



Draft **BUDGET** 2022

**Pathway to recovery:
Investing in our people
and communities**

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

Tabled November 3, 2021



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Public Works & Environmental Services Department

2022 Service Area Summary - Drinking Water Services

Drinking Water Services is responsible for the production and distribution of safe, high-quality drinking water through the operation and maintenance of the Ottawa's water supply. The central system includes the Britannia and Lemieux Island Water Purification Plants and treated water from both plants is pumped into a vast water distribution network that includes 16 pumping stations, 5 reservoirs, 4 elevated tanks, and 3,800 km of watermain pipes. In addition, the City operates six municipal well systems: Carp Drinking Water System, Kings Park (Richmond) Drinking Water System, Munster Hamlet Drinking Water System, Richmond West (Richmond) Drinking Water System, Shadow Ridge (Greely) Drinking Water System and Vars Drinking Water System.

Programs/Services Offered

- Day to day operations and maintenance for treatment plants, pump stations, reservoirs, tanks, and well systems
- Operation of a dedicated computer-control (SCADA) system to monitor all water operations 24/7
- Compliance with all drinking water regulations, inspections, audits, and operator certification requirements
- Distribution system operation, inspection and maintenance (pipe disinfection, system isolation, connections, repairs) for approximately 3,800 km of watermains and 58,000 valves
- Emergency and scheduled repair of watermain breaks throughout distribution system ~250 break repairs per year
- First Response - 24 hour per day response for residents with drinking water and wastewater concerns
- Provision of fire protection through inspection, maintenance and repair of over 23,000 public fire hydrants
- Maintaining the City's accreditation as an Operating Authority for the Drinking Water Quality Management System
- Process optimization, research, and continual improvements to the water treatment process
- Water quality sampling, testing, monitoring, and reporting of 100,000 tests per year for quality assurance
- Customer service for on-site water quality testing, complaints, water meters, inquiries, etc.
- Technical and operational support for capital infrastructure renewal and development projects
- Participation in water industry activities and organizations (committees, university research, advisory councils, etc.)

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

	2020	2021		2022	\$ Change over 2021 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Water Operations	55,792	57,247	59,162	61,022	1,860
Technical Innovation & Engineering Support Services	7,525	7,641	7,529	7,819	290
Business & Technical Support Services	1,535	1,363	1,340	1,365	25
Non Departmental	122,973	128,602	128,602	132,079	3,477
Gross Expenditure	187,825	194,853	196,633	202,285	5,652
Recoveries & Allocations	-3,991	-3,576	-2,942	-2,942	0
Revenue	-188,193	-194,775	-193,691	-199,343	-5,652
Net Requirement	-4,359	-3,498	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	32,001	31,954	33,512	34,712	1,200
Overtime	1,131	1,576	1,976	1,996	20
Material & Services	19,304	19,838	20,618	21,073	455
Transfers/Grants/Financial Charges	99,853	103,200	103,210	106,449	3,239
Fleet Costs	2,997	3,232	3,337	3,337	0
Program Facility Costs	0	0	0	0	0
Other Internal Costs	32,539	35,053	33,980	34,718	738
Gross Expenditures	187,825	194,853	196,633	202,285	5,652
Recoveries & Allocations	-3,991	-3,576	-2,942	-2,942	0
Net Expenditure	183,834	191,277	193,691	199,343	5,652
Revenues By Type					
Federal	0	0	0	0	0
Provincial	0	0	0	0	0
Own Funds	-1,724	-1,718	-1,718	-650	1,068
Fees and Services	-186,469	-193,057	-191,973	-198,693	-6,720
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-188,193	-194,775	-193,691	-199,343	-5,652
Net Requirement	-4,359	-3,498	0	0	0
Full Time Equivalents			307.27	314.77	7.50

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Water Services Connection							-25
All sizes of Service Pipe							
Cost plus 15%, hourly	147.00	150.00	153.00	2.0%	4.1%	01-Jan-22	
Additional visit (service connection 20 mm-50 mm) - Cost plus 15%, hourly (new fee)	147.00	150.00	153.00	2.0%	4.1%	01-Jan-22	
Additional visit (service connection > 50 mm) - Cost plus 15%, hourly (new fee)	211.00	215.00	219.00	1.9%	3.8%	01-Jan-22	
Private service connection - Cost plus 15%, hourly (new fee)	147.00	150.00	153.00	2.0%	4.1%	01-Jan-22	
Services							
All Thawing of Services							
Cost plus 15%, hourly	179.00	185.00	191.00	3.2%	6.7%	01-Jan-22	
Fire Flow Test Support	266.00	271.00	276.00	1.8%	3.8%	01-Jan-22	
Service Charges							
Turn water services off and on for non payment	196.00	202.00	208.00	3.0%	6.1%	01-Jan-22	
Turn off or on of water services (per operation)	98.00	101.00	104.00	3.0%	6.1%	01-Jan-22	
Permit for Flusher Hydrant Usage	282.00	288.00	297.00	3.1%	5.3%	01-Jan-22	
Blanking of Water Services							
All sizes	Cost plus 15% \$4,000.00 deposit	Cost plus 15% \$4,000.00 deposit	Cost plus 15% \$4,000.00 deposit			01-Jan-22	
Inspection Fees (Inspection of activities connected to the water distribution system)							
All new watermains and services that don't require full disinfection	208.00	212.00	216.00	1.9%	3.8%	01-Jan-22	
All new watermains and services up to 50m long that require full disinfection	618.00	630.00	643.00	2.1%	4.0%	01-Jan-22	
All new watermains and services over 50m long that require full disinfection	Cost plus 15%	Cost plus 15%	Cost plus 15%			01-Jan-22	

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Meter Service Charges							
Inspection/Re-Inspection for New Water Meters (<= 20 mm meter)	102.00	106.00	109.00	2.8%	6.9%	01-Jan-22	
Meter Maintenance Service Call	175.00	181.00	186.00	2.8%	6.3%	01-Jan-22	
Water Meter Accuracy Test (<= 25 mm meter)	144.00	149.00	153.00	2.7%	6.3%	01-Jan-22	
Water Meter Accuracy Test (> 25 mm meter) (New in 2019)	193.00	199.00	205.00	3.0%	6.2%	01-Jan-22	
Additional visits (<= 25 mm meter)	68.00	70.00	72.00	2.9%	5.9%	01-Jan-22	
Additional visits (large meters greater than 25 mm)	113.00	117.00	121.00	3.4%	7.1%	01-Jan-22	
Additional visits (fire line meters)	213.00	220.00	227.00	3.2%	6.6%	01-Jan-22	
Manual Meter Reading Fee	40.00	41.00	42.00	2.4%	5.0%	01-Jan-22	
New Water Meters							
Size of Meter							
15 mm Pos. Disp.	381.00	400.00	412.00	3.0%	8.1%	01-Jan-22	
15 mm Pos. Disp.(Carlsbad only)	582.00	602.00	620.00	3.0%	6.5%	01-Jan-22	
20 mm Pos. Disp.	428.00	443.00	456.00	2.9%	6.5%	01-Jan-22	
25 mm Pos. Disp.	503.00	521.00	537.00	3.1%	6.8%	01-Jan-22	
40 mm Pos. Disp.	937.00	970.00	999.00	3.0%	6.6%	01-Jan-22	
50 mm Pos. Disp.	1,040.00	1,077.00	1,109.00	3.0%	6.6%	01-Jan-22	
75 mm Magnetic	2,560.00	2,335.00	2,405.00	3.0%	-6.1%	01-Jan-22	
75 mm Ultrasonic	3,739.00	3,292.00	3,391.00	3.0%	-9.3%	01-Jan-22	
100 mm Magnetic	3,126.00	2,836.00	2,921.00	3.0%	-6.6%	01-Jan-22	
100 mm Ultrasonic	4,918.00	3,753.00	3,866.00	3.0%	-21.4%	01-Jan-22	
150 mm Magnetic	5,150.00	5,230.00	5,387.00	3.0%	4.6%	01-Jan-22	
150 mm Ultrasonic	7,931.00	5,641.00	5,810.00	3.0%	-26.7%	01-Jan-22	
Fire Line Meter Assembly - Cost plus 15%, hourly	215.00	223.00	230.00	3.1%	7.0%	01-Jan-22	

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Replacement Water Meters							
Size of Meter							
15 mm Pos. Disp.	279.00	289.00	298.00	3.1%	6.8%	01-Jan-22	
15 mm Pos. Disp.(Carlsbad only)	284.00	294.00	303.00	3.1%	6.7%	01-Jan-22	
20 mm Pos. Disp.	322.00	333.00	343.00	3.0%	6.5%	01-Jan-22	
25 mm Pos. Disp.	398.00	412.00	424.00	2.9%	6.5%	01-Jan-22	
40 mm Pos. Disp.	796.00	824.00	849.00	3.0%	6.7%	01-Jan-22	
50 mm Pos. Disp.	903.00	935.00	963.00	3.0%	6.6%	01-Jan-22	
75 mm Magnetic	2,421.00	2,096.00	2,159.00	3.0%	-10.8%	01-Jan-22	
75 mm Ultrasonic	3,533.00	3,051.00	3,143.00	3.0%	-11.0%	01-Jan-22	
100 mm Magnetic	2,992.00	2,595.00	2,673.00	3.0%	-10.7%	01-Jan-22	
100 mm Ultrasonic	4,717.00	3,512.00	3,617.00	3.0%	-23.3%	01-Jan-22	
150 mm Magnetic	4,929.00	4,998.00	5,148.00	3.0%	4.4%	01-Jan-22	
150 mm Ultrasonic	7,648.00	5,400.00	5,562.00	3.0%	-27.3%	01-Jan-22	
Temporary removal and installation of meter	143.00	150.00	155.00	3.3%	8.4%	01-Jan-22	
City water meter reading device (new or damaged) replacement	219.00	227.00	234.00	3.1%	6.8%	01-Jan-22	
City water meter reading device and/or water meter reader wire re-location	173.00	179.00	184.00	2.8%	6.4%	01-Jan-22	
Total for all fees above							-25

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Non Departmental							-5,198
Distribution of Drinking Water							
Variable Rate - per cubic meter water consumed							
0 - 6 m3	0.83	0.85	0.88	2.9%	6.1%	01-Apr-22	
>6 - 25 m3	1.65	1.70	1.75	3.0%	6.1%	01-Apr-22	
>25 - 180 m3	1.82	1.87	1.93	2.9%	6.1%	01-Apr-22	
>180 m3	2.03	2.09	2.15	3.0%	6.0%	01-Apr-22	
Daily Fixed Fee Rates - per meter size							
15 mm	0.34	0.35	0.36	2.8%	5.9%	01-Apr-22	
20 mm	0.49	0.50	0.51	2.9%	5.0%	01-Apr-22	
25 mm	0.82	0.84	0.86	2.5%	5.0%	01-Apr-22	
40 mm	1.64	1.67	1.72	2.5%	4.4%	01-Apr-22	
50 mm	2.61	2.66	2.74	2.9%	4.8%	01-Apr-22	
75 mm	4.91	5.01	5.14	2.7%	4.7%	01-Apr-22	
100 mm	8.19	8.35	8.57	2.6%	4.7%	01-Apr-22	
150 mm	16.36	16.69	17.15	2.8%	4.8%	01-Apr-22	
200 mm	26.19	26.71	27.44	2.7%	4.8%	01-Apr-22	
250 mm	37.65	38.40	39.44	2.7%	4.8%	01-Apr-22	
300 mm	70.39	71.80	73.74	2.7%	N/A	01-Apr-22	
Compound Meter	1.54	1.58	1.62	3.0%	5.1%	01-Apr-22	

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Fire Supply Charge							-500
Annual cost - per meter size							
15 mm meter	48.15	49.11	50.59	3.0%	5.1%	01-Apr-22	
20 mm meter	85.61	87.32	89.94	3.0%	5.1%	01-Apr-22	
25 mm meter	133.77	136.45	140.54	3.0%	5.1%	01-Apr-22	
40 mm meter	342.44	349.29	359.76	3.0%	5.1%	01-Apr-22	
50 mm meter	535.07	545.77	562.14	3.0%	5.1%	01-Apr-22	
75 mm meter	1,203.89	1,227.97	1,264.81	3.0%	5.1%	01-Apr-22	
100 mm meter	2,140.25	2,183.05	2,248.55	3.0%	5.1%	01-Apr-22	
150 mm meter	4,815.57	4,911.88	5,059.23	3.0%	5.1%	01-Apr-22	
200 mm meter	8,561.01	8,732.23	8,994.19	3.0%	5.1%	01-Apr-22	
250 mm meter	13,376.57	13,644.11	14,053.43	3.0%	5.1%	01-Apr-22	
Total Departmental							-5,748

Public Works & Environmental Services Department

2022 Service Area Summary - Wastewater Services

Wastewater Services is responsible for the management, operations, and maintenance of the wastewater collection system and treatment plant. The collection systems include sanitary, combined, storm sewers and facilities. The City's wastewater is treated at the Robert O. Pickard Environmental Centre (ROPEC) to ensure minimal environmental impact upon re-entry to the Ottawa River. This includes comprehensive maintenance and operation within regulatory framework, and an environmentally sound management of facilities and collection systems. Wastewater Treatment is also responsible for maintenance, operation and repairs of the Supervisory control and data acquisition (SCADA) system and ROPEC.

Programs/Services Offered

- Operation and maintenance (including cleaning, inspection, and repair) of the wastewater collection system, comprised of over 5,953 km of sanitary, combined, and storm pipes, 94,636 maintenance holes, 103,872 catch basins, and 1,777 stormwater outlets
- Operation and maintenance of 91 facilities including sanitary sewage and storm water pumping stations, combined sewage regulators/storage facilities (including the Combined Sewage Storage Tunnel), odour control facilities and ROPEC, where all the City's wastewater is treated
- Sewer Use By-law compliance, monitoring, and enforcement, to ensure discharges into the sewer system are within regulatory limits
- Compliance with all wastewater regulations, inspections, audits, and operator certification requirements
- SCADA and communication systems maintenance and operation
- Operational support for capital infrastructure rehabilitation, renewal and development projects, including upgrades to ROPEC facility
- Quality assurance, compliance management and reporting
- Process optimization, and continual improvements to the wastewater collection system and treatment process

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

	2020	2021		2022	\$ Change over 2021 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Wastewater Operations	47,859	50,110	46,217	50,802	4,585
Biosolids	4,570	4,554	4,554	4,554	0
Technical Innovation & Engineering Support	6,092	6,757	6,154	6,389	235
Business & Technical Support Services	208	58	0	0	0
Non Departmental	111,519	117,763	117,763	120,701	2,938
Gross Expenditure	170,248	179,242	174,688	182,446	7,758
Recoveries & Allocations	-16,692	-14,419	-12,706	-13,206	-500
Revenue	-153,361	-161,995	-161,982	-169,240	-7,258
Net Requirement	195	2,828	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	24,309	26,209	24,188	25,932	1,744
Overtime	699	929	929	945	16
Material & Services	29,390	29,954	27,929	30,989	3,060
Transfers/Grants/Financial Charges	92,768	97,500	97,500	100,354	2,854
Fleet Costs	1,631	1,748	1,511	1,511	0
Program Facility Costs	0	0	0	0	0
Other Internal Costs	21,451	22,902	22,631	22,715	84
Gross Expenditures	170,248	179,242	174,688	182,446	7,758
Recoveries & Allocations	-16,692	-14,419	-12,706	-13,206	-500
Net Expenditure	153,556	164,823	161,982	169,240	7,258
Revenues By Type					
Federal	0	0	0	0	0
Provincial	0	0	0	0	0
Own Funds	-4,476	-4,477	-4,477	-4,725	-248
Fees and Services	-148,885	-157,518	-157,505	-164,515	-7,010
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-153,361	-161,995	-161,982	-169,240	-7,258
Net Requirement	195	2,828	0	0	0
Full Time Equivalent			229.15	234.65	5.50

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Sanitary Sewer Systems							-15
Sewer Use Program - Disposal Fees							
Septic Tank Strength Liquid Material (per cubic meter)	16.77	17.10	17.10	0.0%	2.0%	01-Jan-22	
Holding Tank Strength Liquid Material (per cubic metre)	3.60	3.67	3.67	0.0%	2.0%	01-Jan-22	
Liquid Material Generated Outside the City of Ottawa (per cubic metre)	29.22	29.81	29.81	0.0%	2.0%	01-Jan-22	
Sewer Use Program - Permit Fees		-	-				
Annual Permit Fee	285.00	291.00	355.00	22.0%	24.6%	01-Jan-22	
Annual Permit Revision Fee	160.00	163.00	143.00	-12.3%	-10.6%	01-Jan-22	
Sewer Use Program - Discharge Fees		-	-				
Conveyance Fee	1.58	1.64	1.71	4.0%	8.2%	01-Jan-22	
Treatment Fee	0.98	1.02	1.06	4.0%	8.2%	01-Jan-22	
Sewer Use Program - Discharge Fees - Parameters in Sewage							
Biochemical Oxygen Demand (per kg)	1.66	1.66	1.66	0.0%	0.0%	01-Jan-22	
Suspended Solids (per kg)	0.88	0.88	0.88	0.0%	0.0%	01-Jan-22	
Phenolic Compounds (per kg)	1.66	1.66	1.66	0.0%	0.0%	01-Jan-22	
Kjeldahl Nitrogen (per kg)	6.60	6.60	6.60	0.0%	0.0%	01-Jan-22	
Phosphorus (per kg)	2.66	2.66	2.66	0.0%	0.0%	01-Jan-22	
Sewer Use Program - Administrative Fees							
Special Discharge Agreement Fee	1,107.00	1,129.00	1,482.00	31.3%	33.9%	01-Jan-22	
Sanitary Sewer Agreement Fee	788.00	804.00	744.00	-7.5%	-5.6%	01-Jan-22	
Compliance Program Fee	1,107.00	1,129.00	1,399.00	23.9%	26.4%	01-Jan-22	
Combined Agreement Fee	1,107.00	1,129.00	1,416.00	25.4%	27.9%	01-Jan-22	
Sanitary Discharge Agreement Revision Fee							
	238.00	243.00	292.00	20.2%	22.7%	01-Jan-22	
Combined Agreement Revision Fee	238.00	243.00	292.00	20.2%	22.7%	01-Jan-22	
Sanitary Sewer Agreement Revision Fee (per revision)	118.00	120.00	367.00	205.8%	211.0%	01-Jan-22	
Compliance Program Revision Fee (per revision)	238.00	243.00	292.00	20.2%	22.7%	01-Jan-22	

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Non Departmental							-6,173
Sewer Surcharge for Sanitary Sewer Systems							
Variable Rate - per cubic meter water consumed							
0 - 6 m3	0.745	0.78	0.81	4.0%	8.2%	01-Apr-22	
>6 - 25 m3	1.491	1.55	1.61	4.0%	8.1%	01-Apr-22	
>25 - 180 m3	1.651	1.72	1.77	4.0%	7.4%	01-Apr-22	
>180 m3	1.848	1.92	2.00	4.0%	8.1%	01-Apr-22	
Daily Fixed Fee Rates - per meter size							
15 mm	0.288	0.30	0.31	3.9%	7.5%	01-Apr-22	
20 mm	0.441	0.45	0.47	3.9%	6.3%	01-Apr-22	
25 mm	0.729	0.75	0.78	3.9%	6.7%	01-Apr-22	
40 mm	1.469	1.51	1.56	3.7%	6.5%	01-Apr-22	
50 mm	2.350	2.41	2.50	3.8%	6.5%	01-Apr-22	
75 mm	4.403	4.51	4.69	3.9%	6.6%	01-Apr-22	
100 mm	7.337	7.53	7.82	3.8%	6.6%	01-Apr-22	
150 mm	14.680	15.06	15.64	3.8%	6.5%	01-Apr-22	
200 mm	23.490	24.10	25.02	3.8%	6.5%	01-Apr-22	
250 mm	33.770	34.65	35.97	3.8%	6.5%	01-Apr-22	
Compound Meter	1.457	1.49	1.55	4.0%	6.6%	01-Apr-22	
Total Departmental							-6,188

Public Works & Environmental Services Department

2022 Service Area Summary – Stormwater, Laboratory and Municipal Drainage Services

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

Programs/Services Offered

- Operation, maintenance, and inspection of all municipal stormwater management facilities including: 133 wet ponds, 100 dry ponds, 83 underground stormwater treatment facilities
- Operation, maintenance, and inspection of low impact development stormwater infrastructure (commonly referred to as green infrastructure) that supports environmental conservation and protection of water quality
- Operation and maintenance of the City's rain-gauge monitoring network
- Water quality monitoring within Ottawa's major rivers to assess the environmental effects of regulated municipal infrastructure
- Management and maintenance of laboratory license and accreditation requirements and renewals as required through the Ministry of the Environment, Conservation and Parks and the Accreditation Body (Canadian Association of Laboratory)
- Inspection and maintenance, improvement, modification, and construction of all municipal drains to ensure compliance with the *Drainage Act, R.S.O. 1990. c. D. 17*
- Administration and investigation of drainage issues related to City-owned drainage easements and private property, outside the Road Right-of-Way (ROW) in support of the *Site Alteration By-law 2018-164*
- Recovery of costs related to the administration of the *Drainage Act, R.S.O. 1990. c. D. 17* through provincial grants and assessments

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

	2020	2021		2022	\$ Change over 2021 Budget
	Actual	Forecast	Budget	Estimate	
Expenditures by Program					
Stormwater Operations	13,071	11,020	11,739	11,944	205
Technical Innovation & Engineering Support	1,222	409	409	409	0
Business & Technical Support Services	379	354	354	354	0
Non Departmental	46,173	53,313	53,313	62,749	9,436
Gross Expenditure	60,845	65,096	65,815	75,456	9,641
Recoveries & Allocations	-1,391	-1,767	-1,767	-1,767	0
Revenue	-59,018	-64,778	-64,048	-73,689	-9,641
Net Requirement	436	-1,449	0	0	0
Expenditures by Type					
Salaries, Wages & Benefits	4,795	5,132	4,886	4,990	104
Overtime	5	9	60	61	1
Material & Services	1,985	1,257	2,354	2,454	100
Transfers/Grants/Financial Charges	33,220	39,664	39,664	49,042	9,378
Fleet Costs	228	230	230	230	0
Program Facility Costs	0	0	0	0	0
Other Internal Costs	20,612	18,804	18,621	18,679	58
Gross Expenditures	60,845	65,096	65,815	75,456	9,641
Recoveries & Allocations	-1,391	-1,767	-1,767	-1,767	0
Net Expenditure	59,454	63,329	64,048	73,689	9,641
Revenues By Type					
Federal	0	0	0	0	0
Provincial	-219	-145	-145	-145	0
Own Funds	0	0	0	0	0
Fees and Services	-58,799	-64,633	-63,903	-73,544	-9,641
Fines	0	0	0	0	0
Other	0	0	0	0	0
Total Revenue	-59,018	-64,778	-64,048	-73,689	-9,641
Net Requirement	436	-1,449	0	0	0
Full Time Equivalents			46.02	46.02	0.00

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Laboratory Services (Tests)							
Alkalinity, PH, Conductivity	11.03	11.25	11.48	2.0%	4.1%	01-Jan-22	
Alkalinity Brinkman (wastewater)	16.60	16.93	17.27	2.0%	4.0%	01-Jan-22	
Biochemical Oxygen Demand	18.15	18.51	18.88	2.0%	4.0%	01-Jan-22	
Carbonaceous Biochemical Demand	18.15	18.51	18.88	2.0%	4.0%	01-Jan-22	
Chloride	12.70	13.16	13.42	2.0%	5.7%	01-Jan-22	
Chemical Oxygen Demand	11.79	12.03	12.27	2.0%	4.1%	01-Jan-22	
Conductivity	11.03	11.25	11.48	2.0%	4.1%	01-Jan-22	
Dissolved Organic Carbon	15.58	15.89	16.21	2.0%	4.0%	01-Jan-22	
E. coli (wastewater)	12.41	12.66	12.91	2.0%	4.0%	01-Jan-22	
Fluoride (SIE)	17.80	18.16	18.52	2.0%	4.0%	01-Jan-22	
Heterotrophic Plate	13.19	13.45	13.72	2.0%	4.0%	01-Jan-22	
Halo Acetic Acid	141.72	144.55	147.44	2.0%	4.0%	01-Jan-22	
ICP-OES Industrial Waste - 28 elements	28.04	28.60	29.17	2.0%	4.0%	01-Jan-22	
ICP-OES Metals Scan - 5 elements	14.52	14.81	15.11	2.0%	4.1%	01-Jan-22	
ICP-OES Metal Scan - 28 elements	24.31	24.80	25.30	2.0%	4.1%	01-Jan-22	
ICP/MS Metal Scan SW/DW - 27 elements	39.19	39.97	40.77	2.0%	4.0%	01-Jan-22	
ICP/MS Lead DW	14.52	14.81	15.11	2.0%	4.1%	01-Jan-22	
Ammonia - Surface/Waste Water	11.03	11.29	11.52	2.0%	4.4%	01-Jan-22	
Ion Chromatography	17.80	18.16	18.52	2.0%	4.0%	01-Jan-22	
Mercury	36.07	36.79	37.53	2.0%	4.0%	01-Jan-22	
Nitrates	12.70	13.16	13.42	2.0%	5.7%	01-Jan-22	
PH	11.03	11.25	11.48	2.0%	4.1%	01-Jan-22	
Reactive Phosphorus	11.03	11.29	11.52	2.0%	4.4%	01-Jan-22	
Soluble Biochemical Oxygen Demand	19.17	19.55	19.94	2.0%	4.0%	01-Jan-22	
Soluble Carbonaceous Biochemical Oxygen Demand	19.17	19.55	19.94	2.0%	4.0%	01-Jan-22	
Soluble Chemical Oxygen Demand	12.81	13.07	13.33	2.0%	4.1%	01-Jan-22	
Specific gravity	22.95	23.41	23.88	2.0%	4.1%	01-Jan-22	
Sulphate	12.70	13.16	13.42	2.0%	5.7%	01-Jan-22	
Soluble Phosphorus	16.03	16.35	16.68	2.0%	4.1%	01-Jan-22	
Soluble Kjeldahl Nitrogen	16.03	16.35	16.68	2.0%	4.1%	01-Jan-22	

