewer Access Structure Upgrade	500,000	340,836	159,164	6,584	152,580
908722 CWWF 2017 Buried Infrastruct-Bld & Parks	1,250,000	-	1,250,000	731,212	518,788

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908942 2018 Sewer & Water Repairs/Improvements	5,000,000	288,284	4,711,716	206,376	4,505,340
908944 2018 Trenchless Rehab - Sanitary & Storm	4,006,000	-	4,006,000	-	4,006,000
908997 LRT2 SS1 Sewer Upgrades	135,000	-	135,000	-	135,000
Renewal of City Assets Total	95,179,000	32,628,182	62,550,818	9,371,288	53,179,531
Integrated Water & Wastewater Total	95,179,000	32,628,182	62,550,818	9,371,288	53,179,531
Stormwater Services					
Renewal of City Assets					
900820 Foster SWMF Expansion & Ditch	10,200,000	9,457,056	742,944	281,560	461,384
903324 Kennedy Burnett SW Pond	1,000,000	45,268	954,732	547,372	407,360
903940 Carp River Restoration	6,360,927	5,045,464	1,315,463	28,385	1,287,078
904470 LI-Britannia Villge-OttRivr FloodProtect	1,945,000	1,863,187	81,813	88,277	(6,464)
905004 ORAP-Ottawa River Quality Model	422,000	304,466	117,534	3,002	114,532
905555 Sawmill Creek SWM Pond	500,000	-	500,000	-	500,000
905653 ORAP-Stormwater Mgmt Retrofit MasterPlan	2,360,000	1,475,956	884,044	322,342	561,702
905757 Monahan Constructed Wetland Rehab.	5,750,000	5,480,737	269,263	283,666	(14,403)
905762 ORAP-Monitoring & Source Control Program	520,000	502,777	17,223	-	17,223
907115 2013 Stormwater Master Planning	300,000	272,800	27,200	6,303	20,896
907618 Stormwater Storage Tanks Rehab	170,000	-	170,000	-	170,000
907671 Nepean Crk MTSS Forebay Sediment Removal	125,000	84,458	40,542	3,649	36,893
907680 Stream Restoration Projects - 2016	846,000	58,302	787,698	23,591	764,107
908101 Stormwater Mgmt: Rehab &Enviro Complince	440,000	385,867	54,133	8,671	45,462
908165 2016 Scoping Pre/Post Drn Culverts	1,500,000	1,420,586	79,414	68,135	11,279
908166 2016 Drainage Culverts (1m-3m)	5,685,000	4,732,523	952,477	203,577	748,901
908167 2016 Drainage Culverts (<=1m)	3,815,000	2,701,130	1,113,870	91,843	1,022,027
908168 2016 Drainage Culverts (<=1m) Resur	1,400,000	1,108,853	291,147	102,383	188,764
908169 2016 Drainage Culverts - Site-Speci	1,800,000	1,600,522	199,478	192,511	6,967
908185 2016 Inlet Control Devices - CW	400,000	42,308	357,692	67,602	290,090
908252 Stormwater Mgmt Retrofit Master Plan	1,350,000	-	1,350,000	-	1,350,000