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Laboratory Services (Tests) cont'd							
Total Coliforms - E-Coli (DC)	11.43	11.66	11.89	2.0%	4.0%	01-Jan-22	
Total Coliforms - E-Coli (PA)	21.52	21.95	22.39	2.0%	4.0%	01-Jan-22	
Total Coliforms - E-Coli (MPN)	22.45	22.90	23.36	2.0%	4.1%	01-Jan-22	
Total Kjeldahl Nitrogen	15.01	15.35	15.66	2.0%	4.3%	01-Jan-22	
Total Phosphorus	15.01	15.35	15.66	2.0%	4.3%	01-Jan-22	
Total Solid - Waste Water	11.61	11.84	12.08	2.0%	4.0%	01-Jan-22	
Total Solid - Solid	11.61	11.84	12.08	2.0%	4.0%	01-Jan-22	
Total Suspended Solid	10.84	11.06	11.28	2.0%	4.1%	01-Jan-22	
Trihalomethane/VOC Full Scan	65.59	66.90	68.24	2.0%	4.0%	01-Jan-22	
Volatile Acids	40.38	41.19	42.01	2.0%	4.0%	01-Jan-22	
Volatile Solids - Waste Water	12.35	12.60	12.85	2.0%	4.0%	01-Jan-22	
Volatile Solids - Solids	12.58	12.83	13.09	2.0%	4.1%	01-Jan-22	
Volatile Suspended Solid (Water)	12.52	12.77	13.03	2.0%	4.1%	01-Jan-22	
Drinking Water Anion (Chloride, fluoride, nitrite and nitrate, sulphate)	17.80	18.16	18.52	2.0%	4.0%	01-Jan-22	
Total Nutrients (Ammonia + Ammonia, Reactive Phosphorus)	12.05	12.29	12.54	2.0%	4.1%	01-Jan-22	
TKN/TP (Total Kjeldahl Nitrogen, Total Phosphorus)	16.03	16.35	16.68	2.0%	4.1%	01-Jan-22	
Increase to rates for various lab tests listed above							-15

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
Non Departmental							
Annual Stormwater Service Fees							
Residential Connected							
Urban Single/Semi	140.65	154.80	167.30	8.1%	18.9%	01-Apr-22	-7,868
Rural Single/Semi	140.65	154.80	167.30	8.1%	18.9%	01-Apr-22	
Urban Townhouse/Apt	70.33	77.40	83.65	8.1%	18.9%	01-Apr-22	
Rural Townhouse/Apt	70.33	77.40	83.65	8.1%	18.9%	01-Apr-22	
Residential Non-Connected							
Urban Single/Semi	98.46	108.36	117.11	8.1%	18.9%	01-Apr-22	
Rural Single/Semi	70.33	77.40	83.65	8.1%	18.9%	01-Apr-22	
Urban Townhouse/Apt	49.23	54.18	58.55	8.1%	18.9%	01-Apr-22	
Rural Townhouse/Apt	35.16	38.70	41.82	8.1%	18.9%	01-Apr-22	
Industrial, Commercial and Institutional (ICI)							
ICI Connected Urban and Rural							
0 to 300K Assessment	65.86	72.53	78.39	8.1%	19.0%	01-Apr-22	
>300K to 1M Assessment	311.68	343.25	370.98	8.1%	19.0%	01-Apr-22	
>1M to 5M Assessment	1,162.57	1,280.30	1,383.74	8.1%	19.0%	01-Apr-22	
>5M to 20M Assessment	5,096.62	5,612.78	6,066.24	8.1%	19.0%	01-Apr-22	
>20M to 50M Assessment	15,426.69	16,989.02	18,361.58	8.1%	19.0%	01-Apr-22	
>50M to 100M Assessment	37,232.17	41,002.82	44,315.49	8.1%	19.0%	01-Apr-22	
>100M to 150M Assessment	62,453.81	68,778.77	74,335.48	8.1%	19.0%	01-Apr-22	
>150M Assessment	132,255.61	145,649.67	157,416.88	8.1%	19.0%	01-Apr-22	

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

	2020 Rate \$	2021 Rate \$	2022 Rate \$	% Change Over 2021	% Change Over 2020	Effective Date	2022 Revenue (\$000)
ICI Non-Connected - Urban							
0 to 300K Assessment	65.86	72.53	78.39	8.1%	19.0%	01-Apr-22	
>300K to 1M Assessment	311.68	343.25	370.98	8.1%	19.0%	01-Apr-22	
>1M to 5M Assessment	1,162.57	1,280.30	1,383.74	8.1%	19.0%	01-Apr-22	
>5M to 20M Assessment	5,096.62	5,612.78	6,066.24	8.1%	19.0%	01-Apr-22	
>20M to 50M Assessment	15,426.69	16,989.02	18,361.58	8.1%	19.0%	01-Apr-22	
>50M to 100M Assessment	37,232.17	41,002.82	44,315.49	8.1%	19.0%	01-Apr-22	
>100M to 150M Assessment	62,453.81	68,778.77	74,335.48	8.1%	19.0%	01-Apr-22	
>150M Assessment	132,255.61	145,649.67	157,416.88	8.1%	19.0%	01-Apr-22	
ICI Non-Connected - Rural							
0 to 300K Assessment	46.10	50.77	54.87	8.1%	19.0%	01-Apr-22	
>300K to 1M Assessment	218.18	240.27	259.68	8.1%	19.0%	01-Apr-22	
>1M to 5M Assessment	813.80	896.21	968.62	8.1%	19.0%	01-Apr-22	
>5M to 20M Assessment	3,567.64	3,928.94	4,246.37	8.1%	19.0%	01-Apr-22	
>20M to 50M Assessment	10,798.69	11,892.31	12,853.11	8.1%	19.0%	01-Apr-22	
>50M to 100M Assessment	26,062.52	28,701.98	31,020.84	8.1%	19.0%	01-Apr-22	
>100M to 150M Assessment	43,717.67	48,145.14	52,034.84	8.1%	19.0%	01-Apr-22	
>150M Assessment	92,578.92	101,954.77	110,191.82	8.1%	19.0%	01-Apr-22	
Total Departmental							-7,883

City Of Ottawa
2022 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Grand Total
Drinking Water Services						
Renewal of City Assets						
906665 Lemieux WPP Intake Ice Mgmt	0	0	0	14,821	0	14,821
908076 Large Water Meters Changeout Program	0	0	0	750	0	750
908908 Small Water Meters Changeout Program	0	0	0	2,625	0	2,625
908909 Advanced Metering Infra. (AMI) Changeout	0	0	0	1,075	1,000	2,075
909671 2020 Infrastructure Master Plan (Water)	0	17	0	138	0	155
910119 Stanley Ave. (Sussex - Union St)	0	0	0	1,650	0	1,650
910396 2022 Groundwater Studies	0	16	0	148	0	164
910411 2022 Buildings-Water Services	0	0	0	150	0	150
910456 2022 Water System Improvements	0	0	0	4,000	3,000	7,000
910457 2022 WM Transmission/Distribution Rehab	0	0	0	3,000	2,000	5,000
910458 2022 Water Structures - Inspections	0	0	0	40	0	40
910459 Bank St (Leitrim - Dunskipper)	0	0	0	3,000	2,000	5,000
910460 Fuel Oil Tank Incentive Program	0	0	0	207	0	207
910496 Protective Lead Service Replace Prg 2022	250	0	0	250	0	500
910497 Cathodic Protection 2022	0	0	0	1,200	0	1,200
910498 Critical Links Risk Mitigation Meas 2022	0	0	0	500	0	500
910499 Water Pumping Station Facility Rehab 2022	0	0	0	1,360	0	1,360
910525 Communal Well System Rehab 2022	0	0	0	1,899	1,000	2,899
910526 Water Treatment Rehab 2022	0	0	0	7,594	4,000	11,594
910527 Water Sys SCADA & Instrument Rehab 2022	0	0	0	2,000	1,000	3,000
910529 New Vehicles Drinking Water 2022	0	0	0	176	0	176
Renewal of City Assets Total	250	33	0	46,583	14,000	60,866

City Of Ottawa
2022 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Grand Total
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Growth						
902206 Ottawa South Pumping Station Upgrade	0	0	423	407	0	830
907100 Carp Well Capacity Increase	467	0	0	570	0	1,037
910050 Manotick Supply Watermain - Phase 2	0	0	10,030	9,258	0	19,288
910395 2022 Off Site Reliability Links	0	150	0	17	0	167
910397 2022 Rural Servicing Strategy	0	110	0	110	0	220
910399 2022 Water & Wastewater Studies	0	415	0	104	0	519
Growth Total	467	675	10,453	10,466	0	22,061

Regulatory						
910528 Water Efficiency 2022	0	0	0	150	0	150
Regulatory Total	0	0	0	150	0	150

Drinking Water Services Total	717	708	10,453	57,199	14,000	83,077
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Integrated Roads, Water & Wastewater						
Renewal of City Assets						
906735 Bank St (Riverside-Ledbury)	0	130	0	16,898	4,000	21,028
906900 Main Greenfield Echo Concord et al	0	170	0	20,287	0	20,457
908139 Montreal Rd (N River Rd-St Laurent Blvd)	0	10	0	1,210	0	1,220
908141 ORAP Albert St-Bronson Ave-Slater St	0	40	0	3,599	3,000	6,639
908580 CWWF Queensway Terrace North Sewer	0	0	0	3,139	0	3,139
908581 Valley Dr Storm Sewer	0	0	0	2,701	0	2,701
909012 Bronson Ave (Arlington-Rideau Canal)	0	10	0	873	0	883
909401 Broadview Ave	0	0	0	244	0	244
910085 Valley Dr Storm Sewer Phase 2	0	0	0	640	2,000	2,640
910390 2022 Aerial Mapping Services	0	0	0	219	0	219
910421 2022 Infrastructure Assess & Data Collec	0	13	0	287	0	300
910422 2022 Integrated Scoping Pre/Post Eng	0	0	0	1,573	0	1,573
910423 2022 Road Resurfacing - CW	0	0	0	4,563	0	4,563

City Of Ottawa
2022 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Grand Total
910424 2022 Comprehensive Asset Management	0	0	0	1,233	0	1,233
910432 Quality Management System	0	0	0	1,063	0	1,063
910433 St Joseph PS Decomission-Bruyere&Cathcar	0	0	0	806	0	806
910434 Highland Ave (Princeton to Dovercourt)	0	0	0	736	0	736
910473 Viscount Ave	0	0	0	767	0	767
910474 Ella St - Ralph St	0	0	0	981	0	981
910475 Hilda St - Manchester Ave	0	0	0	537	0	537
Renewal of City Assets Total	0	373	0	62,356	9,000	71,729

Integrated Roads, Water & Wastewater Total	0	373	0	62,356	9,000	71,729
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Integrated Water & Wastewater						
Renewal of City Assets						
910435 McLeod (Elgin - Metcalfe)	0	0	0	1,200	0	1,200
910436 Riverside Dr Sewer Industrial-Transitway	0	0	0	1,380	1,000	2,380
910437 Easement Agreements Update	0	0	0	2,500	1,500	4,000
910438 2022 Hydraulic Structures	0	0	0	1,000	0	1,000
910439 2022 Sewer Repairs / Improvements	0	0	0	2,500	4,500	7,000
910440 2022 Sewer Trenchless Rehab	0	0	0	1,000	2,000	3,000
910441 2022 Sewer CCTV Engineering	0	0	0	800	0	800
910552 Data Analytics Roll Out Water Services	0	0	0	130	0	130
910554 Maximo Scheduler	0	0	0	500	0	500
910555 Water and Wastewater Plants Mobility	0	0	0	500	0	500
Renewal of City Assets Total	0	0	0	11,510	9,000	20,510

Integrated Water & Wastewater Total	0	0	0	11,510	9,000	20,510
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Stormwater Services						
Renewal of City Assets						
909748 Mud Creek Stream Renewal	0	0	0	104	0	104
910081 2021 Drainage Culverts - CW	0	0	0	6,910	6,000	12,910

City Of Ottawa
2022 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Grand Total
910420 2022 Flood Plain Mapping	0	0	0	228	0	228
910448 2022 Drainage Culverts - CW	0	0	0	488	1,000	1,488
910449 2022 Drainage Culverts - Other	0	0	0	594	0	594
910450 2022 Culverts Scoping Pre/Post Eng.	0	0	0	700	0	700
910451 2022 Drainage Culverts - Site-Specific	0	0	0	0	1,500	1,500
910452 2022 Drainage Culvert - Site Spec-Other	0	0	0	133	0	133
910453 2022 Drainage Culverts Assessment	0	0	0	400	0	400
910461 2022 Storm and Surface Water Rehab	0	0	0	0	1,500	1,500
910462 2022 Ditch Alterations	0	0	0	50	0	50
910516 Stormwater Mgmt: Rehab&Enviro Compl 2022	0	0	0	460	1,500	1,960
Renewal of City Assets Total	0	0	0	10,067	11,500	21,567

Growth						
907900 DCA-Mud Creek Erosion Monito E3 Glou EUC	0	156	0	0	0	156
909730 2020 Stormwater Master Planning	0	194	0	194	0	388
Growth Total	0	350	0	194	0	544

Regulatory						
910515 Municipal Drain Improvements - 2022	550	0	0	100	0	650
Regulatory Total	550	0	0	100	0	650

Stormwater Services Total	550	350	0	10,361	11,500	22,761
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Wastewater Services						
Renewal of City Assets						
908250 Infrastructure Planning Information Mgmt	0	0	0	468	0	468
909724 Pump Stations Capacity Renewal	0	0	0	2,173	0	2,173
910048 2021 Infrastructure Master Plan (Sewer)	0	0	0	259	0	259
910463 2022 ORAP Wet Weather IMP	0	0	0	500	500	1,000
910530 New Vehicles Wastewater 2022	0	0	0	250	0	250
910531 SCADA Rehab & Upgrades-Remote Sewer 2022	0	0	0	2,000	2,000	4,000

City Of Ottawa
2022 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Capital Funding Summary
In Thousands \$(000's)

Project Description	Revenues	Develop. Charges	Develop. Charges Debt	Rate Supported	Rate Supported Debt	Grand Total
910532 Collection System Condition Assess. 2022	0	0	0	660	500	1,160
910533 Sewer Lateral Repairs 2022	0	0	0	2,500	2,000	4,500
910534 Sewage Pumping Station Rehab Prog 2022	0	0	0	11,204	5,000	16,204
910535 ROPEC - Sewage Treatment Rehab Prog 2022	0	0	0	10,263	5,000	15,263
910536 Wastewater Facilites Upgrade 2022	0	0	0	250	250	500
910537 Wastewater Drainage Roofing 2022	0	0	0	80	0	80
910538 ROPEC - SCADA Rehab. & Upgrades 2022	0	0	0	1,300	1,000	2,300
910539 Lab Equipment Purchase/Replacement 2022	0	0	0	100	250	350
Renewal of City Assets Total	0	0	0	32,007	16,500	48,507

Growth						
907382 ROPEC Aeration Blower Expansion	0	1,000	0	0	0	1,000
907462 Pump Stations Capacity Increase	0	0	4,257	0	0	4,257
907463 Stittsville PS Gravity Connect	0	73	0	168	0	241
909992 Richmond Pump Station	0	7,378	0	2,459	0	9,837
910076 Carp Wastewater PS Upgrade/Overflow	933	0	0	1,141	0	2,074
Growth Total	933	8,451	4,257	3,768	0	17,409

Service Enhancements						
910398 Shirley's Brook Upgrade (KNUEA)	0	0	0	363	0	363
Service Enhancements Total	0	0	0	363	0	363

Wastewater Services Total	933	8,451	4,257	36,138	16,500	66,279
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Grand Total	2,200	9,882	14,710	177,564	60,000	264,356
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* Integrated Roads, Water and Wastewater Program includes the Rate portion only for information purposes.

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

	2021 Baseline			2022 Adjustments						2022	\$ Change over 2021 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Provincial Legislated	Growth	COVID-19	Service Initiatives / Savings	User Fees & Revenues	Estimate	
Expenditures by Program											
Water Operations	57,247	59,162	0	1,180	290	390	0	0	0	61,022	1,860
Technical Innovation & Engineering Support Services	7,641	7,529	0	290	0	0	0	0	0	7,819	290
Business & Technical Support Services	1,363	1,340	0	25	0	0	0	0	0	1,365	25
Non Departmental	128,602	128,602	0	3,382	0	95	0	0	0	132,079	3,477
Gross Expenditure	194,853	196,633	0	4,877	290	485	0	0	0	202,285	5,652
Recoveries & Allocations	-3,576	-2,942	0	0	0	0	0	0	0	-2,942	0
Revenue	-194,775	-193,691	0	1,068	0	-997	0	0	-5,723	-199,343	-5,652
Net Requirement	-3,498	0	0	5,945	290	-512	0	0	-5,723	0	0
Expenditures by Type											
Salaries, Wages & Benefits	31,954	33,512	0	565	290	345	0	0	0	34,712	1,200
Overtime	1,576	1,976	0	20	0	0	0	0	0	1,996	20
Material & Services	19,838	20,618	0	410	0	45	0	0	0	21,073	455
Transfers/Grants/Financial Charges	103,200	103,210	0	3,239	0	0	0	0	0	106,449	3,239
Fleet Costs	3,232	3,337	0	0	0	0	0	0	0	3,337	0
Program Facility Costs	0	0	0	0	0	0	0	0	0	0	0
Other Internal Costs	35,053	33,980	0	643	0	95	0	0	0	34,718	738
Gross Expenditures	194,853	196,633	0	4,877	290	485	0	0	0	202,285	5,652
Recoveries & Allocations	-3,576	-2,942	0	0	0	0	0	0	0	-2,942	0
Net Expenditure	191,277	193,691	0	4,877	290	485	0	0	0	199,343	5,652
Percent of 2022 Net Expenditure Budget			0.0%	2.5%	0.1%	0.3%	0.0%	0.0%	0.0%	2.9%	

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

	2021 Baseline			2022 Adjustments						2022	\$ Change over 2021 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Provincial Legislated	Growth	COVID-19	Service Initiatives / Savings	User Fees & Revenues	Estimate	
Revenues By Type											
Federal	0	0	0	0	0	0	0	0	0	0	0
Provincial	0	0	0	0	0	0	0	0	0	0	0
Own Funds	-1,718	-1,718	0	1,068	0	0	0	0	0	-650	1,068
Fees and Services	-193,057	-191,973	0	0	0	-997	0	0	-5,723	-198,693	-6,720
Fines	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Total Revenue	-194,775	-193,691	0	1,068	0	-997	0	0	-5,723	-199,343	-5,652
Percent of 2022 Revenue Budget			0.0%	-0.6%	0.0%	0.5%	0.0%	0.0%	3.0%	2.9%	
Net Requirement	-3,498	0	0	5,945	290	-512	0	0	-5,723	0	0
Percent of 2022 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		307.27	0.00	0.00	2.50	5.00	0.00	0.00	0.00	314.77	7.50
Percent of 2022 FTE's			0.0%	0.0%	0.8%	1.6%	0.0%	0.0%	0.0%	2.4%	

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

2021 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Surplus mainly due to vacancies, less maintenance requirements due to reduced watermain breaks and increased cost recovery revenues.	2,414	1,084	3,498
Total Surplus / (Deficit)	2,414	1,084	3,498

2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
Maintain Services				
All programs include an adjustment for potential 2022 cost of living, increments and benefit adjustments.	585	0	585	0.00
Increase in Sewer Discharge costs for water purification plant discharges to the wastewater collection system and treatment at Ropec.	500	0	500	0.00
Inflationary increase to various materials, services and contracts	410	0	410	0.00
Non Departmental				
Decrease in debt servicing costs	-1,420	0	-1,420	0.00
Increase in Inter Departmental Admin and Direct Charges overhead costs due to COLA increases	143	0	143	0.00
Reduction in development charge revenue, offset by a reduction in development charge	-1,068	1,068	0	0.00
Increase in the pay as you go contribution to the water reserve fund	5,727	0	5,727	0.00
Total Maintain Services	4,877	1,068	5,945	0.00
Provincial Legislated				
Compensation funding for 2.5 FTE's for IT security as identified in the IT Audit	290	0	290	2.50
Total Provincial Legislated	290	0	290	2.50

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

2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
Growth				
Conversion of 2 temporary FTE's into permanent FTE's. Compensation budget was approved in 2021.	0	0	0	2.00
Compensation funding for 3 FTE's required due to system growth.	345	0	345	3.00
Fleet operating costs for 3 new vehicles	45		45	0.00
Non Departmental				
Increase in direct charges from Revenue to fund an FTE to support Revenue Water accounts	95	0	95	0.00
Increase in revenues due to growth in number of accounts as well as increased consumption.	0	-997	-997	0.00
Total Growth	485	-997	-512	5.00
2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
User Fees & Revenues				
See following user fee schedule for details on the specific rates.	0	-5,723	-5,723	0.00
Total User Fees & Revenues	0	-5,723	-5,723	0.00
Total Budget Changes	5,652	-5,652	0	7.50

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

	2021 Baseline			2022 Adjustments					2022	\$ Change over 2021 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Provincial Legislated	Growth	COVID-19	User Fees & Revenues	Estimate	
Expenditures by Program										
Wastewater Operations	50,110	46,217	400	3,515	290	380	0	0	50,802	4,585
Biosolids	4,554	4,554	0	0	0	0	0	0	4,554	0
Technical Innovation & Engineering Support	6,757	6,154	0	235	0	0	0	0	6,389	235
Business & Technical Support Services	58	0	0	0	0	0	0	0	0	0
Non Departmental	117,763	117,763	0	2,938	0	0	0	0	120,701	2,938
Gross Expenditure	179,242	174,688	400	6,688	290	380	0	0	182,446	7,758
Recoveries & Allocations	-14,419	-12,706	0	-500	0	0	0	0	-13,206	-500
Revenue	-161,995	-161,982	0	-248	0	-822	0	-6,188	-169,240	-7,258
Net Requirement	2,828	0	400	5,940	290	-442	0	-6,188	0	0
Expenditures by Type										
Salaries, Wages & Benefits	26,209	24,188	0	1,224	290	230	0	0	25,932	1,744
Overtime	929	929	0	16	0	0	0	0	945	16
Material & Services	29,954	27,929	400	2,510	0	150	0	0	30,989	3,060
Transfers/Grants/Financial Charges	97,500	97,500	0	2,854	0	0	0	0	100,354	2,854
Fleet Costs	1,748	1,511	0	0	0	0	0	0	1,511	0
Program Facility Costs	0	0	0	0	0	0	0	0	0	0
Other Internal Costs	22,902	22,631	0	84	0	0	0	0	22,715	84
Gross Expenditures	179,242	174,688	400	6,688	290	380	0	0	182,446	7,758
Recoveries & Allocations	-14,419	-12,706	0	-500	0	0	0	0	-13,206	-500
Net Expenditure	164,823	161,982	400	6,188	290	380	0	0	169,240	7,258
Percent of 2022 Net Expenditure Budget			0.2%	3.8%	0.2%	0.2%	0.0%	0.0%	4.5%	

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

	2021 Baseline			2022 Adjustments					2022	\$ Change over 2021 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Provincial Legislated	Growth	COVID-19	User Fees & Revenues	Estimate	
Revenues By Type										
Federal	0	0	0	0	0	0	0	0	0	0
Provincial	0	0	0	0	0	0	0	0	0	0
Own Funds	-4,477	-4,477	0	-248	0	0	0	0	-4,725	-248
Fees and Services	-157,518	-157,505	0	0	0	-822	0	-6,188	-164,515	-7,010
Fines	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
Total Revenue	-161,995	-161,982	0	-248	0	-822	0	-6,188	-169,240	-7,258
Percent of 2022 Revenue Budget			0.0%	0.2%	0.0%	0.5%	0.0%	3.8%	4.5%	
Net Requirement	2,828	0	400	5,940	290	-442	0	-6,188	0	0
Percent of 2022 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		229.15	0.00	0.00	2.50	3.00	0.00	0.00	234.65	5.50
Percent of 2022 FTE's			0.0%	0.0%	1.1%	1.3%	0.0%	0.0%	2.4%	

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

2021 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)			
	Expense	Revenue	Net	
Deficit mainly due to increased sewer cleaning and catch basin maintenance activities.	-2,841	13	-2,828	
Total Surplus / (Deficit)	-2,841	13	-2,828	
Increase / (Decrease)				
2021 Baseline Adjustment / Explanation	Expense	Revenue	Net 2022 Changes	FTE Impact
Increased requirements for snow removal at pumping stations and facilities to reflect actual spending	400	0	400	0.00
Total Adjustments to Base Budget	400	0	400	0.00
Increase / (Decrease)				
2022 Pressure Category / Explanation	Expense	Revenue	Net 2022 Changes	FTE Impact
Maintain Services				
All programs include an adjustment for potential 2022 cost of living, increments and benefit adjustments.	1,240	0	1,240	0.00
Increase in catch basin cleaning, sewer repairs and CCTV inspections	1,950	0	1,950	0.00
Increase in recoveries from Drinking Water Services for water purification plant discharges into the wastewater collection system.	-500	0	-500	0.00
Inflationary increase to materials and services	560	0	560	0.00
	0	0	0	0.00
Non Departmental				
Decrease in debt servicing costs.	-1,690	0	-1,690	0.00
Increase in Inter Departmental Admin and Direct Charges overhead costs due to COLA increases	84	0	84	0.00
Reduction in development charge revenue, offset by a reduction in development charge debt	248	-248	0	0.00
Increase in the pay as you go contribution to the sewer reserve fund	4,296	0	4,296	0.00
Total Maintain Services	6,188	-248	5,940	0.00

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

2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
Provincial Legislated				
Compensation funding for 2.5 FTE's for IT security as identified in the IT Audit	290	0	290	2.50
Total Provincial Legislated	290	0	290	2.50
2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
Growth				
Requirements for grass cutting due to growth in number of facilities to maintain.	100	0	100	0.00
Compensation funding for 2 FTE's for the new Combined Sewage Storage Tunnel that was commissioned in 2021.	230	0	230	2.00
Fleet costs for 2 new vehicles required for the new Combined Sewage Storage Tunnel and 1 vehicle required for the wastewater collection facilities HVAC maintenance group.	50	0	50	0.00
Conversion of 1 temporary FTE into a permanent FTE. Compensation budget was approved in 2021.	0	0	0	1.00
Non Departmental				
Increase in revenues due to growth in number of accounts as well as increased consumption.	0	-822	-822	0.00
Total Growth	380	-822	-442	3.00
2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
User Fees & Revenues				
See following user fee schedule for details on the specific rates.	0	-6,188	-6,188	0.00
Total User Fees & Revenues	0	-6,188	-6,188	0.00
Total Budget Changes	7,258	-7,258	0	5.50

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

	2021 Baseline			2022 Adjustments				2022	\$ Change over 2021 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	COVID-19	User Fees & Revenues	Estimate	
Expenditures by Program									
Stormwater Operations	11,020	11,739	0	205	0	0	0	11,944	205
Technical Innovation & Engineering Support	409	409	0	0	0	0	0	409	0
Business & Technical Support Services	354	354	0	0	0	0	0	354	0
Non Departmental	53,313	53,313	0	9,436	0	0	0	62,749	9,436
Gross Expenditure	65,096	65,815	0	9,641	0	0	0	75,456	9,641
Recoveries & Allocations	-1,767	-1,767	0	0	0	0	0	-1,767	0
Revenue	-64,778	-64,048	0	0	-1,758	0	-7,883	-73,689	-9,641
Net Requirement	-1,449	0	0	9,641	-1,758	0	-7,883	0	0
Expenditures by Type									
Salaries, Wages & Benefits	5,132	4,886	0	104	0	0	0	4,990	104
Overtime	9	60	0	1	0	0	0	61	1
Material & Services	1,257	2,354	0	100	0	0	0	2,454	100
Transfers/Grants/Financial Charges	39,664	39,664	0	9,378	0	0	0	49,042	9,378
Fleet Costs	230	230	0	0	0	0	0	230	0
Program Facility Costs	0	0	0	0	0	0	0	0	0
Other Internal Costs	18,804	18,621	0	58	0	0	0	18,679	58
Gross Expenditures	65,096	65,815	0	9,641	0	0	0	75,456	9,641
Recoveries & Allocations	-1,767	-1,767	0	0	0	0	0	-1,767	0
Net Expenditure	63,329	64,048	0	9,641	0	0	0	73,689	9,641
Percent of 2022 Net Expenditure Budget			0.0%	15.1%	0.0%	0.0%	0.0%	15.1%	

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

	2021 Baseline			2022 Adjustments				2022	\$ Change over 2021 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	COVID-19	User Fees & Revenues	Estimate	
Revenues By Type									
Federal	0	0	0	0	0	0	0	0	0
Provincial	-145	-145	0	0	0	0	0	-145	0
Own Funds	0	0	0	0	0	0	0	0	0
Fees and Services	-64,633	-63,903	0	0	-1,758	0	-7,883	-73,544	-9,641
Fines	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
Total Revenue	-64,778	-64,048	0	0	-1,758	0	-7,883	-73,689	-9,641
Percent of 2022 Revenue Budget			0.0%	0.0%	2.7%	0.0%	12.3%	15.1%	
Net Requirement	-1,449	0	0	9,641	-1,758	0	-7,883	0	0
Percent of 2022 Net Requirement Budget			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Full Time Equivalents (FTE's)		46.02	0.00	0.00	0.00	0.00	0.00	46.02	0.00
Percent of 2022 FTE's			0.0%	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)

2021 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Surplus mainly due to reduced maintenance requirements and increase in number of new assessment properties resulting in increased revenues..	719	730	1,449
Total Surplus / (Deficit)	719	730	1,449

2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
Maintain Services				
All programs include an adjustment for potential 2022 cost of living, increments and benefit adjustments.	105	0	105	0.00
Inflationary increases to various contracts, materials and services	100	0	100	0.00
	0	0	0	0.00
Non Departmental				
Decrease in debt servicing costs	-392	0	-392	0.00
Increase in Direct charges from other departments due to COLA increases	58	0	58	0.00
Increase in the annual contribution to the Stormwater Capital Reserve Fund	9,770	0	9,770	0.00
	9,641	0	9,641	0.00

2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
Non Departmental				
Increase in revenues due to growth in the number of properties.	0	-1,758	-1,758	0.00
Total Growth	0	-1,758	-1,758	0.00

2022 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2022 Changes	FTE Impact
User Fees & Revenues				
See following user fee schedule for details on the specific rates.	0	-7,883	-7,883	0.00
Total User Fees & Revenues	0	-7,883	-7,883	0.00
Total Budget Changes	9,641	-9,641	0	0.00

Capital Budget

**City of Ottawa
 2022 Draft Capital Budget
 Environment and Climate Protection Committee-Rate
 In Thousands (\$000)**

Service Area: Drinking Water Services											
Category	2022 Draft 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	60,866	250	0	46,583	33	0	0	14,000	0	0	14,000
Growth	22,061	467	0	10,466	675	0	0	0	10,453	0	10,453
Regulatory	150	0	0	150	0	0	0	0	0	0	0
Service Enhancements	0	0	0	0	0	0	0	0	0	0	0
Total	83,077	717	0	57,199	708	0	0	14,000	10,453	0	24,453

City of Ottawa
2022 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: Finance Service 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 reading equipment, and metering software which have passed their life expectancy. It also covers the mobility requirements for water meter servicing.</p>		2022 Request	5,450	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	4,450	Rate Supported Debt			1,000
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	5,450	6,050	6,225	5,450	
		Spending Plan	5,450	6,050	5,475	5,450	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2022 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	750
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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 year of completion is 2027.</p>			
908908	Small Water Meters Changeout Program	Class of Estimate: Not Applicable	2,625
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>Funding is required to replace a growing number of residential water meters which have passed their life expectancy. Aging water meters will under record water consumption, resulting in loss of revenue.</p> <p>New year of completion is 2027.</p>			
908909	Advanced Metering Infrastructure (AMI) Changeout Program	Class of Estimate: Not Applicable	2,075
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2026	
<p>Funding is required to replace components of the Automated Meter Reading Infrastructure system, implemented in 2011, which are approaching the end of life. Components of the system will be replaced with newer prevailing technologies that maintain automated meter reading operational requirements.</p>			

City of Ottawa
2022 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 lifecycle renewal and replacement works to existing building and park assets. Detailed scope of work for specific projects extends to a wide assortment of work, such as roof replacement, building preservation, building mechanical and electrical systems, parks playgrounds and property elements, hard landscaping, arena and pool equipment and unplanned emergency work. Forecasts are based on bulk allocations that will be detailed in future budget submissions. Project cost group summaries are provided following this program summary. Annual programming provides allocations as required for each of the service areas as follows:</p> <table border="1"> <thead> <tr> <th>Service Area</th> <th>Buildings</th> <th>Parks</th> </tr> </thead> <tbody> <tr> <td>By-Law Services</td> <td>350</td> <td></td> </tr> <tr> <td>Child Care Services</td> <td>338</td> <td></td> </tr> <tr> <td>Cultural Services</td> <td>803</td> <td></td> </tr> <tr> <td>Fire Services</td> <td>1,743</td> <td></td> </tr> <tr> <td>General Government</td> <td>4,085</td> <td></td> </tr> <tr> <td>Public Library</td> <td>1,821</td> <td></td> </tr> <tr> <td>Long Term Care</td> <td>7,200</td> <td></td> </tr> <tr> <td>Parks & Recreation Facilities</td> <td>15,224</td> <td>6,000</td> </tr> <tr> <td>Roads Services</td> <td>4,291</td> <td></td> </tr> <tr> <td>Social Services</td> <td>450</td> <td></td> </tr> <tr> <td>Water Services</td> <td>150</td> <td></td> </tr> <tr> <td>Transit Services</td> <td>2,300</td> <td></td> </tr> <tr> <td>TOTAL Authority Request</td> <td>38,755</td> <td>6,000</td> </tr> </tbody> </table>			Service Area	Buildings	Parks	By-Law Services	350		Child Care Services	338		Cultural Services	803		Fire Services	1,743		General Government	4,085		Public Library	1,821		Long Term Care	7,200		Parks & Recreation Facilities	15,224	6,000	Roads Services	4,291		Social Services	450		Water Services	150		Transit Services	2,300		TOTAL Authority Request	38,755	6,000	2022 Request	150	Projected Yearend Unspent Bal.		0
			Service Area	Buildings	Parks																																												
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TOTAL Authority Request	38,755	6,000																																															
Revenues	0	Debt																																															
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0																																												
Rate Supported	150	Rate Supported Debt			0																																												
Develop. Charges	0	Develop. Charges Debt			0																																												
Gas Tax	0	Gas Tax Debt			0																																												
Forecast	2022	2023	2024	2025																																													
Authority	150	150	150	150																																													
Spending Plan	150	150	150	150																																													
FTE's	0	0	0	0																																													
Operating Impact	0	0	0	0																																													

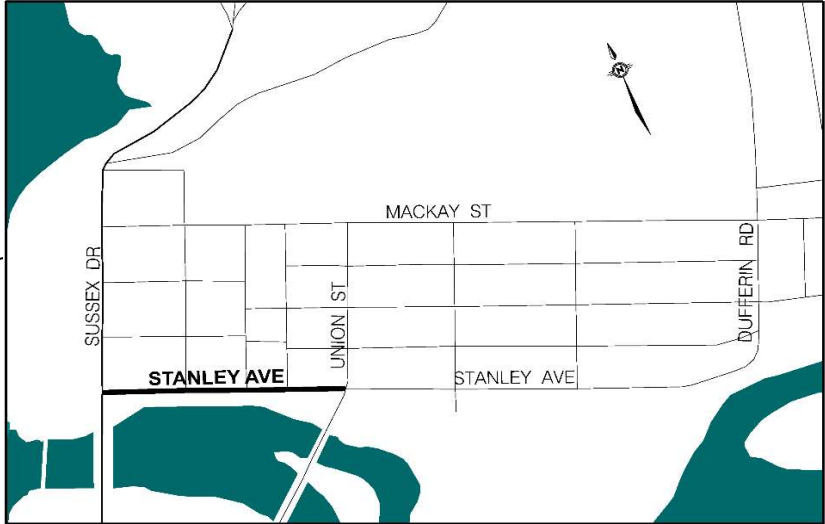
City of Ottawa
2022 Draft Capital Budget
Service Area: Drinking Water Services
In Thousands (\$000)

Project Information		Location/Description	\$000's
910411	2022 Buildings-Water Services	Class of Estimate: C) Planning	150
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
<p>This program provides for lifecycle renewal and replacement works to existing building assets and is a component of the corporate Buildings and Parks Program.</p>			
Ward	Project	Description	
07	Britannia Water Purification Plant	Lime Tower Monitoring	
11	Ropec Technical Services Building	Replace Main Entrance Doors	
CW	City Wide: Water Services Facilities	Unscheduled Works: Water Services Facilities	

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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.</p> <p>The program is focused on:</p> <ul style="list-style-type: none"> • Proactive lifecycle renewal and rehabilitation projects • Level of service initiatives • System improvements and optimization • Miscellaneous upgrades and rehabilitation to support growth demand • Miscellaneous local repairs <p>Program funding requirements to support renewal needs are defined in the Long Range Financial Plan.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p> <p>The funding requests for watermain costs coordinated with roadway, wastewater or stormwater rehabilitation are included within the Integrated Rehabilitation Programs.</p> <p>Detailed information and costs associated with specific stand alone (non-integrated) components and projects directly follow this program summary page.</p>		2022 Request	18,690	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt		0
		Rate Supported	11,690	Rate Supported Debt		7,000
		Develop. Charges	0	Develop. Charges Debt		0
		Gas Tax	0	Gas Tax Debt		0
		Forecast	2022	2023	2024	2025
		Authority	18,690	39,691	29,400	19,040
		Spending Plan	9,345	25,453	30,345	26,278
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

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Project(s) within a Program Information		Location/Description	\$000's
910119 Stanley Ave. (Sussex - Union St)		Class of Estimate: C) Planning	1,650
Category: Renewal of City Assets	Ward: 13	Year of Completion: 2023	
<p>The watermain in Stanley Ave from Sussex Dr to Union St requires rehabilitation due to its age and lead services. The authority request will allow for construction as well as other associated project costs.</p>			

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Project(s) within a Program Information			\$000's
910456	2022 Water System Improvements	Class of Estimate: D) Conceptual	7,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>To meet long range watermain replacement goals, this program provides funding for watermain replacement in areas where there are no sewer or roadway needs. Funding is also used to implement measures to reduce system vulnerability to critical service areas. Measures could include, but are not limited to, watermains, valves, pumping stations, pumps, storage, backup power, other infrastructure and appurtenances, as required, to improve system reliability. The funding request may include design, construction and other related project costs.</p>			
910457	2022 WM Transmission/Distribution Rehab	Class of Estimate: D) Conceptual	5,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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>			
910458	2022 Water Structures - Inspections	Class of Estimate: Not Applicable	40
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>This program provides the authority for the regulatory inspections/ follow-up assessment of the bridges carrying watermains and connecting water facilities.</p>			

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Project(s) within a Program Information		Location/Description	\$000's
910459 Bank St (Leitrim - Dunskipper)		Class of Estimate: C) Planning	5,000
Category: Renewal of City Assets	Ward: 22	Year of Completion: 2025	
<p>In coordination with the Bank St widening project, the watermain in Bank Street from Leitrim Rd. to south of Dunskipper Dr. will be replaced to take advantage of the opportunity to locate the watermain in a more accessible location within the new roadway and to replace a watermain material that has a history of premature failure.</p>		<p>The map displays a street grid in a residential area. A thick black line highlights the segment of Bank St between Leitrim Rd to the west and Dunskipper Dr to the east. Other streets shown include Blais Rd, Rideau Rd, Albion Rd, and Findlay Creek Dr. A north arrow is present in the top left corner of the map.</p>	

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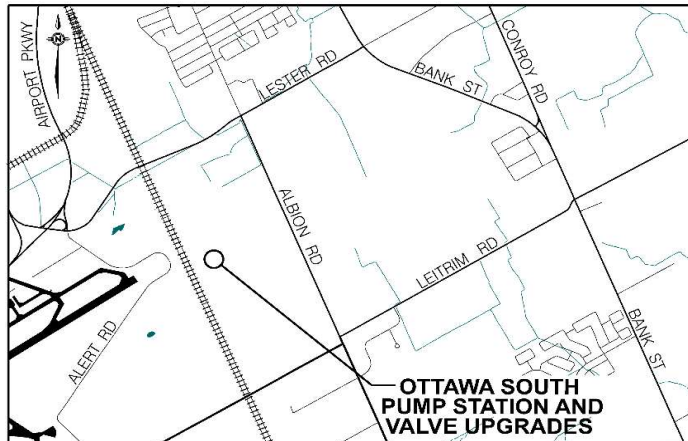
Project Information			Financial Details						
909671	2020 Infrastructure Master Plan (Water)		Class of Estimate: Not Applicable						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022					
<p>This capital account is to support the planning of major drinking water infrastructure required to support growth citywide. The scope of infrastructure includes transmission mains, pump stations, storage facilities, municipal wells, and other distribution system-related components, but excludes works at the central water purification plants.</p>			2022 Request		155	Projected Yearend Unspent Bal.	510		
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	0
			Rate Supported		138	Rate Supported Debt			0
			Develop. Charges		17	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			Forecast		2022	2023	2024	2025	
			Authority		155	0	0	0	0
			Spending Plan		155	0	0	0	0
			FTE's		0	0	0	0	0
			Operating Impact		0	0	0	0	0
			910460	Fuel Oil Tank Incentive Program		Class of Estimate: Not Applicable			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024					
<p>Fuel tanks (residential home heating oil) near municipal wells are considered a significant drinking water threat under certain circumstances under the Clean Water Act and there are policies in local Source Protection Plans to manage the threat. This incentive program would provide funding to convert existing residential fuel oil tanks that are considered a significant drinking water threat under the Act, to an alternative heating source to eliminate the potential threat to municipal supply wells and protect the City's drinking water resources.</p>			2022 Request		207	Projected Yearend Unspent Bal.	0		
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	0
			Rate Supported		207	Rate Supported Debt			0
			Develop. Charges		0	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			Forecast		2022	2023	2024	2025	
			Authority		207	0	0	0	0
			Spending Plan		207	0	0	0	0
			FTE's		0	0	0	0	0
			Operating Impact		0	0	0	0	0

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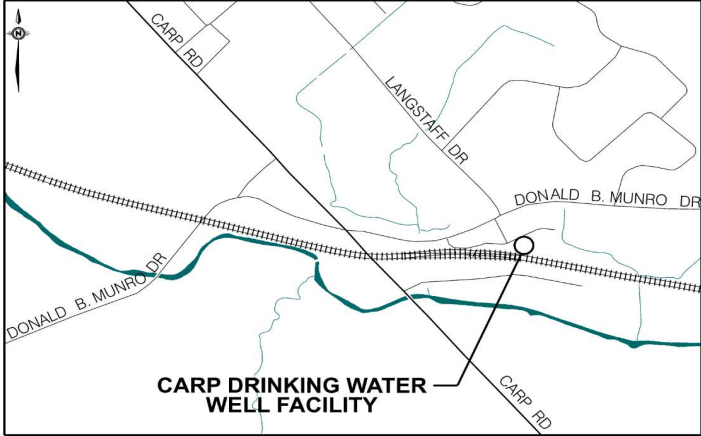
Project Information			Financial Details						
910396 2022 Groundwater Studies			Class of Estimate: Not Applicable						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024					
<p>These funds will be used to further the City's ongoing groundwater characterization efforts. The scope includes the preparation of studies with the following goals: to characterize the resource in order to better support rural growth; to assess existing drinking water wells, private wastewater disposal, public health and environmental matters within the City's rural villages and privately serviced enclaves within the Urban Area. The results of this work is used to flag private servicing issues and to assess the potential need for alternative services.</p>			2022 Request		164	Projected Yearend Unspent Bal.	0		
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported		148	Rate Supported Debt			0
			Develop. Charges		16	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			Forecast		2022	2023	2024	2025	
			Authority		164	169	279	285	
			Spending Plan		164	169	279	285	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				

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Project Information			Financial Details					
902206 Ottawa South Pumping Station Upgrade			Class of Estimate: A) Pre-Tender					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 10	Year of Completion: 2023				
<p>This project was identified in the Infrastructure Master Plan and is needed to provide sufficient drinking water pumping capacity to meet the needs of the South Urban Community and the Ottawa Airport. This budget request is to supplement existing authority for construction based on revised cost estimates.</p> <p>New year of completion 2026.</p>			2022 Request		830	Projected Yearend Unspent Bal.	13,113	
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		407	Rate Supported Debt		0
			Develop. Charges		0	Develop. Charges Debt		423
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2022	2023	2024	2025
			Authority		830	0	0	1,187
			Spending Plan		3,665	3,499	3,416	3,844
			FTE's		0	0	0	0
Operating Impact		0	0	23	0			



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Project Information			Financial Details					
907100 Carp Well Capacity Increase			Class of Estimate: C) Planning					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 5	Year of Completion: 2025				
<p>Existing Village of Carp water facility emergency diesel generator is approaching end of the design life and does not meet current design guidelines requirements. This budget request is for generator replacement and some minor modifications to the drinking water facility operation processes to accommodate additional development in the Village and Carp Airport.</p>			2022 Request	1,037	Projected Yearend Unspent Bal.			0
			Revenues	467	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated	Debt		0
			Rate Supported Develop. Charges	570	Rate Supported Debt			0
				0	Develop. Charges Debt			0
			Gas Tax	0	Gas Tax Debt			0
			Forecast	2022	2023	2024	2025	
			Authority	1,037	0	1,079	0	
			Spending Plan	519	518	1,079	0	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				
			 <p>The map shows the location of the Carp Drinking Water Well Facility. It is situated near the intersection of Carp Rd and Donald B. Munro Dr. Other roads shown include Langstaff Dr and Donald B. Munro Dr. The facility is marked with a circle and labeled 'CARP DRINKING WATER WELL FACILITY'.</p>					

City of Ottawa
2022 Request
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Project Information			Financial Details		
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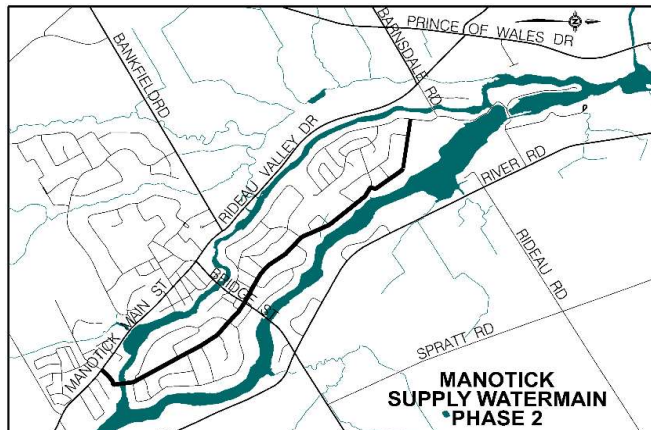
910050 Manotick Supply Watermain - Phase 2			Class of Estimate: C) Planning		
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Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 20, 21, 22	Year of Completion: 2023		
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This project, which is identified in the Infrastructure Master Plan, provides an extension to the Phase 1 project from the north end of Long Island to the southern part of the village. The project will improve the reliability of water supply and provide additional capacity to the village to support development. The watermain also allows the opportunity for local improvements for village residents that currently rely on private services. The project is currently in the design phase. This request is to cover the cost of construction.

New year of completion 2024.