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908497 2017 Drn Culverts - Site-Specific	760,000	725,496	34,504	30,746	3,757
908498 2017 Drn Culverts (<=1m)	806,000	585,326	220,674	35,104	185,570
908499 2017 Drn Culverts (<=1m) Resurfacing	1,985,000	1,706,611	278,389	64,326	214,063
908500 2017 Drn Culverts (1m-3m)	5,033,133	3,071,216	1,961,917	1,368,953	592,964
908501 2017 Drn Culverts-Scoping Pre/Post Eng	835,000	688,415	146,585	40,490	106,094
908512 2017 Joint CA/City Renewal Activities	200,000	181,111	18,889	-	18,889
908618 CWWF Convent Glen North Storm Sewer	1,425,000	343,216	1,081,784	469,906	611,878
908619 Graham Creek Storm Sewer	16,906,000	127,019	16,778,981	708,151	16,070,831
908723 CWWF 2017 Drainage Culvert Renewal	13,250,000	6,116,507	7,133,493	4,631,923	2,501,570
908724 CWWF 2017 Drainage Culvert Renew-Design	1,500,000	582,309	917,691	62,437	855,253
908725 CWWF Stillwater Creek Storm Sewer Upgrad	300,000	153,444	146,556	134,051	12,505
908726 CWWF Vanier Parkway Storm Sewer Renewal	400,000	230,391	169,609	67,889	101,720
908733 CWWF SW Retrofit - Hemmingwood Way	118,000	91,066	26,934	14,722	12,212
908734 CWWF SW Retrofit - Navaho Drive	72,000	-	72,000	-	72,000
908736 CWWF Didsbury Stormwater Facility Rehab.	100,000	100,000	-	-	-
908737 CWWF Graham Creek Slope Stabilization	250,000	-	250,000	-	250,000
908738 CWWF Mud Creek Bank Stabilization	100,000	81,048	18,952	-	18,952
908739 CWWF Shields Creek/Findlay Creek Rehab	50,000	50,000	-	-	-
908852 Bilberry Creek - Slope Stabilization	5,800,000	4,701,935	1,098,065	310,614	787,450
908855 Sprucewood Slope Stabilization	145,000	71,156	73,844	64,743	9,101
908972 2018 Scoping Pre/Post Drn Culverts	1,060,000	70,925	989,075	794,201	194,875
908973 2018 Drainage Culverts (<=1m)	6,500,000	1,056,754	5,443,246	1,042,246	4,401,001
908974 2018 Drainage Culverts (1m-3m)	6,689,000	2,227,103	4,461,897	2,365,101	2,096,796
908975 2018 Drainage Culverts pre Resurfacing	3,000,000	663,778	2,336,222	416,874	1,919,348
908976 2018 Drainage Culverts - Site-Specific	940,000	115,708	824,292	228,855	595,437
908982 2018 Joint CA/City Renewal Activiti	200,000	-	200,000	-	200,000
909017 LRT2 C1 Hwy 174 Culverts	197,000	-	197,000	-	197,000
909027 Stormwater Mgmt: Rehab&Enviro Compliance	2,442,000	167,750	2,274,250	392,909	1,881,341
909131 2018 Stormwater Management Retrofit	2,000,000	-	2,000,000	-	2,000,000

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
Renewal of City Assets Total	119,952,060	60,490,545	59,461,515	15,567,109	43,894,405
Growth					
900812 DCA-Cardinal Creek-Stormwater Facility	24,856,000	22,543,313	2,312,687	-	2,312,687
900814 DCA-EUC SW Pond 1	7,810,000	7,254,012	555,988	16,127	539,861
903223 Cardinal Creek Erosion Monitor	1,403,000	1,133,171	269,829	185,877	83,952
903230 DCA-SWM Ponds E 1&2 Shirley's Brook	3,250,000	2,481,997	768,003	646,063	121,940
903250 DCA-Storm Water Pond - Monahan Drain	8,147,356	7,073,538	1,073,818	728,043	345,774
903328 DCA-Area W-2 Shirleys Brook W SWM Pond 1	1,283,600	780,240	503,360	473,517	29,843
905993 Richmond Village Stormwater Retrofit	185,000	586	184,414	-	184,414
907528 DCA-Riverside South SW Treatment Chamber	421,286	244,466	176,820	-	176,820
907529 DCA-Leitrim SW Pond 2	18,606,547	-	18,606,547	-	18,606,547
907535 DCA-Leitrim Pond 2 Trunk Storm Sewer	4,388,909	426	4,388,483	-	4,388,483
907536 DCA-Riverside South SW Pond 3	18,797,110	-	18,797,110	-	18,797,110
907537 DCA-Riverside S. Pond3 Trunk Storm Sewer	10,050,840	-	10,050,840	-	10,050,840
907538 DCA-Riverside South - Tributary No. 3	1,165,150	-	1,165,150	-	1,165,150
907539 DCA-Riverside South - Tributary No. 4	498,520	-	498,520	-	498,520
907540 DCA-Riverside South - Tributary No. 7A	403,030	-	403,030	-	403,030
907541 DCA-Riverside South - Tributary No. 7B	876,280	-	876,280	-	876,280
907542 DCA-Riverside South - Tributary No. 10	1,488,550	-	1,488,550	-	1,488,550
907543 DCA-Riverside South - Fish Habitat	2,808,580	-	2,808,580	-	2,808,580
907558 DCA-N5 Ultimate SW Pond	14,229,000	2,078,649	12,150,351	21,273	12,129,078
907560 DCA-EUC SW Pond 1 Trunk Sewers	11,045,000	-	11,045,000	-	11,045,000
907561 DCA-EUC SW Pond 3 Trunk Sewers	1,700,000	553,779	1,146,221	-	1,146,221
907562 DCA-Leitrim SW Pond 1 Trunk Sewers	9,054,979	3,124,710	5,930,269	3,626,308	2,303,961
907563 DCA-Riverside South SW Pond2 Trunk Sewer	5,306,400	381,425	4,924,975	-	4,924,975
907602 DCA-Glou. EUC SWM Pond 1 Modification	6,863,712	-	6,863,712	-	6,863,712
907603 DCA-Glou. EUC SWM Pond 1 Fish Habitat	1,132,091	-	1,132,091	-	1,132,091
907805 DCA-Riverside South Pond 5	10,353,940	511,760	9,842,180	72,805	9,769,375
907900 DCA-Mud Creek Erosion Monito E3 Glou EUC	250,000	-	250,000	-	250,000

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
907952 DCA-Monahan Drain Strmwter FacilityRehab	2,400,000	907,835	1,492,165	1,301,385	190,780
908385 Utman Park Stormwater Facility	462,800	102	462,698	-	462,698
908386 Taylor Creek Erosion Works Phase 2	278,900	-	278,900	-	278,900
909152 SNDC - Chapman Mills SW Pond	827,000	-	827,000	-	827,000
Growth Total	170,343,580	49,070,009	121,273,570	7,071,398	114,202,172
Service Enhancement					
905792 Manotick Special Des Area SW Monitoring	74,000	-	74,000	-	74,000
906632 Flood Plain Mapping	1,809,000	1,282,336	526,664	187,031	339,633
907102 2013 Infrastruct Master Plan(Stormwater)	250,000	60,184	189,816	156,069	33,747
907103 2013 Stormwater Managment Retrofit	2,000,000	916,061	1,083,939	267,973	815,966
907483 2014 Infrastruct Master Plan(Stormwater)	300,000	142,119	157,881	73,024	84,857
907484 2015 Stormwater Management Retrofit	9,243,000	-	9,243,000	-	9,243,000
908084 ORAP-Water Environment Strategy (WES)PH2	2,011,000	183,060	1,827,940	1,432,151	395,789
908246 2016 Stormwater Management Retrofit	1,000,000	-	1,000,000	-	1,000,000
908440 ORAP-Water Environment Strategy (WES)PH2	1,000,000	-	1,000,000	249,975	750,025
908625 2017 Stormwater Management Retrofit	2,810,000	-	2,810,000	-	2,810,000
909026 ORAP-Water Environment Strategy (WES)PH2	1,000,000	-	1,000,000	-	1,000,000
Service Enhancement Total	21,497,000	2,583,760	18,913,240	2,366,224	16,547,016
Regulatory					
905816 Const. to David Adams Municipal Drain	880,000	755,858	124,142	16,233	107,910
906194 Municipal Drain Improvements	258,000	132,026	125,974	5,377	120,598
907395 Municipal Drain Improvements - 2016	144,500	92,831	51,669	45,622	6,048
907486 Van Gaal Municipal Drain	100,000	54,547	45,453	27,626	17,827
907570 Hazeldean Municipal Drain	51,200	10,637	40,563	40,517	45
907572 Arbuckle Municipal Drain	661,000	438,920	222,080	50,383	171,697
907718 Kizell Municipal Drain	1,816,000	138,970	1,677,030	45,488	1,631,542
907720 Cranberry Creek Municipal Drain	2,385,000	189,631	2,195,369	181,651	2,013,719
908085 Cassidy Municipal Drain	41,500	-	41,500	-	41,500
908087 John Taylor Municipal Drain	50,000	11,034	38,966	26,363	12,602