2022 Request	19,288	Projected Yearend Unspent Bal.		1,003
Revenues	0	Debt		
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt		0
Rate Supported	9,258	Rate Supported Debt		0
Develop. Charges	0	Develop. Charges Debt		10,030
Gas Tax	0	Gas Tax Debt		0
Forecast	2022	2023	2024	2025
Authority	19,288	0	0	0
Spending Plan	9,644	5,786	3,858	0
FTE's	0	0	0	0
Operating Impact	0	310	0	0



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Project Information			Financial Details						
910395	2022 Off Site Reliability Links		Class of Estimate:		D) Conceptual				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2024					
<p>This budget request is to cover minor off-site watermain connections needed to improve the reliability of water supply to development areas.</p>			2022 Request		167	Projected Yearend Unspent Bal.	0		
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt			0
			Rate Supported		17	Rate Supported Debt			0
			Develop. Charges		150	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			Forecast		2022	2023	2024	2025	
			Authority		167	170	173	177	
			Spending Plan		167	170	173	177	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				
910397	2022 Rural Servicing Strategy		Class of Estimate:		Not Applicable				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2024					
<p>The Rural Servicing Strategy is intended to promoting safe and sustainable water supply and wastewater disposal for rural use. It utilizes the findings of various groundwater studies, as well as other data, to provide technical and policy direction on private and municipal servicing within the rural planning context. The rural area has a variety of servicing arrangements, and these are regularly reviewed for sustainability and future growth. The results of this work support rural servicing master plans.</p>			2022 Request		220	Projected Yearend Unspent Bal.	0		
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt			0
			Rate Supported		110	Rate Supported Debt			0
			Develop. Charges		110	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			Forecast		2022	2023	2024	2025	
			Authority		220	224	228	233	
			Spending Plan		220	224	228	233	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				

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Project Information			Financial Details					
910399 2022 Water & Wastewater Studies			Class of Estimate: Not Applicable					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2024				
<p>This capital account is intended to support various studies related to the planning of growth-driven water and wastewater infrastructure and related aspects of public infrastructure servicing. This includes technical studies, functional design work, and Class Environmental assessments.</p>			2022 Request		519	Projected Yearend Unspent Bal.	0	
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		104	Rate Supported Debt		0
			Develop. Charges		415	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2022	2023	2024	2025
			Authority		519	280	287	291
			Spending Plan		519	280	287	291
			FTE's		0	0	0	0
Operating Impact		0	0	0	0			

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Program Information			Financial Details					
Water Distribution Systems			Class of Estimate: D) Conceptual					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various					
<p>The City of Ottawa operates a water distribution system consisting of approximately 3,238 km of piping, 21,292 fire hydrants, over 50,831 valves and 245,565 water service meters. The value of this buried infrastructure is over \$4.0 billion. This program is aimed at addressing annual preventive and corrective maintenance for the City's existing water distribution network in order to provide reliable operation of the network components, to ensure drinking water quality is maintained throughout the water distribution network and to preserve and extend the life of the infrastructure to prevent failures requiring heavier and costlier reconstruction strategies.</p> <p>The program is focused on:</p> <ul style="list-style-type: none"> - Proactive lifecycle renewal and rehabilitation projects; - Level of service initiatives; - System improvements and optimization; - Asset lifecycle upgrades and rehabilitation to support growth demand. <p>Some of the key infrastructure renewal projects for 2022 are:</p> <ul style="list-style-type: none"> - Large Transmission Main condition assessment and risk mitigation projects; - Preventative maintenance and water distribution system improvements; - Lead Service Replacement program. 			2022 Request	2,200	Projected Yearend Unspent Bal.		0	
			Revenues	250	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
			Rate Supported	1,950	Rate Supported Debt			0
			Develop. Charges	0	Develop. Charges Debt			0
			Gas Tax	0	Gas Tax Debt			0
			Forecast	2022	2023	2024	2025	
			Authority	2,200	4,950	4,950	4,950	
			Spending Plan	4,401	4,950	4,950	4,950	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

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Project(s) within a Program Information			\$000's
910496 Protective Lead Service Replacement Program 2022		Class of Estimate: D) Conceptual	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
<p>The City produces and distributes drinking water that is lead-free. However, lead can enter drinking water through exposure to existing lead service lines. As these services exist within public right-of-way and private property, the responsibility for these services is a shared City/property owner responsibility. The City replaces lead services within the public right-of-way as part of the Integrated Watermain Rehabilitation Program. This program provides the funds to cover the costs of the City's portion of Lead Service Replacement (outside of the integrated program). Customers are responsible for the cost of replacement on private property. The program offers residents deferred payment options on the tax bill and a rebate option for customers with only a private lead service. Production and distribution costs for public information bulletins are provided by this account.</p>			
910497 Cathodic Protection 2022		Class of Estimate: C) Planning	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>The water distribution system consists of over 3,238 km of watermains. The Cathodic Protection program is a proactive program to extend the life of metallic watermains that are showing signs of premature corrosion failure. Anodes are installed onto the pipe network to prolong its useful life by acting as a sacrificial material, thereby protecting watermains from corrosion. Key elements include condition assessment, installation, monitoring and testing of the anodes to measure their effectiveness and predict life cycle expectations.</p>			
910498 Critical Links Risk Mitigation Meas 2022		Class of Estimate: C) Planning	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>Investigate the reliability and serviceability of key transmission mains and their appurtenances (i.e. valves, chambers) to ensure a continued reliable service to a large urban population.</p>			

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Program Information		Financial Details					
Water Systems General-Renewal		Class of Estimate: D) Conceptual					
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>		2022 Request		176	Projected Yearend Unspent Bal.	0	
		Revenues		0	Debt		
		Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0
		Rate Supported		176	Rate Supported Debt		0
		Develop. Charges		0	Develop. Charges Debt		0
		Gas Tax		0	Gas Tax Debt		0
		Forecast		2022	2023	2024	2025
		Authority		176	490	460	450
		Spending Plan		376	490	460	450
		FTE's		0	0	0	0
Operating Impact		0	0	0	0		

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Project(s) within a Program Information			\$000's
910529 New Vehicles Drinking Water 2022		Class of Estimate: A) Pre-Tender	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>The Water Production East group has a need for three 1¾ ton Sprinter vans to support water production activities related to system growth.</p>			

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Program Information		Financial Details					
Water Pumping Stations		Class of Estimate: D) Conceptual					
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>		2022 Request	1,360	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	1,360	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	1,360	2,150	2,150	2,150	
		Spending Plan	1,360	2,150	2,150	2,150	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

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Project(s) within a Program Information			\$000's
910499	Water Pumping Station Facility Rehab 2022	Class of Estimate: C) Planning	1,360
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2026	
<p>To establish a funding envelope for retrofit, rehabilitation or replacement of the infrastructure as it ages. Projects for 2022 include: condition assessment activities, Arc flash hazard review, reliability improvements and chemical system modifications.</p>			

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Program Information		Financial Details					
Water Treatment - Renewal		Class of Estimate: D) Conceptual					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The program is aimed at addressing annual requirements for the City's two Water Purification Plants that have an estimated replacement value of \$550 million. In order to provide continued uninterrupted safe supply of potable water, to preserve and extend the life of the infrastructure, and to meet provincial and federal regulation requirements, it is necessary to invest in the ongoing rehabilitation and renewal of these assets.</p>		2022 Request		29,415	Projected Yearend Unspent Bal.	0	
		Revenues		0	Debt		
		Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt		0
		Rate Supported		24,415	Rate Supported Debt		5,000
		Develop. Charges		0	Develop. Charges Debt		0
		Gas Tax		0	Gas Tax Debt		0
		Forecast		2022	2023	2024	2025
		Authority		29,415	21,943	14,524	14,529
		Spending Plan		19,343	28,052	27,062	17,030
		FTE's		0	0	0	0
Operating Impact		0	0	0	0		

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Project(s) within a Program Information			\$000's
906665 Lemieux WPP Intake Ice Mgmt		Class of Estimate: C) Planning	14,821
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>The Lemieux Island WPP is supplied with raw water by an intake structure submerged several feet below the water surface in the Ottawa River. The intake pipe is located at intake screens in the low lift pump station. The formation of frazil occurs during early winter (prior to full ice cover being formed on the Ottawa River) and early spring (while ice cover is being broken up). When it occurs, frazil clogs the screens and its disruption can and has forced a shutdown of the plant until the screens are cleared. This project covers the design and construction of a new intake in order to reduce the impacts of frazile ice.</p>			
910526 Water Treatment Rehab 2022		Class of Estimate: C) Planning	11,594
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2028	
<p>The replacement value of the City's two (2) water facilities is estimated to be in excess of \$550 million. This project addresses equipment upgrades; infrastructure life cycle replacement; and process changes resulting from operational, legislative and health and safety initiatives. Work includes: valve and meter replacements, mechanical and electrical rehabilitation, chemical system control/operational improvements. It also covers the costs related to condition assessment within the water purification plants.</p>			
910527 Water Sys SCADA & Instrument Rehab 2022		Class of Estimate: C) Planning	3,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2026	
<p>The Supervisory Control and Data Acquisition (SCADA) system is a computerized system that is used by certified Operators to monitor and control the drinking water treatment system. The Operator monitors all critical components of the treatment process and is able to remotely operate equipment within the purification plants, communal well systems, pump stations, reservoirs and storage tanks. The SCADA system is crucial to the operation of the treatment system for monitoring key parameters required under provincial and federal legislation. Components of the existing SCADA system are nearing the end of their lifecycles. Various components of the system require to be either upgraded or replaced to maintain reliability.</p>			

City of Ottawa
2022 Draft Capital Budget
Service Area: Drinking Water Services
 In Thousands (\$000)

Program Information		Financial Details					
Water Communal Well System		Class of Estimate: D) Conceptual					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The City currently operates six (6) communal well based drinking water systems. These include systems serving:</p> <ul style="list-style-type: none"> · Munster Hamlet · Richmond – King’s Park Subdivision · Richmond West Subdivision · Carp · Vars · Greely - Shadow Ridge Subdivision <p>Taken collectively, the asset value for the facilities associated with these communal drinking water systems (pumping stations, reservoirs, treatment process) is estimated at \$24.8 million.</p> <p>This program has been developed to ensure that these assets are maintained and that the demand, quality and regulatory requirements of this service are met.</p>		2022 Request	2,899	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	1,899	Rate Supported Debt			1,000
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	2,899	9,250	2,500	2,500	
		Spending Plan	2,899	1,850	8,050	4,350	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

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Project(s) within a Program Information			\$000's
910525 Communal Well System Rehab 2022		Class of Estimate: C) Planning	2,899
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2027	
<p>This project is to establish a funding envelope for the retrofit, rehabilitation or replacement of asset components at the six (6) communal well based drinking water systems serving: Munster Hamlet; Richmond - King's Park Subdivision; Richmond West Subdivision; Carp; Vars; Greely - Shadow Ridge Subdivision. Taken collectively, the asset value for the facilities associated with these communal systems (pumping stations, reservoirs, treatment process) is estimated at \$24.8 million.</p> <p>Typical projects include: condition assessment; control and instrumentation rehabilitations; water treatment and process upgrades; well condition and capacity testing.</p>			

City of Ottawa
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Service Area: Drinking Water Services
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Program Information		Financial Details					
Water Systems General-Regulatory		Class of Estimate: D) Conceptual					
Dept: Public Works & Environmental Services Department	Category: Regulatory	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>		2022 Request	150	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	150	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	150	500	500	500	
		Spending Plan	150	500	500	500	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

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 In Thousands (\$000)

Project(s) within a Program Information			\$000's
910528	Water Efficiency 2022	Class of Estimate: C) Planning	150
Category: Regulatory	Ward: CW	Year of Completion: 2026	
<p>To develop water efficiency programs to provide water demand management, effective use of resources, delay or eliminate the need to expand system capacity.</p>			

City of Ottawa
2022 Draft Capital Budget
Environment and Climate Protection Committee-Rate
In Thousands (\$000)

Service Area: Integrated Water & Wastewater											
Category	2022 Draft 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	20,510	0	0	11,510	0	0	0	9,000	0	0	9,000
Growth	0	0	0	0	0	0	0	0	0	0	0
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancements	0	0	0	0	0	0	0	0	0	0	0
Total	20,510	0	0	11,510	0	0	0	9,000	0	0	9,000

City of Ottawa
2022 Draft Capital Budget
Service Area: Integrated Water & Wastewater
In Thousands (\$000)

Program Information		Financial Details				
Integrated Water & Wastewater		Class of Estimate: C) Planning				
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>The Integrated Rate Program includes rehabilitation of more than one asset class (sanitary sewers, storm drainage, and water mains) that are coordinated within a single project. The program is aimed at renewing and replacing the infrastructure assets in order to provide continued service and prevent failures.</p> <p>The program is comprised of:</p> <ul style="list-style-type: none"> • Functional and preliminary designs. • Lifecycle renewal: renewal, rehabilitation and replacements for deterioration. • Coordinated renewal: schedule coordination (escalation or deferral) between asset classes and with other asset classes. • Level of service enhancements: flooding improvements and system optimization. • Upgrades and rehabilitation to support growth and miscellaneous localized repairs. <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p> <p>Detailed information and costs associated with specific components and projects are provided following this program summary.</p>		2022 Request	19,380	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	10,380	Rate Supported Debt	9,000	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		Forecast	2022	2023	2024	2025
		Authority	19,380	19,176	21,800	24,350
		Spending Plan	9,690	15,402	20,529	22,550
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

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2022 Draft Capital Budget
Service Area: Integrated Water & Wastewater
 In Thousands (\$000)

Project(s) within a Program Information			Location/Description	\$000's
910435 McLeod (Elgin - Metcalfe)			Class of Estimate: C) Planning	1,200
Category: Renewal of City Assets	Ward: 14	Year of Completion: 2025		
<p>The sewers in McLeod St require replacement due to age and condition. Within the limits of the project there are two existing parallel watermain and the older watermain requires rehabilitation due to age and lead services. The project will include the abandonment of the older watermain and re-connecting the services to the adjacent, newer watermain.</p> <p>The funding request will provide for all project related costs which may include construction, utility and/or property acquisition.</p> <p>The year of completion for the account is 2023.</p>				
910436 Riverside Dr Sewers (S of Industrial Av to Transitway)			Class of Estimate: C) Planning	2,380
Category: Renewal of City Assets	Ward: 17, 18	Year of Completion: 2025		
<p>The existing sanitary and storm sewers are currently aligned within the NCC owned property at 1460 Riverside Dr. The NCC has asked that the sewers be re-aligned outside their property to allow for development. This project will see the re-alignment of the existing sanitary and storm sewers.</p> <p>The funding request will provide for all project related costs which may include design costs, construction costs, utility costs and/or property costs.</p> <p>The year of completion for the account is 2023.</p>				

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Service Area: Integrated Water & Wastewater
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Project(s) within a Program Information			\$000's
910437	Easement Agreements Update	Class of Estimate: Not Applicable	4,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>Various existing City underground watermain and sewer assets are currently located on publicly owned or privately owned property. This budget request will provide funding to renegotiate expired or soon to expire easement agreements and acquire new easements for the existing sewers and watermains.</p>			
910438	2022 Hydraulic Structures	Class of Estimate: D) Conceptual	1,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>The authority will provide for the rehabilitation of the City's sewer outfalls, access structures and other hydraulic features. The funding is for all project related costs which may include but not limited to design, construction and property acquisition.</p>			
910439	2022 Sewer Repairs / Improvements	Class of Estimate: D) Conceptual	7,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>A number of locations have been identified to resolve sewer infrastructure and surface flooding problems. Work could entail both trenchless and conventional spot repairs, as well as various hydraulic improvements such as; installing catch basins, re-profiling driveways and road grading. The authority provides for the design, construction and all associated costs for various drainage and sewer improvements.</p>			

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Service Area: Integrated Water & Wastewater
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Project(s) within a Program Information			\$000's
910440	2022 Sewer Trenchless Rehab	Class of Estimate: D) Conceptual	3,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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, reduce extraneous flows, and improve the overall operation of the system.</p>			
910441	2022 Sewer CCTV Engineering	Class of Estimate: Not Applicable	800
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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
2022 Draft Capital Budget
Service Area: Integrated Water & Wastewater
 In Thousands (\$000)

Program Information		Financial Details				
Water Technology Improvements		Class of Estimate: D) Conceptual				
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>The Water Business Technology Initiatives represents future technology such as expanding the utilization of Maximo and expanding the mobility capabilities across the department.</p>		2022 Request	1,130	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0	
		Rate Supported	1,130	Rate Supported Debt	0	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		Forecast	2022	2023	2024	2025
		Authority	1,130	330	500	500
		Spending Plan	1,130	330	500	500
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

City of Ottawa
2022 Draft Capital Budget
Service Area: Integrated Water & Wastewater
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
910552	Data Analytics Roll Out Water Services	Class of Estimate:	130
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
Power BI - Reporting Tool - Implementation, Training and Change Management for Water Services.			
910554	Maximo Scheduler	Class of Estimate:	500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
Implementing a Planning & Scheduling Tool to improve workforce management and compliance with ESD Audit Recommendation for Water Distribution and Wastewater Collection.			
910555	Water and Wastewater Plants Mobility	Class of Estimate:	500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
Implementing Fiori Mobile Solution for Water and Wastewater Plants & Facilities.			

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Service Area: Stormwater Services											
Category	2022 Draft 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	21,567	0	0	10,067	0	0	0	11,500	0	0	11,500
Growth	544	0	0	194	350	0	0	0	0	0	0
Regulatory	650	550	0	100	0	0	0	0	0	0	0
Service Enhancements	0	0	0	0	0	0	0	0	0	0	0
Total	22,761	550	0	10,361	350	0	0	11,500	0	0	11,500

City of Ottawa
2022 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.</p> <p>The program is focused on:</p> <ul style="list-style-type: none"> • Flood mitigation measures. • Proactive lifecycle renewal and rehabilitation projects. • Level of service initiatives. • System improvements and optimization. • Miscellaneous upgrades and rehabilitation to support growth demand. <p>The funding requests for stormwater costs coordinated with roadway, wastewater or water rehabilitation are included within the Integrated Rehabilitation Programs. Program funding requirements to support renewal needs are defined in the Long Range Financial Plan.</p> <p>Detailed information and costs associated with specific stand-alone (non-integrated) components and projects are provided following this program summary page.</p> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>		2022 Request		1,550	Projected Yearend Unspent Bal.	0	
		Revenues		0	Debt		
		Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
		Rate Supported		50	Rate Supported Debt		1,500
		Develop. Charges		0	Develop. Charges Debt		0
		Gas Tax		0	Gas Tax Debt		0
		Forecast		2022	2023	2024	2025
		Authority		1,550	1,550	41,970	1,550
		Spending Plan		775	1,240	21,760	13,676
		FTE's		0	0	0	0
Operating Impact		0	0	0	0		

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 In Thousands (\$000)

Project(s) within a Program Information			\$000's
910461	2022 Storm and Surface Water Rehabilitation	Class of Estimate: D) Conceptual	1,500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>This program provides for the rehabilitation of storm and surface water features, including creeks, rivers, ravines, slope stabilization and flood mitigation measures at various locations. The funding is for all project related costs which may include investigation, design, construction and property acquisition.</p>			
910462	2022 Ditch Alterations	Class of Estimate: D) Conceptual	50
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>The funding provides for the assessment and reinstatement of existing ditch networks. Works can include: study, design, survey, inspection or reconstruction of existing ditches.</p>			

City of Ottawa
2022 Draft Capital Budget
Service Area: Stormwater Services
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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.</p> <p>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>		2022 Request 17,725		Projected Yearend Unspent Bal. 0			
		Revenues 0		Debt			
		Tax Supported/Dedicated 0		Tax Supported/Dedicated Debt 0			
		Rate Supported 9,225		Rate Supported Debt 8,500			
		Develop. Charges 0		Develop. Charges Debt 0			
		Gas Tax 0		Gas Tax Debt 0			
		Forecast		2022	2023	2024	2025
		Authority	17,725	14,290	15,127	11,166	
		Spending Plan	8,863	12,463	15,396	14,479	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

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Service Area: Stormwater Services
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Project Information		Location/Description	\$000's
910081	2021 Drainage Culverts - CW	Class of Estimate: B) Design	12,910
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023	
<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 project is for construction work (year 2 funding) to be delivered by Infrastructure Services Design & Construction. Design is underway in 2021.</p>			
Ward	Project	Location	
19	Canaan Rd Culvert on Dejardins-Morris MD	0.10 km N of Colonial Rd [CR28] [890030]	
3	Fallowfield Rd Culvert on O'Keefe MD	1.10 km E of Moodie Dr [110480]	
3	O'Keefe Court Culvert on O'Keefe MD	0.36 km west of Foxtail Ave [110320]	
5	Richardson Side Rd Culvert	0.20 km W of Carp Rd [540380]	
5	Loggers Way Culvert	0.10 km north of Kinburn Side Rd [438120]	
21	Third Line Rd North on Mud Creek (Scobie Br)	0.90 km S of Brophy Dr [878410]	
20	Squire Rd Twin Culvert	0.50 km W of Dozois Rd [880175-1/2]	
20	Yorks Corners Rd Culvert	0.22km N of Castor Rd [CR4] [880200]	
2	Renaud Rd Culvert	1.80 km W of Navan Rd [228180]	
19	Russell Rd Culvert	0.95 km E of Leitrim Rd [228340]	
5	Dunrobin Rd Culvert	2.10 km N of March Rd [648920]	
10	Russell Rd Culvert	3.30 km E of Walkley Rd [228620]	
5	Donald B Munro Dr Culvert	8.89 km N of Carp Rd [548500]	
7	Corkstown Rd Culvert	3.45 km E of March Rd [118930]	
2	Navan Rd Culvert	0.40 km E of Innes Rd Bypass [228090]	
5	John Shaw Rd Culvert	3.3 km N of Thomas Dolan Pky [430210]	
21	Franktown Rd Culvert	2.25 km E of Munster Side Rd [758380]	
20	Springhill Rd Culvert on George Drew MD	0.46 km west of Dalmac Rd [880580]	
21	Barnsdale Rd Culvert	0.50 km East of Prince of Wales [110250]	
5	Upper Dwyer Hill Rd Culvert	0.78 km N of Grainger Park Rd [438501]	
5	Upper Dwyer Hill Rd Culvert	0.78 km N of Grainger Park Rd [438511]	
5	Upper Dwyer Hill Rd Culvert	0.72 km S of Hamilton Side Rd [548400]	
19	Devine Rd Culvert on Harold Walsh MD	0.33 km west of Rockdale Rd [898490]	
19	Dunning Rd on Brady MD	0.50 km north of Russland Rd [890810]	

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Project Information		Location/Description	\$000's
Class of Estimate: B) Design			
Category:	Ward:	Year of Completion:	
2021 Drainage Culvert CW - Continued			
Ward	Project	Location	
19	Huismans Rd Culvert on John MacDonald MD	0.30 km E of Frank Kenny Rd [890580]	
20	8th Line Rd Culvert	0.41 km north of Pana Rd [A883020]	
19	French Hill Rd Culvert	0.01 km west of Dunning Rd [L896590]	
20	9th Line Rd Culvert	0.67 km north of Victoria St [L887545]	
2	Renaud Rd Culvert	2.02 km east of Anderson Rd [L224650]	
20	8th Line Rd Culvert	0.63 km south of Marvelville Rd [L887203]	
20	8th Line Rd Culvert	2.9 km south of Marvelville Rd [L887215]	
19	Russell Rd Culvert	0.03 km west of Spring St [A224260]	
10	Russell Rd Culvert	0.51 km east of Ramseyville Rd [A222960]	
20	9th Line Rd Culvert	0.83 km north of Castor Rd [L887495]	
10	Russell Rd Culvert	1.15 km east of Ramseyville Rd [A224020]	
10	Ramsayville Rd Culvert	0.16 km south of Russell Rd (N) [A222900]	
10	Russell Rd Culvert	0.81 km east of Ramseyville Rd [A222980]	
10	Russell Rd Culvert	0.91 km east of Ramseyville Rd [A224000]	
10	Russell Rd Culvert	0.27 km west of Anderson Rd [A224030]	
10	Ramsayville Rd Culvert	0.07 km south of Russell Rd (N) [A222920]	
10	Russell Rd Culvert	1.04 km east of Ramseyville Rd [A224010]	
20	Bank St Culvert	0.08 km south of Snake Island Rd [A881850]	
1	Jeanne D'Arc Blvd N Culvert	0.28 km east of Trim Rd [L898566]	
13	Hemlock Rd Culvert	0.09 km east of Lansdowne Rd S [A058000]	
20	Roger Stevens Dr Culvert	0.01 km west of River Rd [A881105]	
10	Airport Pkwy Culvert	0.84 km north of Uplands Dr [A221415]	
10	Airport Pkwy Culvert	0.42 km north of Uplands Dr [A221413]	
10	Airport Pkwy Culvert	0.85 km north of Uplands Dr [A221417]	

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Project Information		Location/Description	\$000's
Class of Estimate: B) Design			
Category:	Ward:	Year of Completion:	
2021 Drainage Culvert CW - Continued			
Ward	Project	Location	
20	Loyalist St Culvert on Ferguson Br (line C) MD	0.01 km west of White Spruce St [L882500]	
20	Owen St Culvert on Ferguson Br (line C) MD	0.01 km east of White Spruce St [L882528]	
19	Delson Dr Culvert	0.02 km south of Villeroy Cres [L894903]	
10	Belgreen Dr Culvert	0.01 km west of Russell Rd [L224184]	
5	Loggers Way Culvert	0.38 km north of Kinburn Side Rd [L431660]	
5	Carp Rd Culvert	0.20 km south of Baird Side Rd [A431190]	
5	Panmure Rd Culvert	0.01 km west of Stonewalk Way [A432220]	
5	Sixth Line Rd Culvert	0.20 km north of Pinhey's Point Rd [A641430]	
5	Moran St Culvert	0.01 km north of Cameron Harvey Dr [L649150]	
21	Joy's Rd Culvert	0.01 km north of Franktown Rd [L755150]	
21	Flewellyn Rd Culvert	1.01 km east of Munster Rd [L756750]	
5	Craig's Side Rd Culvert	0.55 km east of Farmland Rd [L544410]	
9	West Hunt Club Rd Culvert	0.02 km north of Laser St [A112384]	
16	Prince of Wales Dr Culvert	0.35 km north of Baseline Rd [A011002]	
5	Dunrobin Rd Culvert	1.00 km north of Porcupine Trl [A331030]	
21	Roger Stevens Dr Culvert	0.86 km west of Fourth Line Rd [A872180]	
5	Carp Rd Culvert	0.90 km south of Thomas A Dolan Pky [A541760]	
5	McGee Side Rd Culvert	0.05 km east of Diamondview Rd [L542993]	
5	Loggers Way Culvert	1.00 km north of Kinburn Side Rd [L431690]	
21	Roger Stevens Dr Culvert on McCordick-Pratt	0.14 km west of McCordick Rd [A864260]	
21	Roger Stevens Dr Culvert on Noble-Wallace MD	1.66 km east of Malakoff Rd [A864180]	
5	Bairds Side Rd Culvert	0.01 km west of Carp Rd [L432850]	
21	Dilworth Rd Culvert	0.58 km west of Rideau Valley Dr S [A872120]	

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Project Information		Location/Description	\$000's
910448	2022 Drainage Culverts - CW	Class of Estimate: C) Planning	1,488
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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 project is for design work (year 1 funding) to be delivered by Infrastructure Services Design & Construction.</p>			
Ward	Project	Location	
10	Albion Rd Culvert	0.05 km S of Lester Rd [220450]	
20	South Gower Boundary Rd Culvert on Backen	1.35 km S of River Rd [880070]	
19	McNeely Rd Twin Culvert	3.60 km N of Russell Rd [890620-1/2]	
21	Rideau Valley N Culvert on McIntye-Scobie	1.80 km N of Roger Stevens Dr [878180]	
21	Flewellyn Rd Culvert	0.24 km W of Ironstone Crt [750090]	
23	Eagleson Rd Culvert	0.03 km south of Emerald Meadows Dr [110410]	
19	Anderson Rd Culvert	0.7 km south of Piperville Rd [228940]	
16	Airport Pkwy Culvert	0.12 km south of Walkley Rd [A051060]	
19	West St Culvert	0.01 km north of Regional Rd 174 [L895194]	
18	Old Innes Rd Culvert	0.05 km west of Bantree St [L050830]	
20	Victoria St Culvert	0.64 km east of 8th Line Rd [A882790]	
20	Old Mill Way Culvert	0.01 km west of River Rd [L220360]	
20	Old Mill Way Culvert	0.01 km west of River Rd [L220370]	
20	Fetterly Dr Culvert	0.07 km west of South Branch St [L887704]	
20	Marionville Rd Culvert	0.01 km west of 8th Line Rd [L882095]	
19	Wilhaven Dr Culvert	0.01 km west of Lough Dr [L898390]	
19	Lough Dr Culvert	0.01 km north of Wilhaven Dr [L895780]	
19	Quigley Hill Rd Culvert	0.28 km north of Cumberland Ridge Dr [L895095]	
20	Herberts Corners Rd Culvert	0.13 km west of Manotick Station Rd [L886030]	
19	Morin Rd Culvert	0.01 km north of Hwy 174 [L895880]	
20	8th Line Rd Culvert	0.98 km south of Marvelville Rd [L887207]	
19	Boundary Rd Culvert	1.30 km north of Thunder Rd [A222010]	
19	Piperville Rd Culvert	0.55 km west of Farmers Way [L222770]	
19	Piperville Rd Culvert	0.66 km east of Farmers Way [L222790]	

City of Ottawa
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Service Area: Stormwater Services
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Project Information		Location/Description	\$000's
Class of Estimate: C) Planning			
Category:	Ward:	Year of Completion:	
2022 Drainage Culvert CW - Continued			
Ward	Project	Location	
19	Piperville Rd Culvert	0.12 km west of Boundary Rd [L222830]	
20	Mitch Owens Rd Culvert	0.64 km east of Farmers Way [A222180]	
19	Rusland Rd Culvert	0.28 km west of Dunning Rd [A892160]	
19	Rusland Rd Culvert	0.01 km west of Saumure Rd [A892200]	
20	Sale Barn Rd Culvert	0.01 km north of Parkway Rd [L885510]	
20	Sale Barn Rd Culvert	0.02 km south of Parkway Rd [L885500]	
19	Burton Rd Culvert	1.20 km east of Frontier Rd [L892000]	
20	Marionville Rd Culvert on McLean Skuce MD	0.33 km east of 8th Line Rd [L882100]	
18	Bourassa St Culvert	0.01 km east of Gladwin Cres [L050810]	
5	Bearhill Rd Culvert	0.15 km north of Sierra Woods [L543210]	
5	Machardy Rd Culvert	1.80 km south of Galetta Side Rd [L431390]	
5	Peter Robinson Rd Culvert	0.01 km north of March Rd [L541430]	
22	Ashdale Ave Culvert	0.01 km south of Fallowfield Dr [L117410]	
21	Marina Dr Culvert	0.01 km east of Rideau Valley Dr N [L874005]	
21	Colony Heights Rd Culvert	0.07 km north of Highcroft Dr [L877060]	
21	Marina Dr Culvert	0.01 km south of Bunker Rd [L874170]	
5	Fifth Line Rd Culvert	0.30 km south of Thomas A. Dolan Pkwy [L649370]	
16	Wilshire Ave Culvert	0.01 km west of Morley Blvd [L012360]	
5	Carp Rd Culvert	0.18 km north of Thomas Dolan Pkwy [A431150]	
5	Panmure Rd Culvert	0.31 km east of Rock Cody Tr [A432020]	
21	Donnelly Dr Culvert	0.11 km east of Gilroy Rd [A862020]	
5	Shanna Rd Culvert	0.65 km south of Panmure Rd [L543430]	
21	Prince of Wales Dr Culvert	0.05 km north of Century Rd W [A871670]	
21	Franktown Rd Culvert	0.2 km east of Dwyer Hill Rd [A752100]	

**City of Ottawa
2022 Draft Capital Budget**

In Thousands (\$000)

Project Information		Location/Description	\$000's
Class of Estimate: C) Planning			
Category:	Ward:	Year of Completion:	
2022 Drainage Culvert CW - Continued			
Ward	Project	Location	
21	Old Richmond Rd Culvert	0.98 km east of Eagleson Rd [A111255]	
21	Old Richmond Rd Culvert	0.88 km east of Eagleson Rd [A111253]	
6	Norway Spruce St Culvert	0.09 km North of Porter St [L755450]	
9	Cedarview Rd Culvert	0.30 km north of West Hunt Club Rd [A111940]	
21	Dwyer Hill Rd Culvert	0.68 km south of Jock Trail [A751070]	
21	Phelan Rd W Culvert	0.01 km west of Prince of Wales Dr [L874550]	
8	Old Richmond Rd Culvert	0.36 km north of West Hunt Club Rd [A111570]	
5	Diamondview Rd Culvert	1.01 km north of Thomas A. Dolan Pkwy [L433340]	
5	Diamondview Rd Culvert	0.43 km south of Baird Side Rd [L433420]	
5	Diamondview Rd Culvert	0.62 km south of Baird Side Rd [L433400]	
16	Prince of Wales Dr Culvert	1.30 km north of Baseline Rd [A011010]	
21	Eagleson Rd Culvert	0.24 km north of Cambrian Rd [A111070]	
21	Eagleson Rd Culvert	0.18 km south of Brownlee Rd [A111090]	
21	Eagleson Rd Culvert	0.26 km south of Akins Rd [A111110]	
3	Cedarview Rd Culvert	0.21 km south of Cedarhill Dr [A111910]	
3	Woodsia Ave Culvert	0.01 km west of Cedarview Rd [L112823]	
5	Vaughan Side Rd Culvert	0.11 km west of Bearhill Rd [L544320]	
5	Vaughan Side Rd Culvert	0.50 km west of Forest Edge Rd [L544330]	
5	March Rd Culvert	0.43 km west of Huntmar Dr [A542075]	
21	Roger Stevens Dr Culvert	5.25 km east of Dwyer Hill Rd [A862890]	
21	Roger Stevens Dr Culvert	1.00 km west of Malakoff Rd [A864060]	
21	Ashton Station Rd Culvert	1.41 km north of McLinton Rd [L751325]	
21	Ashton Station Rd Culvert	1.38 km north of McLinton Rd [L751310]	
21	Ashton Station Rd Culvert	1.40 km north of McLinton Rd [L751320]	

City of Ottawa
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Project Information		Location/Description	\$000's
910449 2022 Drainage Culverts - Other		Class of Estimate: C) Planning	594
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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	Project	Location	
7	Sackville St Culvert	0.01 km east of Norton Ave [L014005]	
19	Clayton Rd Culvert	0.01 km north of Devine Rd [L895410]	
19	Stackhouse Crt Culvert	0.02 km south of Lough Dr [L895770]	
2/19	Mer-Bleue Rd Culvert	0.07 km south Navan Rd [L227325]	
19	Arbuste Ave Culvert	0.01 km north of Jonquille Way [L893440]	
19	Arbuste Ave Culvert	0.01 km south of Sequoia Dr [L893445]	
19	Garlandside Rd Culvert	0.01 km north of Russland Rd [L897010]	
19	Canaan Rd Culvert	0.91 km north of Russell Rd [L899070]	
21	West River Dr Culvert	0.06 km north of Bridge St [L221505]	
20	Iveson Dr Culvert	0.01 km east of Lonely Cres [L886515]	
21	Colony Heights Rd Culvert	0.01 km east of Colony Heights [L878090]	
9	Vaan Dr Culvert	0.01 km west of Bie St [L112990]	
20	Nixon Dr Culvert	0.23 km south of Dalmeny Rd [L881130]	
20	Albert Bouwers Cir Culvert	0.34 km east of Veena Way [L886500]	
21	Third Line Rd S Culvert	0.82 km north of Dilworth Rd [L871570]	
21	Matilda Gt Culvert	0.07 km north of Franktown Rd [L751760]	
20	Louis-Forget Rd Culvert	0.01 km north of Belmeade Rd [L883310]	
21	Harnett Rd Culvert	0.03 km north of Mulholland Rd [L863120]	
21	McCordick Rd Culvert	0.47 km south of Roger Stevens Dr [L867210]	
21	Malakoff Rd Culvert	0.58 km south of Cowell Rd [L865070]	
21	Settler's Way Culvert	0.07 km south of Paden Rd [L861910]	
21	Settler's Way Culvert	0.01 km north of McCartney St [L861930]	
21	Settler's Way Culvert	0.10 km south of Paden Rd [L861970]	
20	Scobie Cres Culvert	0.27 km east of Squire Dr [L888022]	

City of Ottawa
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In Thousands (\$000)

Project Information		Location/Description	\$000's
Class of Estimate: C) Planning			
Category:	Ward:	Year of Completion:	
2022 Drainage Culvert - Other - Continued			
Ward	Project	Location	
20	Springhill Rd Culvert	0.77 km east of Campbellcroft Rd [L882570]	
21	Fairhurth Dr Culvert	0.39 km east of McCordick Rd [L870020]	
21	Scharfield Rd Culvert	0.01 km north of Beaverwood Rd [L877080]	
5	Loggers Way Culvert	0.23 km south of Kinburn Side Rd [L431650]	
21	Cockburn St Culvert	0.01 km south of Burke St [L755870]	
5	Beach Hts Culvert	0.30 km west of Beachvale Lane [L646262]	
5	Delaney Dr Culvert	0.10 km west of Rocky Creek Way [L544070]	
5	Old Second Line Rd Culvert	0.11 km south of McCord Dr [L649050]	
5	William Hodgins Lane Culvert	0.01 km north of Vaughan Rd [L543815]	
5	William Hodgins Lane Culvert	1.82 km south of Vaughan Rd [L543750]	
7	Storm Sewer Pump and Panels Culvert	0.06 km west of Moodie Dr [P114340]	
5	Torbolton Ridge Rd Culvert	1.24 km south of Kilmaurs Side Rd [L337170]	
5	Old Maple Lane Culvert	0.27 km north of Thomas A. Dolan Pkwy [L339720]	
5	Riddledale Rd Culvert	0.21 km west of Loggers Way [L436540]	
5	Wescar Lane Culvert	0.01 km west of Cardevco Rd [L542415]	
5	Sharne Lane Culvert	0.01 km south of Old Second Line Rd [L646222]	
21	McCaffrey Trl Culvert	0.01 km north of McLinton Rd [L751510]	
21	Jock Trl Culvert	0.17 km east of Dwyer Hill Rd [L752230]	
21	Jock Trl Culvert	0.85 km east of Wood's Rd [L752270]	
21	McLintonRd Culvert	0.07 km west of McCaffrey Trl [L756270]	
21	Butterwick St Culvert	0.01 km south of Cobblestone Crt [L753115]	
5	Old Carp Rd Culvert	0.05 km east of Cherryhill Dr [L547130]	
5	John Aselford Drwy Culvert	0.84 km west of Marchurst Rd [L646770]	
5	John Aselford Drwy Culvert	0.44 km west of Marchurst Rd [L646830]	

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Project(s) within a Program Information			\$000's
910450	2022 Culverts Scoping Pre/Post Eng.	Class of Estimate: C) Planning	700
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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>			
910451	2022 Drainage Culverts - Site-Specific	Class of Estimate: C) Planning	1,500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<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>			
910452	2022 Drainage Culverts - Site-Specific-Other	Class of Estimate: C) Planning	133
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>This program provides authority to undertake minor repairs and unplanned replacements of drainage culverts through other City departments.</p>			

City of Ottawa
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Project(s) within a Program Information			\$000's
910453	2022 Drainage Culverts Assessment	Class of Estimate: C) Planning	400
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>This program provides the authority for the inspection of drainage culverts under roadways and any required follow-up assessments.</p>			

City of Ottawa
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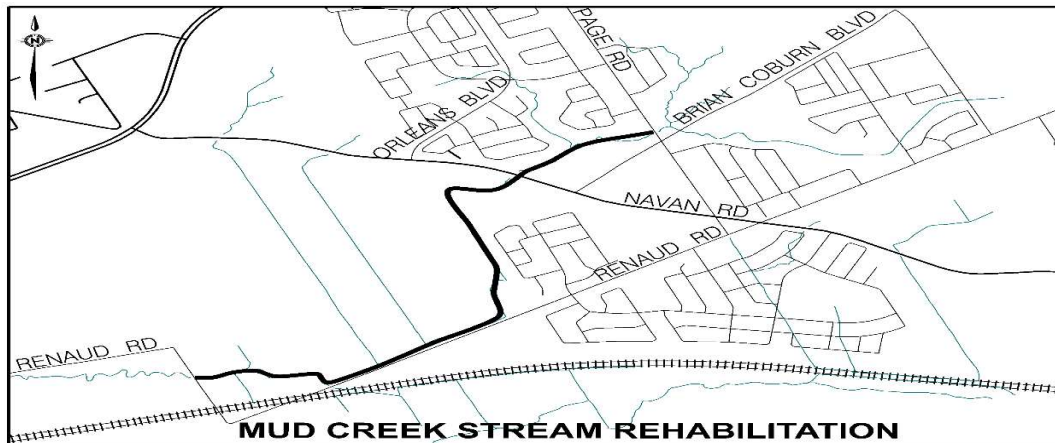
Project Information			Financial Details		
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909748 Mud Creek Stream Renewal			Class of Estimate: D) Conceptual		
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward 2	Year of Completion: 2024		

Reconstruction of portions of Mud Creek is required to mitigate the impacts of existing and future development in the watershed, including the East Urban Community Mixed Use Centre Community Design Plan area. The project will be funded through an Area Specific Development Charge and the City's stormwater rate. This request is for the share of project costs to be covered by the stormwater rate.

New year of completion 2025.

2022 Request	104	Projected Yearend Unspent Bal.			370
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
Rate Supported	104	Rate Supported Debt			0
Develop. Charges	0	Develop. Charges Debt			0
Gas Tax	0	Gas Tax Debt			0
Forecast	2022	2023	2024	2025	
Authority	104	2,254	0	0	
Spending Plan	52	1,528	697	451	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	

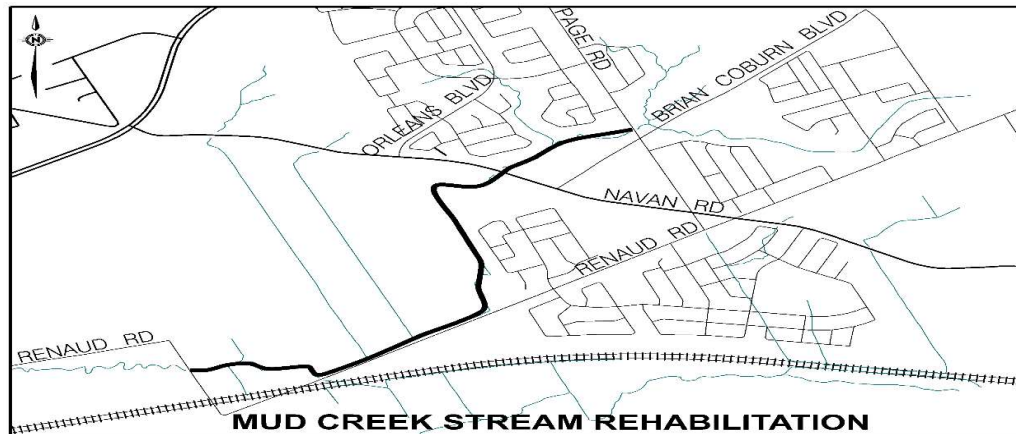


City of Ottawa
2022 Draft Capital Budget
Service Area: Stormwater Services
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Project Information			Financial Details					
910420	2022 Flood Plain Mapping		Class of Estimate:		Not Applicable			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024				
<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 and to finance other flood plain mapping work.</p> <p>The year of Completion of the current mapping agreement is 2022. It is anticipated that new or updated flood plain mapping studies will also be required to support urban boundary expansion approved in the new Official Plan.</p> <p>This budget request also includes costs for related study work to support and inform regulation mapping, which are not covered in the contribution agreement.</p>			2022 Request	228	Projected Yearend Unspent Bal.		0	
			Revenues	0	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
			Rate Supported	228	Rate Supported Debt			0
			Develop. Charges	0	Develop. Charges Debt			0
			Gas Tax	0	Gas Tax Debt			0
			Forecast	2022	2023	2024	2025	
			Authority	228	230	234	239	
			Spending Plan	114	183	232	236	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

City of Ottawa
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Service Area: Stormwater Services
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Project Information			Financial Details						
907900 DCA-Mud Creek Erosion Monito E3 Glou EUC			Class of Estimate: D) Conceptual						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 2	Year of Completion: 2022					
<p>This work stems from erosion monitoring in Mud Creek downstream of Pond 2 Gloucester East Urban Community. The scope of work was identified in the “2019 Development Charges Background Studies and By-laws,” City of Ottawa, May 22, 2019. This 2022 budget request represents Development Charge contribution to creek improvements as covered by the 2019 Background Study. An updated Area E-3 SWM DC Bylaw to cover future budget asks will be presented to Council with anticipated approval in late 2021/early 2022.</p> <p>New year of completion 2025.</p>			2022 Request		156	Projected Yearend Unspent Bal.		250	
			Revenues		0	Debt			
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0	
			Rate Supported Develop. Charges		0	Rate Supported Debt		0	
			Gas Tax		156	Develop. Charges Debt		0	
					0	Gas Tax Debt		0	
			Forecast		2022	2023	2024	2025	
			Authority		156	3,703	0	0	
			Spending Plan		78	2,148	1,142	741	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				



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Project Information			Financial Details					
909730	2020 Stormwater Master Planning		Class of Estimate:		Not Applicable			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW		Year of Completion: 2022			
<p>The requested funds are to support citywide stormwater master planning work needed to support growth and maintenance of existing service levels.</p> <p>New year of completion 2024.</p>			2022 Request		388			
			Revenues		0		Debt	
			Tax Supported/ Dedicated		0		Tax Supported/ Dedicated Debt	
			Rate Supported		194		Rate Supported Debt	
			Develop. Charges		194		Develop. Charges Debt	
			Gas Tax		0		Gas Tax Debt	
			Forecast		2022		2023	
			Authority		388		212	
			Spending Plan		691		247	
			FTE's		0		0	
Operating Impact		0		0				
			Projected Yearend Unspent Bal.		381			

City of Ottawa
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Program Information		Financial Details				
Stormwater Management Facilities		Class of Estimate: C) Planning				
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>Stormwater Management facilities serve to protect homes, business and the road network from flooding and also mitigate erosion and water quality impacts from the growing city. Currently, the most visible infrastructure the City owns, operates and maintains in this category encompasses over 250 pond facilities. While most SWM ponds appear very natural and simple, these are complicated engineered facilities that include significant hard elements such as concrete hydraulic structures, large valves and flow control gates. Other assets the City is required to maintain under this category include 100 underground treatment tanks, and 25 specialty treatment systems (including 3 right-of-way Low Impact Development gardens).</p>		2022 Request	1,960	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0	
		Rate Supported	460	Rate Supported Debt	1,500	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		Forecast	2022	2023	2024	2025
		Authority	1,960	2,900	4,000	4,400
		Spending Plan	1,960	2,900	4,000	4,400
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

City of Ottawa
2022 Draft Capital Budget
Service Area: Stormwater Services
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Project(s) within a Program Information			\$000's
910516 Stormwater Mgmt: Rehab&Enviro Compliance 2022		Class of Estimate: C) Planning	1,960
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>The City owns, operates and maintains over 350 stormwater facilities (including underground treatment tanks) for the management of stormwater runoff. This number is increasing at the rate of 5-10 per year. The facilities provide flow attenuation and water quality treatment, ensuring that stream corridors and water quality are not degraded. In order to ensure combined compliance with environmental regulations and MECP Certificate of Approval discharge criteria, these facilities require maintenance activities such as the removal and disposal of accumulated sediment, along with major repair or rehabilitation 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
2022 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: Regulatory	Ward: Multiple	Year of Completion: Various				
<p>The program is required to address modifications, improvements and construction of Municipal Drains in the City of Ottawa. Under Sections 4 and 78 of the Drainage Act, RSO 1990, the municipality, whose duty it is to maintain, and repair drainage works or any part thereof, may with or without a petition, undertake and complete such drainage works. These drainage systems provide legal outlet for a vast majority of the agricultural and rural lands and roads in the City however the impetus for the majority of projects in this program is from land and road development mainly in the rural and suburban areas and as such the timing of the works hinges on the particular development project, which can span several years. In most cases the entire cost of the drainage works, including engineering and construction costs, is paid by the developer and/or benefiting landowners and in all cases the costs are recovered by the City once the drainage works are completed.</p>		2022 Request	650	Projected Yearend Unspent Bal.		0	
		Revenues	550	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	2022	2023	2024	2025	
		Authority	650	500	500	500	
		Spending Plan	650	500	500	500	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2022 Draft Capital Budget
Service Area: Stormwater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
910515 Municipal Drain Improvements - 2022		Class of Estimate: B) Design	650
Category: Regulatory	Ward: CW	Year of Completion: 2024	
<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. Funds are required in order to ensure the City is able to respond to drainage petitions in a timely fashion.</p>			

City of Ottawa
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 Environment and Climate Protection Committee-Rate
 In Thousands (\$000)

Service Area: Wastewater Services											
Category	2022 Draft 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	48,507	0	0	32,007	0	0	0	16,500	0	0	16,500
Growth	17,409	933	0	3,768	8,451	0	0	0	4,257	0	4,257
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Service Enhancements	363	0	0	363	0	0	0	0	0	0	0
Total	66,279	933	0	36,138	8,451	0	0	16,500	4,257	0	20,757

City of Ottawa
2022 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>		2022 Request	1,000	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	500	Rate Supported Debt			500
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	1,000	2,500	3,000	3,100	
		Spending Plan	500	1,550	2,450	2,950	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