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908360 Eastboro Municipal Drain	147,500	48,780	98,720	47,737	50,983
908361 Seabrook Municipal Drain	63,100	34,220	28,880	27,694	1,186
908426 Hawkins Municipal Drain	68,300	15,431	52,869	52,868	1
908427 Thomas Baxter Municipal Drain	71,500	10,837	60,663	60,645	19
908443 Municipal Drain Improvements - 2017	-	-	-	-	-
908816 Flowing Creek Municipal Drain	36,600	18,650	17,950	17,593	356
908817 McKinnons Creek Municipal Drain	158,800	47,879	110,921	60,020	50,901
909001 Hobbs Municipal Drain	160,000	41,275	118,725	41,940	76,785
909002 Tompkins Diversion Municipal Drain	75,000	16,522	58,479	37,987	20,491
909028 Municipal Drain Improvements - 2018	557,000	-	557,000	-	557,000
909153 Wilson-Cowan Municipal Drain	80,500	544	79,956	81,208	(1,252)
909170 Kilroe Municipal Drain	75,000	4,187	70,813	68,498	2,314
909171 Thomas Gamble Municipal Drain	75,000	-	75,000	83,269	(8,269)
909172 Tasse-Regimbald Municipal Drain	75,000	10,998	64,002	51,518	12,484
909173 O'Keefe (Sec 78) Municipal Drain	100,000	4,296	95,704	33,514	62,190
909184 Regimbald Municipal Drain	179,500	24,123	155,377	51,202	104,175
909195 Simpson Municipal Drain	155,000	12,952	142,048	66,203	75,844
909196 Wilson-Johnston Municipal Drain	235,000	11,804	223,196	66,874	156,321
909216 Cassidy 2018 Municipal Drain	100,000	-	100,000	-	100,000
909305 Buckles Municipal Drain	80,000	-	80,000	-	80,000
Regulatory Total	8,880,000	2,126,953	6,753,047	1,288,032	5,465,015
Stormwater Services Total	320,672,640	114,271,268	206,401,372	26,292,763	180,108,609
Wastewater Services					
Renewal of City Assets					
903437 ROPEC West Boiler Plant Replacement	670,000	288,065	381,935	26,035	355,899
903438 ROPEC East Boiler Plant Upgrade	200,000	-	200,000	-	200,000
903439 ROPEC Outfall	1,250,000	-	1,250,000	-	1,250,000
904752 DCA-Barhaven S. O/S(South of Jock River)	1,100,000	495,717	604,283	-	604,283

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
904939 ORAP-Wet Weather IMP - Flow Reduction	8,005,000	5,504,605	2,500,395	1,503,340	997,055
905421 DCA-O/S Orleans S Business Park SanSewer	843,000	-	843,000	-	843,000
905423 DCA-O/S - Riverside S Community Sanitary	1,439,000	233	1,438,767	-	1,438,767
905424 DCA-O/S -BarrhavenS Oversize NJock River	600,000	895	599,105	-	599,105
905705 ORAP-Combined Sewage Overflow Storage	209,700,000	92,151,327	117,548,673	107,772,743	9,775,930
905806 Flow Monitoring System Rehab. Program	1,088,000	33,103	1,054,897	-	1,054,897
906099 Trunk Sewer Reliability	3,500,000	289,549	3,210,451	1,356,507	1,853,944
906100 2018 Sanitary Sewer Improvements	930,000	60,958	869,042	527,221	341,821
906186 ROPEC - Sewage Treatment Rehab. Program	7,174,000	7,039,753	134,247	2,272	131,975
906645 ROPEC - Primary Clarifier Upgrades	13,100,000	10,347,451	2,752,549	940,524	1,812,025
906646 ROPEC Aeration Piping & Diffusers Replace	570,000	38,238	531,762	-	531,762
906647 ROPEC Primary Clarifier Rehab Phase 2	16,000,000	1,155,784	14,844,216	418,679	14,425,537
906648 ROPEC - Digester Gas Utilization	2,811,000	10,176	2,800,824	2,199,076	601,748
906650 ROPEC - Process Facility - Environ. Sys	9,676,000	8,545,401	1,130,599	964,693	165,906
906670 ROPEC Treatment Facility Develop. Plan	832,000	769,134	62,866	-	62,866
906671 Collection Sys. Condition Assesment Prog	2,020,000	1,864,775	155,225	152,241	2,983
907060 ROPEC Secondary Clarifier Upgrades	8,296,000	2,971,782	5,324,218	776,701	4,547,516
907061 ROPEC Concrete Rehab & Repairs	825,000	680,540	144,460	99,493	44,967
907381 Wastewater Facilities Upgrades 2014	2,400,000	2,109,013	290,987	196,834	94,154
907382 ROPEC Aeration Blower Expansion	1,265,000	7,365	1,257,635	-	1,257,635
907383 ROPEC Digester Flare Expansion	636,000	-	636,000	-	636,000
907384 ROPEC Sludge Thickening Centrifuge Expan	500,000	-	500,000	-	500,000
907391 ROPEC WAS Pumps Expansion	275,000	-	275,000	-	275,000
907392 Raw Sewage Pumping Station Upgrade	9,206,000	7,516,728	1,689,272	1,390,661	298,611
907393 ROPEC Condition Assesment Program	500,000	91,580	408,420	24,110	384,310
907596 Hazeldean Pumping Station HVAC Rehab	1,520,000	459,395	1,060,605	1,041,053	19,551
907598 Tartan Pumping Station Generator Rehab	610,000	587,894	22,106	5,951	16,156
907599 Richmond Pumping Station Rehab	180,000	-	180,000	-	180,000
907615 Don B. Munroe Pumping Station Rehab	202,000	25,550	176,450	209,906	(33,456)

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
907616 Decommission Cathcart Regulator	200,000	-	200,000	-	200,000
907617 Critical Manholes- Electrical / Mechanic	480,000	-	480,000	-	480,000
907620 Keefer Odour Control Fac.Modification	4,400,000	3,284,075	1,115,925	442,350	673,576
907623 West End Remote Facility Corrosion/Odour	400,000	-	400,000	-	400,000
907624 Wastewater Effluent Water Grid Rehab	2,750,000	1,290,118	1,459,882	302,028	1,157,854
907627 WW Pumping Stations Inflow / Infiltrate	100,000	-	100,000	-	100,000
907629 ROPEC-Sub#1 Switchgear & Sub#2 Transform	261,000	222,939	38,061	8,173	29,888
907630 ROPEC-High Volt Transform Replace/Rehab	200,000	-	200,000	-	200,000
907667 Wastewater Drainage Roofing 2015	40,000	26,445	13,555	41	13,515
907678 Linear Sewage System Improve Prog 2015	500,000	235,825	264,175	6,737	257,438
907679 Sewer Lateral Repairs 2015	7,057,679	5,907,617	1,150,062	807,253	342,810
907682 Wastewater Facilities Upgrade 2015	212,000	211,313	687	-	687
907683 Lab Equipment Purchase/Replacement 2016	600,000	422,628	177,372	-	177,372
907684 ROPEC-Sewage Treatment Rehab Prog 2015	5,716,000	4,654,824	1,061,176	1,037,338	23,837
907685 ROPEC-Concrete Rehab & Repairs 2015	950,000	44,380	905,620	191	905,429
907688 Collection System Condition Assesment	1,000,000	732,872	267,128	120,107	147,021
907689 Flow Monitoring Rehab Program	675,000	85,311	589,689	7,758	581,931
907716 ROPEC Rehab of Digester	16,115,000	4,835,697	11,279,303	481,830	10,797,473
907777 Trenchless Rehab - Sanitary	2,100,000	1,599,121	500,879	125,032	375,846
907807 N5 Sanitary Pumping Station Overflow	948,800	-	948,800	-	948,800
907912 ROPEC Gas Flare Piping Project	800,000	220,928	579,072	-	579,072
907928 Thare Crescent Pumping Station Decommiss	450,000	163,082	286,918	17,836	269,082
907932 Richmond Forcemain Construction	6,800,000	5,109,246	1,690,754	328,147	1,362,607
907940 ROPEC RAS / WAS Ferrous Platform Rehab	168,000	3,819	164,181	-	164,181
907941 Remote Operations - Station Modification	270,000	110,504	159,496	101,765	57,732
907942 Keefer Blofilter Upgrades & Media Replac	360,000	316,038	43,962	11,621	32,341
907961 East End Odour and Corrosion Study	400,000	153,337	246,663	68,629	178,034
908029 South End Remote Facil. Corrosion/Odour	400,000	-	400,000	-	400,000
908083 Wastewater Drainage Roofing 2016	250,000	217,950	32,050	7,959	24,092