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2022 Draft Capital Budget
Service Area: Wastewater Services
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Project(s) within a Program Information			\$000's
910463	2022 ORAP Wet Weather IMP	Class of Estimate: D) Conceptual	1,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>This project is required for the development of programs and project implementation needed to support the objectives of the Wet Weather Infrastructure Management Plan (WW-IMP). Once developed, these programs will define and prioritize the specific actions to be implemented, which will increase the capacity of the sewer systems; reduce the risk of property flooding; and reduce impacts related to combined sewer overflows. This project is considered for development charge (DC) funding pursuant to the 2014 Development Charge By-Law 2014-229. This project also includes the installation of Inlet Control Devices (ICDs) into catch basins throughout various areas in the City. The intent is to reduce sewer surcharge during major rainfall events, and to diminish the incidences of basement flooding as a result of sewer surcharge.</p>			

City of Ottawa
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Service Area: Wastewater Services
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Project Information			Financial Details					
908250 Infrastructure Planning Information Mgmt			Class of Estimate: Not Applicable					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2022				
<p>Development and implementation of information management systems to support infrastructure planning and related City functions.</p> <p>New completion year is 2025.</p>			2022 Request		468	Projected Yearend Unspent Bal.	0	
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		468	Rate Supported Debt		0
			Develop. Charges		0	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2022	2023	2024	2025
			Authority		468	528	540	219
			Spending Plan		234	404	522	377
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0
909724 Pump Stations Capacity Renewal			Class of Estimate: C) Planning					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: 2,4,19,21	Year of Completion: 2027				
<p>These funds will be used to cover renewal needs (benefit to existing) at five sanitary sewage pump stations that are also being upgraded for capacity to support growth. The growth portion of the works is covered by a separate account which is funded by development charges.</p>			2022 Request		2,173	Projected Yearend Unspent Bal.	0	
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		2,173	Rate Supported Debt		0
			Develop. Charges		0	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2022	2023	2024	2025
			Authority		2,173	2,493	533	0
			Spending Plan		1,087	1,898	1,449	659
			FTE's		0	0	0	0
			Operating Impact		0	0	0	0

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project Information			Financial Details					
910048	2021 Infrastructure Master Plan (Sewer)		Class of Estimate:		Not Applicable			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2023				
<p>This budget request is to cover wastewater sewer system analysis and project planning work to support growth citywide. The scope of infrastructure considered includes wastewater trunk sewers and collectors, pumping stations, and forcemains, but excludes the Robert O. Pickard Environmental Centre.</p>			2022 Request	259	Projected Yearend Unspent Bal.		0	
			Revenues	0	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt		0	
			Rate Supported	259	Rate Supported Debt		0	
			Develop. Charges	0	Develop. Charges Debt		0	
			Gas Tax	0	Gas Tax Debt		0	
			Forecast	2022	2023	2024	2025	
			Authority	259	0	0	0	
			Spending Plan	259	0	0	0	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

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Project Information			Financial Details					
907462	Pump Stations Capacity Increase		Class of Estimate:		C) Planning			
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 2,4,19,21	Year of Completion: 2028				
<p>This project was identified in the Infrastructure Master Plan and is needed to provide sufficient wastewater pumping capacity to meet the needs of development at various locations across the City. This project include capacity upgrade for 5 Pump Stations: Briar Ridge PS, Tenth Line PS, Leitrim PS, Forest Valley PS, and Manotick PS. The project will increase the 5 Pump Stations capacity from the existing installed capacity, to the full rated capacity in accordance with the original station designs. The work at these 5 stations will be phased over time. This budget request will cover the remaining design work and the first phase of construction.</p>			2022 Request	4,257	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	0	Develop. Charges Debt		4,257	
			Gas Tax	0	Gas Tax Debt		0	
			Forecast	2022	2023	2024	2025	
			Authority	4,257	4,630	990	0	
			Spending Plan	2,129	3,592	2,735	1,223	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

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 In Thousands (\$000)

Project Information			Financial Details					
907463 Stittsville PS Gravity Connect			Class of Estimate: D) Conceptual					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 6,23	Year of Completion: 2024				
<p>This project was identified in the 2013 Wastewater Master Plan. Scope includes decommissioning the Stittsville Pump Station and forcemains and constructing a new sewer on Fernbank Road to convey flows from the Stittsville Pump Station and development areas south of Fernbank Road by gravity to the 600 mm Fernbank Trunk Sewer on Cope Drive.</p> <p>New year of completion 2025.</p>			2022 Request		241	Projected Yearend Unspent Bal.	0	
			Revenues		0	Debt		
			Tax Supported/ Dedicated		0	Tax Supported/ Dedicated Debt		0
			Rate Supported		168	Rate Supported Debt		0
			Develop. Charges		73	Develop. Charges Debt		0
			Gas Tax		0	Gas Tax Debt		0
			Forecast		2022	2023	2024	2025
			Authority		241	1,623	0	0
			Spending Plan		121	884	535	325
			FTE's		0	0	0	0
Operating Impact		37	0	0	0			

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

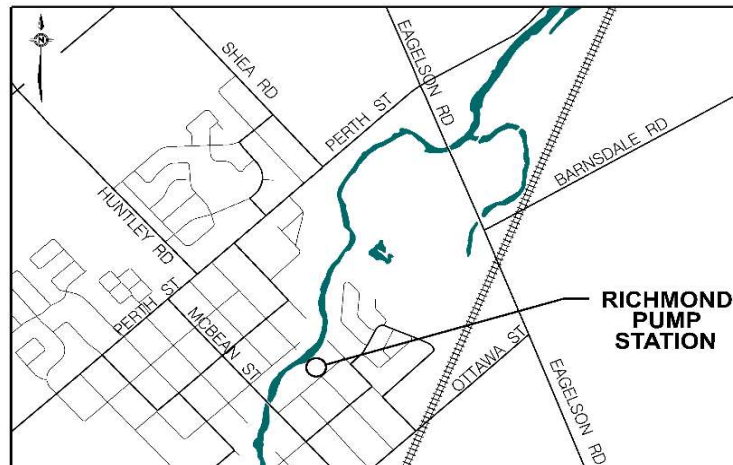
Project Information			Financial Details	
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909992 Richmond Pump Station			Class of Estimate: A) Pre-Tender	
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Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 21	Year of Completion: 2026	
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To accommodate anticipated new development in the Village of Richmond there is a need to upgrade and renew the existing wastewater pumping station. Detailed design work for the Richmond wastewater pumping station upgrade/renewal is completed and project is ready for tender once this 2022 budget request is approved. Previous budget authority has been approved for this project but is not sufficient to cover the current project estimate.

2022 Request	9,837	Projected Yearend Unspent Bal.			2,874
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
Rate Supported	2,459	Rate Supported Debt			0
Develop. Charges	7,378	Develop. Charges Debt			0
Gas Tax	0	Gas Tax Debt			0
Forecast	2022	2023	2024	2025	
Authority	9,837	0	0	0	
Spending Plan	4,919	2,951	1,967	2,874	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	



City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project Information			Financial Details	
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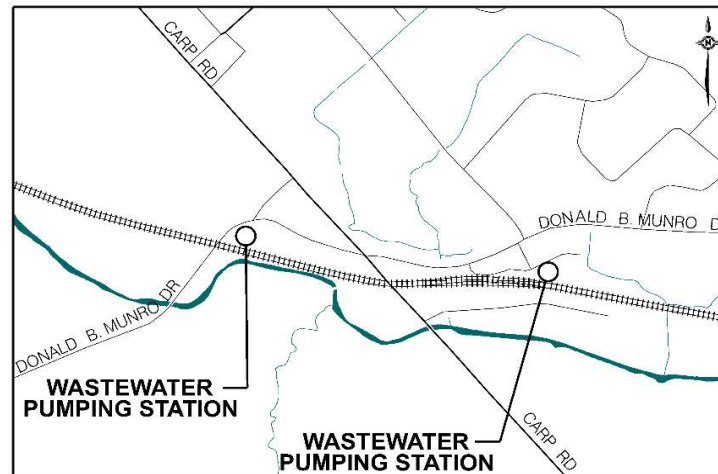
910076 Carp Wastewater PS Upgrade/Overflow **Class of Estimate: D) Conceptual**

Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 4,5	Year of Completion: 2023	
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The Village of Carp Wastewater Pumping Stations were designed and constructed in 1992 -1994, prior to the development of the current City of Ottawa Sewer Design Guidelines. The stations do not have emergency overflows, which are necessary to protect homes from basement flooding during extreme wet weather conditions or major system failures. This 2022 budget request is to fund construction the main pumping station overflow and interim improvements to the station to provide sufficient capacity for short-term growth in the village.

New year of completion 2024.

2022 Request	2,074	Projected Yearend Unspent Bal.			2,040
Revenues	933	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
Rate Supported Develop. Charges	1,141	Rate Supported Debt			0
Gas Tax	0	Develop. Charges Debt			0
		Gas Tax Debt			0
Forecast	2022	2023	2024	2025	
Authority	2,074	0	0	0	0
Spending Plan	3,077	622	415		0
FTE's	0	0	0		0
Operating Impact	81	0	0		0



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Service Area: Wastewater Services
In Thousands (\$000)

Project Information			Financial Details					
910398 Shirley's Brook Upgrade (KNUEA)			Class of Estimate: D) Conceptual					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Service Enhancements	Ward 4, 7	Year of Completion: 2025				
<p>A section of Shirley's Brook in North Kanata, where it runs close to March Valley Road, was identified as an area requiring erosion protection in the Kanata North Urban Expansion Area Environmental Management Plan. This protection is needed to address existing and future development impacts on the brook. Funds requested in 2022 are for design and are funded by the City.</p>			2022 Request	363	Projected Yearend Unspent Bal.			0
			Revenues	0	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated		Debt	0
			Rate Supported Develop. Charges	363	Rate Supported Debt			0
			Gas Tax	0	Develop. Charges Debt			0
				0	Gas Tax Debt			0
			Forecast	2022	2023	2024	2025	
			Authority	363	1,534	0	0	
			Spending Plan	182	876	533	307	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Program Information		Financial Details					
Wastewater General		Class of Estimate: D) Conceptual					
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.</p>		2022 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	2022	2023	2024	2025	
		Authority	330	180	180	180	
		Spending Plan	330	180	180	180	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
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Project(s) within a Program Information			\$000's
910530	New Vehicles Wastewater 2022	Class of Estimate: A) Pre-Tender	250
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2024	
<p>A total of three new vehicles are required, two of the vehicles (vans) will be used for the maintenance of the newly commissioned CSST (Combined Sewage System Tunnel) and the other also a van, for HVAC maintenance activities.</p>			
910537	Wastewater Drainage Roofing 2022	Class of Estimate: C) Planning	80
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2026	
<p>The City of Ottawa owns and operates several Wastewater Collection remote and Treatment facilities 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>			

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Program Information		Financial Details					
Wastewater & Stormwater Collection		Class of Estimate: D) Conceptual					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>To keep the wastewater collection system running at it's best, several programs and rehabilitation projects are proposed for 2022:</p> <p>Linear Condition Assessment Program: This program consists of the assessment of the linear infrastructure in order to proactively detect possible failures and perform the necessary repairs.</p> <p>Pumping station rehabilitation projects: Several stations will undergo reliability upgrades to extend their service life. This will include RCAF, RCMP, Hemlock, Cumberland (2,3 and 4), Hazeldean, Woodroffe and Orient Park pumping stations.</p> <p>Flood control measures: The rehabilitation of four flood control pumping station will take place in 2022, this will include the Britannia, McEwen, Pooler and Lincoln Heights pumping stations.</p> <p>Facilities decommissioning: As the wastewater collection system is continuously evolving, several pumping stations are in need to be decommissioned and the design portion of this project will take place in 2022.</p> <p>Remote Facilities Condition Assessment Program: This program was proven to be very effective in the early detection of system failures and will continue throughout 2022.</p> <p>Health and Safety: Health and safety will continue to be our focus throughout 2022 and funds will be allocated to continue to rehabilitate structures to keep our people safe.</p>		2022 Request	9,660	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	5,160	Rate Supported Debt			4,500
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	9,660	5,910	5,910	5,915	
		Spending Plan	9,660	5,910	5,910	5,915	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
In Thousands (\$000)

Project(s) within a Program Information			\$000's
910531 SCADA Rehab & Upgrades-Remote Sewer Facilities 2022		Class of Estimate: C) Planning	4,000
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2026	
<p>This project focuses on the rehabilitation and upgrade of the Supervisory Control and Data Acquisition (SCADA) system which is a computerized system that is used by Certified Operators to monitor and control the wastewater system. The project focuses on cybersecurity, control documentation, condition assessment and replacement and upgrading of existing key components of the SCADA system controlling remote facility and collection system operations. The Operator monitors all critical components of the collection processes and is able to remotely operate equipment within the pump stations and regulators. Various components of the system either require to be upgraded or replaced to maintain reliability.</p>			
910532 Collection System Condition Assess. 2022		Class of Estimate: C) Planning	1,160
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
<p>This project intends to systematically inspect and assess the condition of large sewer trunks and collectors. The output of this program will be used to develop capital renewal and/or rehabilitation programs.</p>			
910533 Sewer Lateral Repairs 2022		Class of Estimate: C) Planning	4,500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
<p>The sewer collection systems includes 247,721 service connections, ie. 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
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Program Information		Financial Details					
Wastewater Collection Pumping Station		Class of Estimate: D) Conceptual					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The City of Ottawa owns and operates wastewater collection remote and treatment facilities in support of the Wastewater Management program.</p> <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>		2022 Request	16,204	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	11,204	Rate Supported Debt			5,000
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	16,204	13,300	12,500	12,500	
		Spending Plan	3,241	12,382	13,721	12,660	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
910534 Sewage Pumping Station Rehab Prog 2022		Class of Estimate: C) Planning	16,204
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2028	
<p>The City of Ottawa owns and operates several wastewater collection remote and treatment facilities, in support of the Wastewater Management program. This project provides the funding for the operational studies, condition assessment and lifecycle 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
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Program Information		Financial Details					
Wastewater Treatment-Renewal		Class of Estimate: D) Conceptual					
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>2022 Major Spending Projects:</p> <ul style="list-style-type: none"> - Sewage Treatment Rehabilitation Program - Raw Sewage Pumping Station Rehabilitation 		2022 Request	18,413	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	11,913	Rate Supported Debt			6,500
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	18,413	41,600	34,100	24,100	
		Spending Plan	7,203	21,758	35,103	30,100	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

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In Thousands (\$000)

Project(s) within a Program Information			\$000's
910535 ROPEC - Sewage Treatment Rehab Prog 2022		Class of Estimate: C) Planning	15,263
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2028	
<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>			
910536 Wastewater Facilities Upgrade 2022		Class of Estimate: C) Planning	500
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
<p>Wastewater Services operates and maintains all buildings and structures on the ROPEC site. This project is for the rehabilitation and upgrade of non-process related structures, and HVAC and Life safety equipment.</p>			
910538 ROPEC - SCADA Rehab. & Upgrades 2022		Class of Estimate: C) Planning	2,300
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2027	
<p>The Supervisory Control and Data Acquisition (SCADA) system is a computerized system used by Certified Operators to monitor and control the wastewater treatment system. The Operator monitors the critical components of the treatment process and is able to remotely operate equipment within the treatment plant and remote facilities such as pump stations. The SCADA system is crucial to the operation of the treatment system for monitoring key parameters required under provincial and federal legislation. This project will provide sustainable capital re-investment required to ensure efficient process operation, maintain asset functionality through equipment overhauls, adapt to changing regulations and take advantage of new technologies. Project will be identified on an annual basis through condition assessment and identified opportunities to improve on current process control requirements.</p>			

City of Ottawa
2022 Draft Capital Budget
Service Area: Wastewater Services
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
910539	Lab Equipment Purchase/Replacement 2022	Class of Estimate: C) Planning	350
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2025	
<p>The wastewater treatment laboratory requires a new Inductively coupled plasma optical emission spectrophotometer which will be used for the detection of certain chemical elements in water samples.</p>			

City of Ottawa
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Service Area: Wastewater Services
 In Thousands (\$000)

Program Information		Financial Details					
Wastewater Treatment-Growth		Class of Estimate: D) Conceptual					
Dept: Public Works & Environmental Services Department	Category: Growth	Ward: Multiple	Year of Completion: Various				
<p>The blower expansion at ROPEC was first identified in the ROPEC Development Plan and then subsequently incorporated in the DC Background Study. This work is required to increase the capacity of the blower system in order to meet future predicted demands on the process.</p>		2022 Request	1,000	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	1,000	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		Forecast	2022	2023	2024	2025	
		Authority	1,000	0	0	6,000	
		Spending Plan	2,218	0	0	1,200	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

City of Ottawa
2022 Draft Capital Budget
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 In Thousands (\$000)

Project(s) within a Program Information			\$000's
907382 ROPEC Aeration Blower Expansion		Class of Estimate: C) Planning	
Category: Growth	Ward: CW	Year of Completion: 2023	
<p>ROPEC has eight(8) open, rectangular, deep aeration tanks with 2226 diffusers per tank which transfer air(oxygen) to the biological activated sludge process. This project is for the rehabilitation of aeration piping and diffusers to maintain a state of good repair.</p>			

City Of Ottawa
2022 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2022	2023	2024	2025	Total
Drinking Water Services					
Renewal of City Assets					
906665 Lemieux WPP Intake Ice Mgmt	14,821	0	0	0	14,821
908076 Large Water Meters Changeout Program	750	750	750	750	3,000
908633 Enhanced Corrosion Control	0	7,100	0	0	7,100
908908 Small Water Meters Changeout Program	2,625	1,650	1,650	1,650	7,575
908909 Advanced Metering Infra. (AMI) Changeout	2,075	3,000	3,025	3,050	11,150
908981 Lemieux island Pipe Bridge SN 017160	0	2,210	15,840	0	18,050
908995 Advanced Metering Infra. (AMI) Software	0	500	750	0	1,250
908996 Meter Service Mobility	0	150	50	0	200
909671 2020 Infrastructure Master Plan (Water)	155	0	0	0	155
909735 Carling Ave (Moodie-Shirleys Bay)	0	17,690	0	0	17,690
909795 Water Distribution Sys Improvements 2020	0	1,000	1,000	1,000	3,000
909796 Water Facilities Roofing 2020	0	240	210	200	650
910119 Stanley Ave. (Sussex - Union St)	1,650	0	0	0	1,650
910133 Water Storage Tanks & Reservoir 2021	0	860	600	600	2,060
910140 Ops Condition Assess-Critical Sys Links	0	1,000	1,000	1,000	3,000
910396 2022 Groundwater Studies	164	169	279	285	897
910411 2022 Buildings-Water Services	150	150	150	150	600
910456 2022 Water System Improvements	7,000	12,751	9,120	14,200	43,071
910457 2022 WM Transmission/Distribution Rehab	5,000	7,000	4,400	4,800	21,200
910458 2022 Water Structures - Inspections	40	40	40	40	160
910459 Bank St (Leitrim - Dunskipper)	5,000	0	0	0	5,000
910460 Fuel Oil Tank Incentive Program	207	0	0	0	207
910496 Protective Lead Service Replace Prg 2022	500	1,250	1,250	1,250	4,250
910497 Cathodic Protection 2022	1,200	1,200	1,200	1,200	4,800
910498 Critical Links Risk Mitigation Meas 2022	500	500	500	500	2,000
910499 Water Pumping Station Facility Rehab 2022	1,360	2,150	2,150	2,150	7,810
910525 Communal Well System Rehab 2022	2,899	9,250	2,500	2,500	17,149
910526 Water Treatment Rehab 2022	11,594	11,325	11,000	11,000	44,919
910527 Water Sys SCADA & Instrument Rehab 2022	3,000	3,518	3,524	3,529	13,571
910529 New Vehicles Drinking Water 2022	176	250	250	250	926
Renewal of City Assets Total	60,866	85,703	61,238	50,104	257,911

City Of Ottawa
2022 Draft Capital Budget
Standing Committee on Environmental Protection, Water and Waste Management - Rate
Four Year Forecast Summary
In Thousands \$(000's)

Project Description	2022	2023	2024	2025	Total
Growth					
901144 Glen Cairn Reservoir Expansion	0	354	3,796	11,716	15,866
902206 Ottawa South Pumping Station Upgrade	830	0	0	1,187	2,017
904916 DCA-Kanata West Feedermain	0	323	220	3,814	4,357
904918 Limebank Feedermain	0	4,237	0	0	4,237
904972 Glen Cairn PS Upgrade	0	913	2,794	0	3,707
904982 Zone 2W West march Rd 406 to 6	0	3,238	0	0	3,238
907008 Treatment Plant Process Expansion	0	5,000	47,000	0	52,000
907100 Carp Well Capacity Increase	1,037	0	1,079	0	2,116
907101 River Ridge 3C Elevated Tank	0	3,368	12,110	0	15,478
907453 Britannia WPP Valving Upgrade	0	688	0	0	688
910050 Manotick Supply Watermain - Phase 2	19,288	0	0	0	19,288
910395 2022 Off Site Reliability Links	167	170	173	177	687
910397 2022 Rural Servicing Strategy	220	224	228	233	905
910399 2022 Water & Wastewater Studies	519	280	287	291	1,377
Growth Total	22,061	18,795	67,687	17,418	125,961
Regulatory					
910528 Water Efficiency 2022	150	500	500	500	1,650
Regulatory Total	150	500	500	500	1,650
Service Enhancements					
909930 H2Ottawa Post Implementation Deployment	0	500	0	0	500
Service Enhancements Total	0	500	0	0	500
Drinking Water Services Total	83,077	105,498	129,425	68,022	386,022
Integrated Roads, Water & Wastewater					
Renewal of City Assets					
906735 Bank St (Riverside-Ledbury)	21,028	9,370	0	22,840	53,238
906900 Main Greenfield Echo Concord et al	20,457	0	0	0	20,457
908137 CWWF Deerpark-Hilliard-Fisher et al.	0	4,700	0	0	4,700
908139 Montreal Rd (N River Rd-St Laurent Blvd)	1,220	0	0	0	1,220
908140 City Centre Ave & Elm St	0	3,990	0	0	3,990
908141 ORAP Albert St-Bronson Ave-Slater St	6,639	0	0	0	6,639
908567 Alta Vista Dr	0	0	3,250	0	3,250

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Project Description	2022	2023	2024	2025	Total
908574 Grove Ave & Grosvenor	0	7,220	0	0	7,220
908580 CWWF Queensway Terrace North Sewer	3,139	0	0	0	3,139
908581 Valley Dr Storm Sewer	2,701	5,900	0	0	8,601
908646 Integrated Construction - Bulk Prjs	0	0	12,004	65,700	77,704
909012 Bronson Ave (Arlington-Rideau Canal)	883	0	21,220	0	22,103
909021 Woodroffe Ave (Anthony - Byron)	0	680	0	1,660	2,340
909394 Arch - Canterbury - Plessier	0	8,640	0	0	8,640
909401 Broadview Ave	244	0	0	0	244
909402 Caroline Ave - Huron Ave N	0	5,860	0	0	5,860
909406 Integrated Design - Bulk Prjs	0	17,593	19,272	21,900	58,765
909407 Longpre - Marquette- Michel Cir	0	0	7,590	0	7,590
909408 Monk - Oakland -Wilton	0	0	3,650	0	3,650
909409 Winona Ave & Wilmont Ave	0	4,610	0	0	4,610
909485 Carling Ave - Churchill Ave - Kirkwood	0	7,210	0	0	7,210
909731 Piccadilly Ave (Wellington - Bassett)	0	1,520	0	0	1,520
909732 Maclaren St - Lyon St	0	8,460	0	0	8,460
909733 Pretoria Ave (Metcalf-Bank)	0	1,890	0	0	1,890
909849 Albert St. - Slater St. (Bay to Elgin)	0	11,060	0	0	11,060
910085 Valley Dr Storm Sewer Phase 2	2,640	0	10,720	0	13,360
910092 Breezehill Ave N (Gladstone - Somerset)	0	0	2,860	0	2,860
910105 Drouin Ave (North River - West Presland)	0	0	1,230	0	1,230
910106 James St Kent St (Bronson - Bank)	0	0	6,340	0	6,340
910107 Arnhem St and Apeldoorn Ave	0	0	7,280	0	7,280
910108 Clare Dovercourt (Chruchill - Hilson & T	0	0	6,250	0	6,250
910109 Ferndale Ave (Churchill Ave N - Selby Av	0	0	1,900	0	1,900
910110 Farnham, Eastbourne and Ava	0	0	4,800	0	4,800
910111 Glebe (Bank - O'Connor)	0	0	1,640	0	1,640
910112 Oakhill and Corona (Acaia - Beechwood)	0	0	2,320	0	2,320
910113 Summit Ave (Alta Vista - Fairbanks)	0	0	2,630	0	2,630
910390 2022 Aerial Mapping Services	219	238	235	432	1,124
910421 2022 Infrastructure Assess & Data Collec	300	300	330	360	1,290
910422 2022 Integrated Scoping Pre/Post Eng	1,573	1,573	1,658	2,465	7,269
910423 2022 Road Resurfacing - CW	4,563	2,604	2,634	2,670	12,471
910424 2022 Comprehensive Asset Management	1,233	270	285	300	2,088
910432 Quality Management System	1,063	0	0	0	1,063
910433 St Joseph PS Decomission-Bruyere&Cathcar	806	0	1,590	0	2,396
910434 Highland Ave (Princeton to Dovercourt)	736	0	1,460	0	2,196