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908091 Collection System Condition Assess. 2016	1,000,000	-	1,000,000	67,389	932,611
908093 Linear Sewage System Improve. Prog. 2016	2,000,000	69,154	1,930,846	-	1,930,846
908094 SCADA Rehab & Upgrades - Remote Sewer	1,000,000	-	1,000,000	-	1,000,000
908095 Sewer Lateral Repairs 2016	5,000,000	2,833,472	2,166,529	891,012	1,275,517
908096 Tartan PS Reliability Improvements	250,000	164,741	85,259	66,864	18,395
908098 ROPEC - SCADA Rehab. & Upgrades 2016	492,000	-	492,000	-	492,000
908099 ROPEC - Sewage Treatment Rehab Prog 2016	1,137,000	772,897	364,103	282,855	81,247
908102 Wastewater Facilities Upgrade	500,000	-	500,000	-	500,000
908107 ROPEC Process Facil - Enviro Sys Upgrade	3,787,000	1,576,495	2,210,505	2,211,831	(1,326)
908108 ROPEC Ops & Technical Bldg Space Upgrade	210,000	40,529	169,471	3,299	166,171
908182 2016 Sanitary Sewer Improvements	2,000,000	996,633	1,003,367	1,015,721	(12,354)
908183 Tri-Township Collector	1,500,000	614,153	885,847	387,073	498,775
908184 2016 ORAP-Wet Weather IMP - Flow Reduct.	1,500,000	90,339	1,409,661	522,140	887,521
908250 Infrastructure Planning Information Mgmt	1,230,000	127,701	1,102,299	-	1,102,299
908280 Kanata West Pump Station (KWOE)	947,801	320,896	626,905	139,055	487,849
908330 RS-PS HVAC Boilers & SCADA Upgrade Const	9,609,000	7,801,134	1,807,866	1,826,890	(19,023)
908367 Lees Ave SCADA Tower Rehab	500,000	39,777	460,223	13,679	446,544
908368 WWC PS Gas Monitoring Rehab & Upgrade	1,500,000	226,020	1,273,980	279,063	994,917
908425 ROPEC Screen & Degrit Repairs-Construct.	3,240,000	275,718	2,964,282	2,979,823	(15,541)
908429 ROPEC Digester 5 & 6 Mixing Pump Upgrade	1,000,000	141,352	858,648	188,340	670,308
908446 Collection System Condition Assess.	1,000,000	55,085	944,915	-	944,915
908447 Linear Sewage System Improve. Prog.	800,000	-	800,000	-	800,000
908448 SCADA Rehab & Upgrades-Remote Sewer 2017	2,250,000	43,393	2,206,607	-	2,206,607
908449 Sewer Lateral Repairs 2018	4,000,000	708,114	3,291,886	983,792	2,308,094
908450 Sewage Pumping Station Rehab Prog 2017	2,280,000	601,734	1,678,266	171,206	1,507,060
908451 Lab Equipment Purchase/Replacement 2018	300,000	-	300,000	-	300,000
908452 ROPEC - SCADA Rehab. & Upgrades 2017	2,349,000	104,459	2,244,541	8,937	2,235,604
908453 ROPEC - Sewage Treatment Rehab Prog 2017	2,675,000	1,473,156	1,201,844	960,869	240,974
908454 ROPEC Ops & Technical Bldg Space Upgrade	250,000	-	250,000	-	250,000

City of Ottawa

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

Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908455 ROPEC Process Facil - Enviro Sys Upgrade	500,000	-	500,000	-	500,000
908476 Cumberland #1 PS Decommissioning	300,000	86,591	213,409	7,673	205,736
908513 CWWF Inlet Control - Bilberry/Chatelaine	500,000	111,648	388,352	158,139	230,214
908514 2017 ORAP Wet Weather IMP - Flow Reduct.	1,870,000	59,766	1,810,234	1,398,650	411,584
908521 ROPEC Electrical Master Plan	690,000	434,180	255,820	131,262	124,559
908558 O/S N5 Trunk Sewer Oversizing	60,000	-	60,000	-	60,000
908658 Chemical System Upgrades - Remote WW PS	2,445,000	267,371	2,177,629	1,903,351	274,278
908727 CWWF Inlet Control Devices -Bridlewood N	500,000	386,651	113,349	35,071	78,278
908728 CWWF Inlet Control Devices - Craig Henry	1,600,000	775,423	824,577	391,597	432,980
908729 CWWF Inlet Control Device -Flood Protect	75,000	35,080	39,920	6,568	33,352
908730 CWWF Flood Protection - Bilberry/Chatela	2,600,000	1,107,698	1,492,302	1,447,980	44,322
908731 CWWF Flood Protection - Bridlewood North	3,250,000	735,229	2,514,771	2,395,177	119,593
908732 CWWF Flood Protection - Craig Henry	3,200,000	483,569	2,716,431	2,439,742	276,689
908740 CWWF Wastewater Pumping Stations Light	300,000	9,674	290,326	168,313	122,013
908741 CWWF ROPEC Lighting Upgrades	1,250,000	1,249,613	387	87,198	(86,811)
908742 CWWF [Construct] ROPEC Thicken & Dewater	28,310,000	12,778,775	15,531,225	10,078,222	5,453,003
908785 Cyrville Rd. Pumping Station Upgrades	350,000	304,569	45,431	46,956	(1,526)
908790 Glen Cairn Water Reservoir SCADA Tower	260,000	171,064	88,936	11,566	77,370
908799 ROPEC Substation Structural Rehab.	150,000	114,303	35,697	20,916	14,780
908834 WWS SCADA LAN/WAN Standards Rehab.	575,000	109,663	465,337	236,001	229,336
908836 Pumping Station Capitalized Maintenance	2,000,000	298,703	1,701,297	218,449	1,482,848
908843 Delorme PS & FM Upgrades	1,500,000	227,533	1,272,467	108,185	1,164,282
908845 ROPEC Digester 5 Condition Assessmnt Pln	275,000	122,558	152,442	114,434	38,007
908860 Walkley Biofilter Replacement	1,690,000	331,232	1,358,768	633,014	725,754
908892 ROPEC Activated Sludge Screws Overhaul	2,450,000	753,842	1,696,158	1,605,198	90,960
908902 Shadow Ridge Station Upgrades	2,000,000	28,218	1,971,782	52,632	1,919,150
908904 Decommission West End Pump Stns &Manhole	2,801,500	239,614	2,561,886	385,192	2,176,694
908906 Wastewater SCADA Standards Development	480,000	-	480,000	-	480,000
908912 Woodroffe PS Improvements	485,000	425,789	59,211	71,237	(12,026)