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Project Description	2022	2023	2024	2025	Total
910473 Viscount Ave	767	0	1,510	0	2,277
910474 Ella St - Ralph St	981	0	1,930	0	2,911
910475 Hilda St - Manchester Ave	537	0	850	0	1,387
Renewal of City Assets Total	71,729	103,688	127,438	118,327	421,182

Integrated Roads, Water & Wastewater Total	71,729	103,688	127,438	118,327	421,182
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Integrated Water & Wastewater					
Renewal of City Assets					
910435 McLeod (Elgin - Metcalfe)	1,200	0	0	0	1,200
910436 Riverside Dr Sewer Industrial-Transitway	2,380	0	0	0	2,380
910437 Easement Agreements Update	4,000	5,000	5,000	5,000	19,000
910438 2022 Hydraulic Structures	1,000	1,000	1,000	1,150	4,150
910439 2022 Sewer Repairs / Improvements	7,000	8,376	10,000	12,200	37,576
910440 2022 Sewer Trenchless Rehab	3,000	4,000	5,000	5,300	17,300
910441 2022 Sewer CCTV Engineering	800	800	800	700	3,100
910552 Data Analytics Roll Out Water Services	130	130	0	0	260
910553 Mobility Water Services Locates	0	0	500	500	1,000
910554 Maximo Scheduler	500	0	0	0	500
910555 Water and Wastewater Plants Mobility	500	200	0	0	700
Renewal of City Assets Total	20,510	19,506	22,300	24,850	87,166

Integrated Water & Wastewater Total	20,510	19,506	22,300	24,850	87,166
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Stormwater Services					
Renewal of City Assets					
908252 Stormwater Mgmt Retrofit Master Plan	0	317	324	330	971
908618 CWWF Convent Glen North Storm Sewer	0	0	40,420	0	40,420
909356 2020 Stormwater Management Retrofit	0	2,645	3,316	3,319	9,280
909748 Mud Creek Stream Renewal	104	2,254	0	0	2,358
910081 2021 Drainage Culverts - CW	12,910	0	0	0	12,910
910205 Linear Storm System Improvements 2021	0	2,000	2,000	2,000	6,000
910420 2022 Flood Plain Mapping	228	230	234	239	931
910448 2022 Drainage Culverts - CW	1,488	11,000	12,000	8,000	32,488
910449 2022 Drainage Culverts - Other	594	507	389	373	1,863
910450 2022 Culverts Scoping Pre/Post Eng.	700	750	800	850	3,100
910451 2022 Drainage Culverts - Site-Specific	1,500	1,500	1,400	1,500	5,900

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Project Description	2022	2023	2024	2025	Total
910452 2022 Drainage Culvert - Site Spec-Other	133	133	138	143	547
910453 2022 Drainage Culverts Assessment	400	400	400	300	1,500
910461 2022 Storm and Surface Water Rehab	1,500	1,500	1,500	1,500	6,000
910462 2022 Ditch Alterations	50	50	50	50	200
910516 Stormwater Mgmt: Rehab&Enviro Compl 2022	1,960	900	2,000	2,400	7,260
Renewal of City Assets Total	21,567	24,186	64,971	21,004	131,728

Growth					
907900 DCA-Mud Creek Erosion Monito E3 Glou EUC	156	3,703	0	0	3,859
909730 2020 Stormwater Master Planning	388	212	286	292	1,178
Growth Total	544	3,915	286	292	5,037

Regulatory					
910515 Municipal Drain Improvements - 2022	650	500	500	500	2,150
Regulatory Total	650	500	500	500	2,150

Service Enhancements					
909815 ORAP-Water Enviro Strgy (WES) PH2 2020	0	500	500	500	1,500
Service Enhancements Total	0	500	500	500	1,500

Stormwater Services Total	22,761	29,101	66,257	22,296	140,415
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Wastewater Services					
Renewal of City Assets					
908250 Infrastructure Planning Information Mgmt	468	528	540	219	1,755
909245 Forcemain Condition Assessment & Rehab	0	500	500	500	1,500
909724 Pump Stations Capacity Renewal	2,173	2,493	533	0	5,199
909746 Acres Road PS Phase 2 Renewal	0	951	0	8,729	9,680
910048 2021 Infrastructure Master Plan (Sewer)	259	0	0	0	259
910062 Flow Monitoring System Rehab. 2021	0	200	200	200	600
910120 Linear Sewage System Improve. Prog. 2021	0	1,000	1,000	1,000	3,000
910131 ROPEC - Concrete Rehab & Repairs 2021	0	1,000	1,000	1,000	3,000
910202 ROPEC Process Facilities - Environment	0	0	6,000	0	6,000
910463 2022 ORAP Wet Weather IMP	1,000	2,500	3,000	3,100	9,600
910530 New Vehicles Wastewater 2022	250	100	100	100	550
910531 SCADA Rehab & Upgrades-Remote Sewer 2022	4,000	250	250	250	4,750
910532 Collection System Condition Assess. 2022	1,160	1,160	1,160	1,165	4,645

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Project Description	2022	2023	2024	2025	Total
910533 Sewer Lateral Repairs 2022	4,500	4,500	4,500	4,500	18,000
910534 Sewage Pumping Station Rehab Prog 2022	16,204	13,300	12,500	12,500	54,504
910535 ROPEC - Sewage Treatment Rehab Prog 2022	15,263	36,250	22,250	18,250	92,013
910536 Wastewater Facilites Upgrade 2022	500	500	500	500	2,000
910537 Wastewater Drainage Roofing 2022	80	80	80	80	320
910538 ROPEC - SCADA Rehab. & Upgrades 2022	2,300	1,000	1,000	1,000	5,300
910539 Lab Equipment Purchase/Replacement 2022	350	350	350	350	1,400
910550 ROPEC Process Facil Enviro Sys Upgr 2022	0	2,500	3,000	3,000	8,500
Renewal of City Assets Total	48,507	69,162	58,463	56,443	232,575

Growth					
907382 ROPEC Aeration Blower Expansion	1,000	0	0	6,000	7,000
907462 Pump Stations Capacity Increase	4,257	4,630	990	0	9,877
907463 Stittsville PS Gravity Connect	241	1,623	0	0	1,864
908247 Richmond Forcemain Expansion	0	0	0	3,260	3,260
908626 Signature Ridge PS Expansion -	0	650	5,366	0	6,016
909728 Acres Road PS Upgrade Phase 2 Growth	0	951	0	8,729	9,680
909992 Richmond Pump Station	9,837	0	0	0	9,837
910076 Carp Wastewater PS Upgrade/Overflow	2,074	0	0	0	2,074
Growth Total	17,409	7,854	6,356	17,989	49,608

Service Enhancements					
909029 Protective Plumbing Program 2018	0	1,000	1,000	1,000	3,000
910398 Shirley's Brook Upgrade (KNUEA)	363	1,534	0	0	1,897
Service Enhancements Total	363	2,534	1,000	1,000	4,897

Wastewater Services Total	66,279	79,550	65,819	75,432	287,080
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Grand Total	264,356	337,343	411,239	308,927	1,321,865
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* Integrated Roads, Water and Wastewater Program includes the Rate portion only for information purposes.

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Project Description	Authority	Expenditures	Unspent Cash Balance	Total Contractual Obligations	Unspent Balance including Contractual Obligations
Drinking Water Services					
900631 Carlington Heights Pumping Stn Expansion	16,162	1,830	14,332	1,585	12,747
900632 Strandherd Road Watermain	7,865	3,879	3,985	1,680	2,306
901144 Glen Cairn Reservoir Expansion	0	0	0	0	0
902206 Ottawa South Pumping Station Upgrade	15,540	2,427	13,113	268	12,845
903295 Brittany Pumping Station	9,089	1,008	8,081	6,365	1,716
903298 DCA -Shadow Ridge Exploratory/Well	99	96	3	0	3
904916 DCA-Kanata West Feedermain	3,092	194	2,898	0	2,898
904918 Limebank Feedermain	3,374	0	3,374	0	3,374
904975 Barrhaven PS Conversion to 3C	4,873	4,429	444	0	444
904981 3C/2W Pressure Zone Separation	5,822	4,367	1,455	231	1,225
904982 Zone 2W West march Rd 406 to 6	600	0	600	0	600
905429 DCA-Mer Bleue Rd Reliability Links	1,232	677	555	0	555
905681 Water System SCADA & Instrument Rehab	2,410	2,363	47	30	17
905992 Manotick Supply Watermain	13,042	7,805	5,237	4,396	841
906087 2018 Watermain Improvements	3,900	3,582	318	0	318
906197 Water System Facilities Upgrades 2011	1,745	1,675	70	0	70
906358 Transmission Mains Condition Assessment	1,600	1,581	19	50	(31)
906539 Large Transmission Mains Risk Mitigation	497	384	113	111	3
906662 CWWF Village/Carp Water Quality TreatFac	8,680	6,281	2,399	703	1,696
906664 Hurdman Bridge PS Renewal	18,131	1,683	16,448	2,213	14,235
906665 Lemieux WPP Intake Ice Mgmt	16,800	784	16,016	409	15,607
906795 Condition Assess - Critical System Links	5,000	4,504	496	341	155
906798 Water Distribution Sys Improvements	6,893	6,195	698	0	698
906800 Water Treatment Rehabilitation 2013-2014	4,195	4,194	1	3	(2)
906801 Communal Well System Rehab 2013-2014	566	562	4	0	4
906836 Critical Sys Links Mitigation Measures	2,090	2,080	10	0	10
907007 TSSA Registration and Compliance Upgrade	1,092	932	160	1	159
907008 Treatment Plant Process Expansion	6,016	5,117	899	162	737
907099 Carp Reservoir Cell	0	0	0	0	0
907100 Carp Well Capacity Increase	0	0	0	0	0
907101 River Ridge 3C Elevated Tank	514	4	510	0	510
907453 Britannia WPP Capacity Upgrade	0	0	0	0	0
907455 Hurdman Bridge/Billings BridgePS Upgrade	1,700	0	1,700	0	1,700
907456 Manotick North Island Link	9,356	4,615	4,741	4,290	452
907467 SUC Greenbank	4,930	3	4,927	75	4,852
907476 WPP Chemical Systems Modifications	2,300	2,069	231	191	40
907477 TSSA Diesel Compliance Upgrades at WPPS	300	55	245	1	243
907568 EAM Maximo Data Optimization	1,004	397	607	356	250
907605 Carlington Heights Reservoir Remediation	400	0	400	0	400
907607 Drinking Water Vibration Analysis	200	173	27	0	27

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Drinking Water Services					
900631 Carlington Heights Pumping Stn Expansion	16,162	1,830	14,332	1,585	12,747
900632 Strandherd Road Watermain	7,865	3,879	3,985	1,680	2,306
902206 Ottawa South Pumping Station Upgrade	15,540	2,427	13,113	268	12,845
903295 Brittany Pumping Station	9,089	1,008	8,081	6,365	1,716
903298 DCA -Shadow Ridge Exploratory/Well	99	96	3	0	3
904916 DCA-Kanata West Feedermain	3,092	194	2,898	0	2,898
904918 Limebank Feedermain	3,374	0	3,374	0	3,374
904975 Barrhaven PS Conversion to 3C	4,873	4,429	444	0	444
904981 3C/2W Pressure Zone Separation	5,822	4,367	1,455	231	1,225
904982 Zone 2W West march Rd 406 to 6	600	0	600	0	600
905429 DCA-Mer Bleue Rd Reliability Links	1,232	677	555	0	555
905681 Water System SCADA & Instrument Rehab	2,410	2,363	47	30	17
905992 Manotick Supply Watermain	13,042	7,805	5,237	4,396	841
906087 2018 Watermain Improvements	3,900	3,582	318	0	318
906197 Water System Facilities Upgrades 2011	1,745	1,675	70	0	70
906358 Transmission Mains Condition Assessment	1,600	1,581	19	50	-31
906539 Large Transmission Mains Risk Mitigation	497	384	113	111	3
906662 CWWF Village/Carp Water Quality TreatFac	8,680	6,281	2,399	703	1,696
906664 Hurdman Bridge PS Renewal	18,131	1,683	16,448	2,213	14,235
906665 Lemieux WPP Intake Ice Mgmt	16,800	784	16,016	409	15,607
906795 Condition Assess - Critical System Links	5,000	4,504	496	341	155
906798 Water Distribution Sys Improvements	6,893	6,195	698	0	698
906800 Water Treatment Rehabilitation 2013-2014	4,195	4,194	1	3	-2
906801 Communal Well System Rehab 2013-2014	566	562	4	0	4
906836 Critical Sys Links Mitigation Measures	2,090	2,080	10	0	10
907007 TSSA Registration and Compliance Upgrade	1,092	932	160	1	159
907008 Treatment Plant Process Expansion	6,016	5,117	899	162	737
907101 River Ridge 3C Elevated Tank	514	4	510	0	510
907455 Hurdman Bridge/Billings BridgePS Upgrade	1,700	0	1,700	0	1,700
907456 Manotick North Island Link	9,356	4,615	4,741	4,290	452
907467 SUC Greenbank	4,930	3	4,927	75	4,852

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907476 WPP Chemical Systems Modifications	2,300	2,069	231	191	40
907477 TSSA Diesel Compliance Upgrades at WPPS	300	55	245	1	243
907568 EAM Maximo Data Optimization	1,004	397	607	356	250
907605 Carlington Heights Reservoir Remediation	400	0	400	0	400
907607 Drinking Water Vibration Analysis	200	173	27	0	27
907640 Water Storage Tanks & Reservoir	575	476	99	27	72
907648 Proactive Lead Service Replacement Prog	896	894	2	0	2
907654 Ops Condition Assess-Critical Sys Links	2,275	1,155	1,120	1,054	66
907655 Communal Well System Rehab 2018	526	464	62	22	40
907734 Britannia G4	509	497	11	0	11
907795 Business Technology Opportunities	3,600	559	3,041	107	2,934
908073 Water Pumping Station Facility Rehab2017	225	241	-16	40	-56
908076 Large Water Meters Changeout Program	3,300	1,428	1,872	1	1,871
908077 Ops Condition Assess-Critical Sys Links	234	223	10	6	5
908078 Proactive Lead Service Replace Prog 2017	921	856	65	0	65
908080 Water Distribution Sys Improvements 2019	1,000	750	250	13	237
908082 Communal Well System Rehab 2018	150	60	90	0	90
908257 O/S Kanata West Transmission Mains	907	0	907	0	907
908326 Britannia Chem System Mods - DWS	25	1	24	0	24
908372 Ammonia Rm Ventilation Lemieux-Britannia	250	8	242	0	242
908376 Montreal Road PS Lifecycle Replacements	4,200	3,819	381	151	230
908379 Britannia WPP Expansion Joint Rehab	200	0	200	0	200
908432 Water Sys SCADA & Instrument Rehab 2017	202	143	59	0	59
908479 Carp Diesel Pump Upgrades	1,255	1,158	97	73	24
908511 2017 Watermain Improvements	1,836	1,125	711	695	16
908613 Bank St (Rideau Rd-Mitch Owens)	8,970	861	8,109	7,380	730
908614 LRT2 W1 Hwy 174 - Shefford Rd	1,500	0	1,500	0	1,500
908615 Leitrim Rd (Bank-550m East)	1,700	0	1,700	0	1,700
908622 2017 Rural Servicing Strategy	200	189	11	0	11
908623 2017 Water & Wastewater EA Studies	250	175	75	72	4
908633 Enhanced Corrosion Control	6,118	58	6,060	93	5,967
908745 CWWF [Design] Lemieux Island WPP Intake	2,400	2,150	250	251	-1
908749 FEA2016-Kanata West Feedermain	5,788	5,529	259	0	259
908801 Britannia Medium Voltage Maintenance	1,120	848	272	0	272
908818 Britannia HLPS HVAC Upgrade Design Build	628	605	22	22	0
908825 Lemieux Sludge Line Repairs	151	148	3	3	0
908866 DWS Concrete Repairs	150	108	42	34	9

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908908 Small Water Meters Changeout Program	15,600	167	15,433	14,372	1,061
908931 2018 Buildings-Water Services	1,000	732	268	44	224
908978 2018 Transmission/Distribution WM Rehab	1,090	340	750	230	520
908980 2019 Watermain Improvements	3,845	3,536	309	16	293
908981 Lemieux island Pipe Bridge SN 017160	3,640	860	2,780	10	2,770
908996 Meter Service Mobility	700	408	292	5	287
909003 DWS Ladder Trolley & Rail System Upgrade	600	217	383	73	310
909039 Proactive Lead Service Replace Prog 2018	400	158	242	31	211
909132 2018 Rural Servicing Strategy	205	14	191	169	22
909133 2018 Water & Wastewater EA Studies	255	65	190	201	-11
909134 2018 Infrastructure Master Plan (Water)	501	80	421	127	295
909189 Britannia Highlift Flowmeters	1,359	134	1,225	1,115	110
909191 DWS SCADA secondary network replacement	725	698	27	0	27
909198 Shadow Ridge - 2 Deep Wells	251	0	251	0	251
909208 Lemieux & Britannia G2 Generator Constr	12,125	719	11,406	230	11,176
909220 Stittsville Tank Remediation	768	762	6	0	6
909265 Britannia Window/Roof Repairs	1,250	181	1,069	927	141
909352 2019 Groundwater Studies	1,319	630	689	333	355
909353 2019 Rural Servicing Strategy	250	3	247	3	245
909354 2019 Water & Wastewater EA Studies	260	0	260	0	260
909371 2019 Buildings-Water Services	575	366	209	6	203
909392 2019 WM Transmission/Distribution Rehab	3,944	3,565	379	56	323
909410 Water Storage Tanks & Reservoir 2019	1,010	0	1,010	26	984
909412 Water Treatment Rehab 2019	802	856	-54	0	-54
909415 Water Facilities Roofing 2019	223	201	22	0	22
909416 Water Pumping Station Facility Rehab2019	1,550	0	1,550	0	1,550
909560 Britannia LLP & HLP Motors and Drives	2,500	36	2,464	159	2,306
909573 DWS SCADA Network Upgrade	2,070	0	2,070	0	2,070
909574 DWS SCADA HMI Upgrade	4,000	0	4,000	0	4,000
909576 Lemieux Settled Water Ducts & Outfall Re	1,000	124	876	405	472
909595 WPP Arc Flash Hazard Studies	300	200	100	0	100
909596 Lemieux Waste Management Building Roof R	100	56	44	0	44
909598 Kings Park Well 1 Electrical Service Upg	170	9	161	12	150
909648 Lemieux Protective Relays Upgrades	250	0	250	0	250
909649 WTP Surge Protection Improvements	807	0	807	0	807
909671 2020 Infrastructure Master Plan (Water)	510	0	510	282	228
909672 2020 Off Site Reliability Links	160	0	160	0	160

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909673 2020 Groundwater Studies	380	0	380	0	380
909674 2020 Rural Servicing Strategy	260	0	260	0	260
909682 2020 Buildings - Water Services	150	30	120	0	120
909713 Water System Improvements	6,000	1,843	4,157	2,968	1,190
909714 2020 WM Transmission/Distribution Rehab	4,087	2,505	1,582	90	1,492
909725 2020 Water & Wastewater Studies	260	0	260	0	260
909735 Carling Ave (Moodie-Shirleys Bay)	3,000	0	3,000	0	3,000
909795 Water Distribution Sys Improvements 2020	1,325	4	1,321	0	1,321
909796 Water Facilities Roofing 2020	200	0	200	0	200
909797 Water Storage Tanks & Reservoir 2020	630	0	630	0	630
909798 Water Pumping Station Facility Rehab2020	2,000	0	2,000	26	1,974
909799 Communal Well System Rehab 2020	175	0	175	0	175
909800 Water Treatment Rehab 2020	1,220	1,127	93	168	-75
909801 Water Sys SCADA & Instrument Rehab 2020	100	69	31	9	22
909802 Protective Lead Serv Replace Prog 2020	1,250	281	969	67	902
909803 Cathodic Protection 2020	1,200	1,077	123	117	6
909804 Critical Links Risk Mitigation Meas 2020	500	31	469	348	120
909850 Britannia WTP Chem Mixing Chber Bypass S	150	10	140	0	140
909901 WPP Electrical Preparedness Improvements	180	70	110	0	110
909905 Britannia Flood Initiatives & SW Mngmt	100	4	96	0	96
909963 Britannia Lab Virtualization	126	87	39	0	39
909966 Lemieux High Lift Suction Header	200	41	159	112	47
909968 Water Purification Plants Comprehensive	315	61	254	254	0
909974 Lemieux High Lift PS Structural Upgrades	125	0	125	0	125
909993 2020 Drinking Water Asset Management Pla	250	110	140	30	109
910006 Shadow Ridge Wells Rehab	1,800	177	1,623	331	1,292
910050 Manotick Supply Watermain - Phase 2	1,020	18	1,002	0	1,002
910051 2021 Off Site Reliability Links	164	0	164	0	164
910052 2021 Groundwater Studies	389	0	389	0	389
910053 2021 Rural Servicing Strategy	216	0	216	0	216
910054 2021 Water & Wastewater Studies	270	0	270	0	270
910066 2021 Buildings-Water Services	50	0	50	51	-1
910117 2021 Water System Improvements	7,500	0	7,500	91	7,409
910118 2021 WM Transmission/Distribution Rehab	5,500	64	5,436	0	5,436
910119 Stanley Ave. (Sussex - Union St)	500	0	500	0	500
910133 Water Storage Tanks & Reservoir 2021	530	0	530	0	530
910135 Water Pumping Station Facility Rehab2021	4,290	0	4,290	0	4,290

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910136 Water Treatment Rehab 2021	5,255	25	5,230	55	5,175
910137 Protective Lead Service Rplment Prog2021	1,250	0	1,250	0	1,250
910138 Water Sys SCADA & Instrument Rehab 2021	103	0	103	0	103
910139 Cathodic Protection 2021	1,200	19	1,181	786	395
910140 Ops Condition Assess-Critical Sys Links	900	20	880	13	867
910141 New Vehicles Drinking Water 2021	75	0	75	0	75
910233 Britannia Elevators Rehab	900	14	886	6	880
910251 Britannia high Voltage project	500	0	500	0	500
910255 Lemieux PA System Upgrades	552	195	357	68	289
910256 2021 Spring Freshet Contingency Planning	325	248	77	20	57
910260 Wash Water Tank and Pump Room Rehab	275	0	275	0	275
910272 Whitewood Ave Water Servicing	1,390	37	1,353	110	1,243
910276 Headworks Hardware Upgrade	75	34	41	1	40
910277 Britannia Diesel Gen & Fuel System Rehab	200	0	200	63	137
910278 Lemieux Diesel Gen & Fuel System Rehab	200	0	200	58	142
910305 DWS Online Turbidimeter Replacement	500	82	418	278	141
910310 Backflow Prevention Upgrades Water Facil	500	0	500	99	401
910312 Lemieux Pipe Bridge Contingency Plan	120	35	85	64	22
910327 Reliability Engineering Water Remotes	200	5	195	104	92
910328 Reliability Engineering Water Treatment	561	45	516	47	469
910345 Remotes 5 Year Electrical Maintenance	250	21	229	188	41
910346 Lemieux WPP Relays & WPPs Elec. Coord	400	0	400	0	400
910357 Lemieux 5 yr MVLV PM	750	0	750	0	750
910358 Water Efficiency	50	20	30	0	30
910370 Britannia Sodium Hypo Pumps Upgrade	250	12	238	0	238
910381 DMZ Environment Upgrades	150	0	150	0	150
910385 Well System Inspection and Rehab	425	0	425	0	425
910388 SolarWinds Network Upgrades	150	0	150	39	111
Drinking Water Services Total	363,202	124,016	239,185	58,995	180,191