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908983 2018 ORAP Wet Weather IMP - Flow Reducti	500,000	-	500,000	-	500,000
909030 SCADA Rehab & Upgrades-Remote Sewer 2018	1,500,000	-	1,500,000	-	1,500,000
909031 Sewage Pumping Station Rehab Prog 2018	5,248,000	74,202	5,173,798	6,675	5,167,123
909032 ROPEC - SCADA Rehab. & Upgrades 2018	2,100,000	-	2,100,000	-	2,100,000
909033 ROPEC - Sewage Treatment Rehab Prog 2018	1,530,000	571,876	958,124	141,767	816,357
909136 CW Flood Risk Profile	259,165	124,924	134,241	79,300	54,941
909148 Harvard Pumping Station Upgrade Concept.	250,000	72,297	177,703	-	177,703
909149 Acres & Hazeldean Odour Control	400,000	7,009	392,991	-	392,991
909166 Hazeldean PS Primary Switch Replacement	310,000	67,895	242,105	13,435	228,670
909176 Jackson Trail Pump Station Upgrades	720,000	-	720,000	-	720,000
909183 Remote Station PLC Upgrades	250,000	51,402	198,598	-	198,598
909200 Crystal Beach Pump Station Duct Bank	390,000	52,292	337,708	218,849	118,860
909204 Munster Forcemain and Lagoon Upgrades	183,000	76,904	106,096	98,874	7,222
909217 Pumping Stn HVAC & Isolation Valve Rehab	1,690,000	-	1,690,000	-	1,690,000
909219 Munster 2 Reliability Improvements	600,000	26,860	573,140	182,686	390,453
909226 Flow Through Station Rehabs	850,000	-	850,000	336,002	513,998
909245 Forcemain Condition Assessment & Rehab	1,750,000	80,983	1,669,017	64,336	1,604,681
909251 ROPEC RAS/WAS Ferrous System Replacement	750,000	-	750,000	-	750,000
909270 ROPEC Sub#1 Transformers Replacement	200,000	-	200,000	123,595	76,405
909273 Harvard PS Detailed Design & Contract Ad	500,000	-	500,000	-	500,000
Renewal of City Assets Total	499,279,945	214,825,033	284,454,912	161,900,915	122,553,997
Growth					
902200 Servicing Studies Development Program	2,645,016	2,673,541	(28,525)	76,430	(104,955)
903252 DCA-Sanitary Sewer Oversizing Program	1,816,000	604,697	1,211,303	-	1,211,303
903345 Kanata West Pump Station & Forcemain	55,716,000	53,302,392	2,413,608	542,142	1,871,466
904755 2018 Infrastructure Master Plan (Sewer)	525,000	-	525,000	-	525,000
904984 South Nepean Collector Ph2& Decommission	9,428,000	8,367,714	1,060,286	1,019,932	40,354
904985 North Kanata Sewer Ph 2	22,482,000	2,412,868	20,069,132	18,831,309	1,237,823
904986 Tri-Township/March Ridge Replacement	5,622,000	6,810	5,615,190	1,206,913	4,408,277

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
904987 Fernbank Collector Sewer & Oversizing	2,823,000	2,764,307	58,693	-	58,693
904988 March PS Conversion	1,219,000	453,825	765,175	284,782	480,393
905425 DCA-O/S - Kanata Town Centre Trunk Sewer	349,000	-	349,000	-	349,000
905964 DCA-O/S Jackson Trails Sewer	252,000	-	252,000	-	252,000
905990 DCA-O/S Kanata Lakes North	59,000	-	59,000	-	59,000
906022 DCA-O/S KW Collector Sewers	4,338,000	3,363,812	974,188	650,383	323,805
907106 2014 Servicing Studies Development	200,000	6,316	193,684	226,349	(32,665)
907107 Acres Road PS Upgrade	309,000	24,484	284,516	223,401	61,115
907114 Stittsville/Fernbank Intercept-Diversion	20,000,000	1,034,531	18,965,469	318,506	18,646,963
907808 DCA-O/S - Cardinal Creek Village San Sew	379,000	-	379,000	-	379,000
907809 Richmond PS & Forcemain Expansion Phase1	4,502,800	2,463,582	2,039,218	175,598	1,863,620
907840 FEA2018 Shea Road Pump Station	3,359,000	-	3,359,000	-	3,359,000
907897 DCA-Cardinal Creek East Sanitary Ovrsize	75,000	-	75,000	-	75,000
908624 2017 Infrastructure Master Plan (Sewer)	513,000	33,823	479,177	225,951	253,227
908767 FEA2018-Richmond Sanitary Trunk Sewer	2,838,200	-	2,838,200	-	2,838,200
909072 Leitrim Sanitary Pump Station Expansion	90,000	-	90,000	-	90,000
909199 Johnwoods Bypass Sanitary Sewer	198,500	-	198,500	-	198,500
Growth Total	139,738,516	77,512,703	62,225,813	23,781,695	38,444,118
Service Enhancement					
905745 Compassionate Grant Program	200,000	50,000	150,000	-	150,000
906842 TSSA Registration & Compliance Upgrades	2,293,000	1,217,318	1,075,682	55,427	1,020,256
907597 WWS Remote Pump Stns Arc Flash Study	350,000	262,194	87,806	38,242	49,564
908090 Water Env Protec Short Term Initiatives	150,000	-	150,000	-	150,000
908105 2016 Infrastructure Master Plan (Sewer)	284,000	166,125	117,875	-	117,875
908660 Sewer Use Prog-Short Term Initiatives	200,000	-	200,000	93,572	106,428
Service Enhancement Total	3,477,000	1,695,637	1,781,363	187,241	1,594,122
Regulatory					
907658 ROPEC-Working SafelyAbove Floor Level	1,800,000	61,502	1,738,498	-	1,738,498
907676 Protective Plumbing Program 2015	1,000,000	918,690	81,310	131,562	(50,252)

City of Ottawa
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Works-In-Progress

Project Description	Total Authority	Total Expenditures as of September 30th, 2018	Unspent Cash Balance as of September 30th, 2018	Total Contractual Obligations	Unspent/ Uncommitted Balance as of September 30th, 2018
908089 Protective Plumbing Program 2016	1,000,000	3,373	996,627	51,640	944,987
908444 Protective Plumbing Program 2017	1,000,000	-	1,000,000	-	1,000,000
908874 ROPEC Fire Damper Rehab	500,000	289,974	210,026	85,128	124,898
909029 Protective Plumbing Program 2018	600,000	-	600,000	-	600,000
909128 ROPEC Digester 5&6 Expansion Joint Repl.	635,000	61,244	573,756	367,683	206,073
909158 ROPEC RSPS Motor & Drive Rehab.	1,000,000	78,102	921,898	139,713	782,185
909187 ROPEC Screen & Degrit Conveyor Replacmnt	250,000	88,820	161,180	125,942	35,238
909203 Tech Services Bldg Chiller Piping Repl.	200,000	-	200,000	54,055	145,945
909215 ROPEC Floor Load Study	150,000	34,889	115,111	56,421	58,690
909218 ROPEC Master Schedule-Reval	300,000	2,630	297,370	141,212	156,157
909225 Primary Clarifiers Odour Control System	1,750,000	20,218	1,729,782	185,180	1,544,602
909258 ROPEC RSPS Interior Wall Condition Asses	350,000	-	350,000	6,290	343,710
909276 ROPEC diesel generators maint. contract	250,000	-	250,000	147,241	102,759
909295 Screen and Degrit Hydraulic Study	200,000	-	200,000	-	200,000
Regulatory Total	10,985,000	1,559,442	9,425,558	1,492,067	7,933,491
Wastewater Services Total	653,480,461	295,592,815	357,887,646	187,361,919	170,525,728
Grand Total	1,451,260,589	611,886,865	839,373,724	257,868,876	581,504,848