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Integrated Water & Wastewater					
906899 Sewer Access & Outfalls	25,707	13,384	12,323	3,199	9,124
907468 EAM Maximo Sustainment	3,294	3,260	34	4	31
907501 SAP Integration & Mobility Deployment	6,105	5,913	192	0	192
908424 Environmental Time Series Database	1,490	21	1,469	0	1,469
908484 2017 Sewer & Water Repairs/Improvements	2,620	2,382	238	62	176
908576 Larkin-Larose-Lepage	7,434	785	6,649	6,097	552
908942 2018 Sewer & Water Repairs/Improvements	5,000	4,833	167	42	125
908944 2018 Trenchless Rehab - Sanitary & Storm	4,006	3,964	42	34	8
908997 LRT2 SS1 Sewer Upgrades (Byron Ave)	2,650	0	2,650	0	2,650
909279 Watermain: Albert-Slater (Bay to Elgin)	100	0	100	0	100
909403 Chapman Blvd (Dorval-Othello)	600	0	600	0	600
909481 2019 Sewer CCTV Engineering	1,000	132	868	0	868
909492 LRT2 SS2 Richmond Compl Streets	7,888	0	7,888	0	7,888
909694 Hydraulic Structures	1,000	0	1,000	0	1,000
909695 2020 Sewer Repairs / Improvements	10,777	1,460	9,317	3,261	6,056
909696 2020 Sewer Trenchless Rehab	1,500	82	1,418	140	1,277
910078 2021 Sewer Repairs / Improvements	9,504	0	9,504	0	9,504
910079 2021 Sewer Trenchless Rehab	4,500	0	4,500	0	4,500
910080 2021 Sewer CCTV Engineering	800	0	800	0	800
Integrated Water & Wastewater Total	95,975	36,215	59,760	12,839	46,921

Stormwater Services					
900812 DCA-Cardinal Creek-Stormwater Facility	24,856	22,543	2,313	0	2,313
900814 DCA-EUC SW Pond 1	7,810	7,254	556	0	556
902137 Stormwater Mgmt: Rehab&Enviro Compliance	1,099	760	339	455	-116
903230 DCA-SWM Ponds E 1&2 Shirley's Brook	3,250	2,482	768	646	122
903250 DCA-Storm Water Pond - Monahan Drain	8,147	7,074	1,074	736	337
903324 Kennedy Burnett SW Pond	16,310	7,122	9,188	7,083	2,105
903328 DCA-Area W-2 Shirleys Brook W SWM Pond 1	1,284	780	503	482	22
903940 Carp River Restoration	6,361	5,658	703	0	703
904470 LI-Britannia Villge-OttRivr FloodProtect	1,945	1,875	70	76	-6
905004 ORAP-Ottawa River Quality Model	422	304	118	0	118
905757 Monahan Constructed Wetland Rehab.	5,750	5,683	67	0	67
905792 Manotick Special Des Area SW Monitoring	74	0	74	0	74

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906194 Municipal Drain Improvements	258	136	122	5	116
906632 Flood Plain Mapping	1,809	1,788	21	3	18
907395 Municipal Drain Improvements - 2016	519	169	350	15	335
907483 2014 Infrastruct Master Plan(Stormwater)	402	318	84	76	9
907485 2019 Stormwater Master Planning	250	84	166	166	0
907486 Van Gaal Municipal Drain	157	147	10	10	0
907528 DCA-Riverside South SW Treatment Chamber	421	244	177	0	177
907529 DCA-Leitrim SW Pond 2	18,607	3,997	14,609	0	14,609
907535 DCA-Leitrim Pond 2 Trunk Storm Sewer	4,389	3,261	1,128	0	1,128
907536 DCA-Riverside South SW Pond 3	18,797	0	18,797	0	18,797
907537 DCA-Riverside S. Pond3 Trunk Storm Sewer	10,051	0	10,051	0	10,051
907538 DCA-Riverside South - Tributary No. 3	1,165	0	1,165	0	1,165
907539 DCA-Riverside South - Tributary No. 4	499	0	499	0	499
907540 DCA-Riverside South - Tributary No. 7A	403	0	403	0	403
907541 DCA-Riverside South - Tributary No. 7B	876	0	876	0	876
907542 DCA-Riverside South - Tributary No. 10	1,489	0	1,489	0	1,489
907543 DCA-Riverside South - Fish Habitat	2,809	0	2,809	0	2,809
907558 DCA-N5 Ultimate SW Pond	14,229	10,725	3,504	3,405	99
907560 DCA-EUC SW Pond 1 Trunk Sewers	11,045	0	11,045	0	11,045
907561 DCA-EUC SW Pond 3 Trunk Sewers	1,700	554	1,146	0	1,146
907562 DCA-Leitrim SW Pond 1 Trunk Sewers	9,379	9,183	196	0	196
907563 DCA-Riverside South SW Pond2 Trunk Sewer	5,306	381	4,925	0	4,925
907570 Hazeldean Municipal Drain	51	11	41	0	41
907602 DCA-Glou. EUC SWM Pond 1 Modification	6,864	3,814	3,049	0	3,049
907603 DCA-Glou. EUC SWM Pond 1 Fish Habitat	1,132	1,036	96	96	0
907680 Stream Restoration Projects - 2016	183	165	18	0	18
907718 Kizell Municipal Drain	1,816	335	1,481	59	1,422
907720 Cranberry Creek Municipal Drain	2,385	330	2,055	162	1,893
907805 DCA-Riverside South Pond 5	10,354	583	9,771	1	9,769
907900 DCA-Mud Creek Erosion Monito E3 Glou EUC	250	0	250	0	250
907952 DCA-Monahan Drain Strmwter FacilityRehab	2,400	912	1,488	1,301	186
908084 ORAP-Water Environment Strategy (WES)PH2	2,291	1,395	896	771	125
908087 John Taylor Municipal Drain	61	52	9	3	6
908101 Stormwater Mgmt: Rehab &Enviro Complince	440	407	33	0	33
908185 2016 Inlet Control Devices - CW	400	416	-16	0	-16
908252 Stormwater Mgmt Retrofit Master Plan	2,180	258	1,922	131	1,791

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908360 Eastboro Municipal Drain	277	194	83	79	3
908361 Seabrook Municipal Drain	63	40	23	23	0
908385 Utman Park Stormwater Facility	463	0	463	0	463
908386 Taylor Creek Erosion Works Phase 2	279	0	279	0	279
908426 Hawkins Municipal Drain	68	17	51	51	0
908427 Thomas Baxter Municipal Drain	72	12	59	59	0
908440 ORAP-Water Environment Strategy (WES)PH2	720	402	318	13	305
908618 CWWF Convent Glen North Storm Sewer	1,425	905	520	18	502
908619 Graham Creek Storm Sewer	16,756	1,838	14,918	10,790	4,129
908737 CWWF Graham Creek Slope Stabilization	250	200	50	0	50
908816 Flowing Creek Municipal Drain	37	19	18	0	18
908817 McKinnons Creek Municipal Drain	239	135	103	96	7
908852 Bilberry Creek - Slope Stabilization	5,800	5,568	232	161	71
908974 2018 Drainage Culverts (1m-3m)	7,575	6,252	1,323	96	1,227
908975 2018 Drainage Culverts pre Resurfacing	3,519	2,293	1,226	56	1,170
909001 Hobbs Municipal Drain	160	135	25	7	17
909002 Tompkins Diversion Municipal Drain	75	17	58	38	20
909017 LRT2 C1 Hwy 174 Culverts	8,236	0	8,236	0	8,236
909027 Stormwater Mgmt: Rehab&Enviro Compliance	1,846	1,806	40	0	40
909131 2018 Stormwater Management Retrofit	12,060	2,204	9,856	628	9,229
909153 Wilson-Cowan Municipal Drain	81	24	57	58	-1
909170 Kilroe Municipal Drain	75	7	68	66	2
909171 Thomas Gamble Municipal Drain	75	74	1	9	-8
909172 Tasse-Regimbald Municipal Drain	75	11	64	52	12
909173 O'Keefe (Sec 78) Municipal Drain	100	10	90	28	62
909184 Regimbald Municipal Drain	346	106	239	313	-74
909195 Simpson Municipal Drain	249	89	160	23	137
909196 Wilson-Johnston Municipal Drain	235	78	157	61	96
909216 Cassidy 2018 Municipal Drain	307	188	119	18	100
909305 Buckles Municipal Drain	80	66	14	37	-23
909351 Municipal Drain Improvements - 2019	0	0	0	0	0
909355 2019 Flood Plain Mapping	175	57	118	118	0
909356 2020 Stormwater Management Retrofit	0	0	0	0	0
909383 2019 Culverts Scoping Pre/Post Eng.	510	486	24	5	19
909384 2019 Drainage Culverts - Site-Specific	700	524	176	0	176
909385 2019 Drainage Culverts - CW	21,662	16,183	5,479	2,412	3,066

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909540 DCA- Riverside South Pond 5 Storm Sewers	6,501	0	6,501	0	6,501
909626 KNL Municipal Drain	100	0	100	0	100
909707 2020 Culverts Scoping Pre/Post Eng.	0	0	0	0	0
909708 2020 Drainage Culverts - Site-Specific	1,500	282	1,218	70	1,149
909709 2020 Drainage Culverts - CW	12,168	1,293	10,874	3,939	6,935
909710 2020 Drainage Culverts - Other	500	512	-12	5	-17
909715 Beltown Stormwater Improvements	750	0	750	0	750
909730 2020 Stormwater Master Planning	561	180	381	270	111
909743 Municipal Drain Improvements - 2020	174	0	174	0	174
909744 Stormwater Mgmt. Rhab&Enviro Compl. 2020	2,567	241	2,326	2,227	99
909748 Mud Creek Stream Renewal	370	0	370	0	370
909749 2020 Flood Plain Mapping	310	241	69	60	10
909750 Storm and Surface Water Rehabilitation	1,500	196	1,304	223	1,081
909815 ORAP-Water Enviro Strgy (WES) PH2 2020	1,000	0	1,000	0	1,000
909816 Linear Storm System Improvements	500	9	491	112	379
909898 Biltmore Extension Municipal Drain	80	34	46	38	8
909899 South Cyrville Municipal Drain	80	0	80	0	80
909942 Britannia Village Ottawa River Flood Pro	500	355	145	145	0
909960 Johnston Municipal Drain	103	22	81	80	1
909961 Dillon-Wallace Municipal Drain	112	26	86	86	1
910049 FEA Feedmill Crk Stream Rehab	1,376	0	1,376	0	1,376
910081 2021 Drainage Culverts - CW	2,382	80	2,302	571	1,731
910082 2021 Drainage Culverts - Other	636	481	155	0	155
910083 2021 Culverts Scoping Pre/Post Eng.	700	0	700	472	228
910086 2021 Storm and Surface Water Rehabilitat	3,500	0	3,500	0	3,500
910203 Municipal Drain Improvements - 2021	170	0	170	0	170
910204 Stormwater Mgmt: Rehab&Enviro Compliance	3,500	68	3,432	746	2,686
910205 Linear Storm System Improvements 2021	3,000	0	3,000	0	3,000
910343 Culvert Drainage-Site Specific	133	42	91	0	91
910344 Ditch Alterations	50	0	50	0	50
910350 Drainage Culverts Assessment	200	78	122	134	-12
Stormwater Services Total	342,284	146,315	195,968	40,179	155,789

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Wastewater Services					
903252 DCA-Sanitary Sewer Oversizing Program	1,816	605	1,211	0	1,211
903345 Kanata West Pump Station & Forcemain	53,966	53,935	31	35	-4
903437 ROPEC West Boiler Plant Replacement	570	372	198	0	198
904752 DCA-Barhaven S. O/S(South of Jock River)	1,100	496	604	0	604
904755 2018 Infrastructure Master Plan (Sewer)	1,159	722	437	437	0
904985 North Kanata Sewer Ph 2	23,252	22,900	352	1,028	-676
904986 Tri-Township/March Ridge Replacement	19,222	358	18,864	18,059	805
904988 March PS Conversion	13,249	1,002	12,247	552	11,696
905421 DCA-O/S Orleans S Business Park SanSewer	843	0	843	0	843
905423 DCA-O/S - Riverside S Community Sanitary	1,439	0	1,439	0	1,439
905424 DCA-O/S -BarrhavenS Oversize NJock River	600	1	599	0	599
905425 DCA-O/S - Kanata Town Centre Trunk Sewer	349	0	349	0	349
905705 ORAP-Combined Sewage Overflow Storage	210,544	188,986	21,558	17,427	4,131
905745 Compassionate Grant Program	200	51	149	0	149
905964 DCA-O/S Jackson Trails Sewer	252	0	252	0	252
905990 DCA-O/S Kanata Lakes North	59	0	59	0	59
906022 DCA-O/S KW Collector Sewers	4,338	3,894	444	214	230
906099 Trunk Sewer Reliability	3,500	3,002	498	367	131
906645 ROPEC - Primary Clarifier Upgrades	10,400	10,380	20	0	20
906647 ROPEC Primary Clarifier Rehab Phase 2	22,180	1,365	20,815	0	20,815
906648 ROPEC - Digester Gas Utilization	57,223	2,820	54,403	1,103	53,300
906650 ROPEC - Process Facility - Environ. Sys	9,676	9,371	305	44	261
906671 Collection Sys. Condition Assesment Prog	2,020	2,020	0	0	0
906842 TSSA Registration & Compliance Upgrades	2,076	1,978	98	111	-13
907060 ROPEC Secondary Clarifier Upgrades	8,296	3,130	5,166	0	5,166
907061 ROPEC Concrete Rehab & Repairs	801	749	53	46	7
907107 Acres Road PS Upgrade Phase 1 Growth	1,984	601	1,383	71	1,312
907114 Stittsville/Fernbank Intercept-Diversion	14,500	14,072	428	182	246
907382 ROPEC Aeration Blower Expansion	1,265	47	1,218	0	1,218
907383 ROPEC Digester Flare Expansion	748	0	748	0	748
907387 ROPEC Raw Sewage Pumping Station Expan.	0	0	0	0	0
907392 Raw Sewage Pumping Station Upgrade	9,206	8,858	348	27	322
907393 ROPEC Condition Assesment Program	500	217	283	3	281
907462 Pump Stations Capacity Increase	4,240	268	3,973	35	3,937
907596 Hazeldean Pumping Station HVAC Rehab	2,875	2,707	168	157	11

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907616 Decommission Cathcart Regulator	200	159	41	19	22
907617 Critical Manholes- Electrical / Mechanic	480	269	211	0	211
907620 Keefer Odour Control Fac.Modification	4,400	4,442	-42	0	-42
907624 Wastewater Effluent Water Grid Rehab	2,750	1,536	1,214	0	1,214
907676 Protective Plumbing Program 2015	1,041	1,012	29	61	-32
907679 Sewer Lateral Repairs 2015	6,863	6,860	3	0	3
907683 Lab Equipment Purchase/Replacement 2016	600	463	137	0	137
907684 ROPEC-Sewage Treatment Rehab Prog 2015	5,950	5,629	321	389	-68
907685 ROPEC-Concrete Rehab & Repairs 2015	596	400	196	231	-35
907688 Collection System Condition Assesment	996	917	79	83	-3
907689 Flow Monitoring Rehab Program	2,674	1,283	1,391	425	966
907716 ROPEC Rehab of Digester	16,115	5,252	10,863	41	10,822
907807 N5 Sanitary Pumping Station Overflow	939	509	430	0	430
907809 Richmond PS & Forcemain Expansion Phase1	4,503	3,715	788	134	654
907840 FEA2018 Shea Road Pump Station	3,566	3,188	378	0	378
907897 DCA-Cardinal Creek East Sanitary Ovrsize	75	0	75	0	75
907932 Richmond Forcemain Construction	5,381	5,122	259	0	259
907941 Remote Operations - Station Modification	1,500	1,195	305	309	-4
908089 Protective Plumbing Program 2016	1,000	116	884	52	833
908091 Collection System Condition Assess. 2016	981	454	527	278	249
908093 Linear Sewage System Improve. Prog. 2016	1,244	1,186	58	0	58
908094 SCADA Rehab & Upgrades - Remote Sewer	300	0	300	0	300
908095 Sewer Lateral Repairs 2016	4,803	4,650	153	243	-90
908096 Tartan PS Reliability Improvements	2,250	1,489	761	224	537
908099 ROPEC - Sewage Treatment Rehab Prog 2016	1,137	1,113	24	63	-39
908107 ROPEC Process Facil - Enviro Sys Upgrade	3,432	1,576	1,856	0	1,856
908181 2019 Wastewater Improvements	900	431	469	30	440
908183 Tri-Township Collector	1,500	1,084	416	162	253
908184 2016 ORAP-Wet Weather IMP - Flow Reduct.	1,500	1,454	46	29	17
908247 Richmond Forcemain Expansion	7,066	1,344	5,722	1,030	4,692
908250 Infrastructure Planning Information Mgmt	1,230	562	668	32	635
908330 RS-PS HVAC Boilers & SCADA Upgrade Const	9,609	9,525	84	147	-63
908368 WWC PS Gas Monitoring Rehab & Upgrade	5,111	1,356	3,755	3,671	84
908390 Manotick Servicing DCA Credit	6,857	1,499	5,357	5,357	0
908425 ROPEC Screen & Degrit Repairs-Construct.	3,355	3,324	31	0	31
908429 ROPEC Digester 5 & 6 Mixing Pump Upgrade	3,500	310	3,190	61	3,129
908445 Wastewater Drainage Roofing 2019	180	16	164	53	112

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908446 Collection System Condition Assess.	745	361	385	12	373
908449 Sewer Lateral Repairs 2018	3,353	3,378	-25	0	-25
908450 Sewage Pumping Station Rehab Prog 2017	2,466	704	1,762	7	1,755
908451 Lab Equipment Purchase/Replacement 2018	300	0	300	0	300
908453 ROPEC - Sewage Treatment Rehab Prog 2017	2,443	2,325	118	62	56
908514 2017 ORAP Wet Weather IMP - Flow Reduct.	1,870	1,463	407	3	405
908521 ROPEC Electrical Master Plan	690	563	127	3	124
908558 O/S N5 Trunk Sewer Oversizing	60	0	60	0	60
908658 Chemical System Upgrades - Remote WW PS	2,510	2,455	55	0	55
908660 Sewer Use Prog-Short Term Initiatives	200	97	103	21	82
908741 CWWF ROPEC Lighting Upgrades	1,337	1,329	8	8	0
908742 CWWF [Construct] ROPEC Thicken & Dewater	28,310	23,707	4,603	558	4,045
908767 FEA2018-Richmond Sanitary Trunk Sewer	2,838	2,838	0	0	0
908834 WWS SCADA LAN/WAN Standards Rehab.	1,801	1,038	762	776	-14
908836 Pumping Station Capitalized Maintenance	1,188	1,181	7	23	-16
908843 Delorme PS & FM Upgrades	8,425	7,929	496	164	332
908845 ROPEC Digester 5 Condition Assessmnt Pln	275	155	120	87	33
908874 ROPEC Fire Damper Rehab	765	359	406	21	386
908892 ROPEC Activated Sludge Screws Overhaul	2,640	1,354	1,286	1,266	20
908902 Shadow Ridge Station Upgrades	1,681	153	1,528	1,270	258
908904 Decommission West End Pump Stns & Manhole	2,493	2,403	90	0	90
908983 2018 ORAP Wet Weather IMP - Flow Reducti	500	206	294	291	3
909029 Protective Plumbing Program 2018	600	4	596	87	508
909031 Sewage Pumping Station Rehab Prog 2018	245	219	26	23	3
909032 ROPEC - SCADA Rehab. & Upgrades 2018	1,400	0	1,400	0	1,400
909033 ROPEC - Sewage Treatment Rehab Prog 2018	1,812	1,744	68	0	68
909034 ROPEC HVAC Phase 3	400	0	400	0	400
909072 Leitrim Sanitary Pump Station Expansion	423	0	423	0	423
909136 CW Flood Risk Profile	259	220	40	0	40
909149 Acres & Hazeldean Odour Control	400	400	0	2	-1
909158 ROPEC RSPS Motor & Drive Rehab.	2,671	837	1,834	1,778	56
909176 Jackson Trail Pump Station Upgrades	720	0	720	0	720
909183 Remote Station PLC Upgrades	250	282	-32	0	-32
909187 ROPEC Screen & Degrit Conveyor Replacmnt	250	207	43	8	35
909203 Tech Services Bldg Chiller Piping Repl.	759	255	504	239	265
909217 Pumping Stn HVAC & Isolation Valve Rehab	2,707	1,303	1,404	698	705
909218 ROPEC Master Schedule-Revay	149	39	111	0	111

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909219 Munster 2 Reliability Improvements	1,661	1,643	18	5	13
909225 Primary Clarifiers Odour Control System	1,855	163	1,692	42	1,649
909226 Flow Through Station Rehabs	875	540	335	323	12
909245 Forcemain Condition Assessment & Rehab	2,250	505	1,745	43	1,702
909251 ROPEC RAS/WAS Ferrous System Replacement	1,314	283	1,031	19	1,012
909258 ROPEC RSPS Interior Wall Condition Asses	350	45	305	7	299
909270 ROPEC Sub#1 Transformers Replacement	131	79	52	1	51
909273 Harvard PS Detailed Design & Contract Ad	500	470	30	28	2
909276 ROPEC diesel generators maint. contract	250	111	139	64	75
909295 Screen and Degrit Hydraulic Study	200	160	40	21	19
909312 Water Env Protec Short Term Initiat 2019	150	0	150	0	150
909323 WWC Medium Voltage Maintenance	1,486	1,298	188	0	188
909330 Sewer Lateral Repairs 2019	1,000	525	475	0	475
909331 Sewage Pumping Station Rehab Prog 2019	5,222	3,864	1,358	1,034	324
909334 ROPEC - Sewage Treatment Rehab Prog 2019	668	644	24	35	-11
909341 ROPEC PolymerPipe ConditionAssess-repair	465	330	135	90	45
909342 ROPEC Sodium Bisulphate Piping CondAsses	601	135	466	41	425
909357 South Nepean Collector Ph3	11,438	6,772	4,666	1,815	2,851
909375 2019 Sewer Access & Outfalls	2,000	297	1,703	5	1,698
909376 2019 Sewer Repairs / Improvements	9,821	6,515	3,306	2,645	660
909377 2019 Sewer Trenchless Rehab	4,400	1,505	2,895	847	2,047
909393 2019 ORAP Wet Weather IMP	1,057	992	65	65	0
909491 ROPEC Disinfection Bldg Rehab	1,492	712	780	224	556
909516 LiDAR Topography Update - CW	471	452	19	0	19
909542 DCA-O/S Half Moon Bay N San Sewer	404	0	404	0	404
909567 Dogwood Pump Station Rehab	855	790	65	61	4
909568 Hemlock Pumping Station Rehab	550	300	250	243	7
909585 Leonard Laporte & St.Joseph PS rehab	1,240	546	694	145	548
909594 ROPEC Glycol Loop Extension	700	23	677	0	677
909602 Cumberland 2-3-4 PS Rehab	250	197	53	19	34
909617 ROPEC Medium Voltage Mtce Phase2	809	482	327	100	227
909623 Cambridge St - Sewer Replacement	2,629	2,237	392	14	377
909716 Mooney's Bay Trunk Sewer	8,500	72	8,428	7	8,421
909717 2020 ORAP Wet Weather IMP	4,000	631	3,369	998	2,371
909724 Pump Stations Capacity Renewal	2,439	155	2,284	60	2,224
909745 Acres Road PS Phase 1 Renewal	3,425	0	3,425	0	3,425
909805 Linear Sewage System Improve. Prog. 2020	500	198	302	19	283

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909806 Sewer Lateral Repairs 2020	3,725	1,389	2,336	859	1,477
909807 Sewage Pumping Station Rehab Prog 2020	5,581	565	5,017	1,630	3,387
909808 ROPEC - Sewage Treatment Rehab Prog 2020	9,017	917	8,100	295	7,805
909809 ROPEC - Concrete Rehab & Repairs 2020	330	55	275	0	275
909810 New Vehicles Waste Water - 2020	59	59	0	0	0
909900 Walkley Screen Replacement	170	0	170	0	170
909902 Windsor Park PS Rehab	250	26	224	167	57
909906 Primary Clarifiers Inlet Gate Replacemen	3,730	123	3,607	46	3,561
909938 RSPS to S&D Conduit Flume Channel	360	0	360	0	360
909969 ROPEC Master Plan	1,010	86	924	852	72
909972 RCAF and RCMP PS Rehabilitation	752	82	670	268	402
909992 Richmond Pump Station	2,899	25	2,874	0	2,874
909994 2020 Wastewater Asset Management Plan	250	107	143	31	112
909997 Acres & Hazeldean PSs Odour Control	3,911	872	3,039	3,011	28
910009 Harvard PS Construction	2,700	181	2,519	2,528	-9
910035 WWS SCADA LAN Phase 1	4,700	1	4,699	0	4,699
910040 Sunland and Orchard View Properties	1,747	135	1,612	1,125	487
910048 2021 Infrastructure Master Plan (Sewer)	510	21	489	139	350
910061 Wastewater Drainage Roofing 2021	50	0	50	0	50
910062 Flow Monitoring System Rehab. 2021	200	0	200	6	194
910063 SCADA Rehab & Upgrades-Remote Sewer 2021	1,559	0	1,559	0	1,559
910064 Collection System Condition Assess. 2021	1,160	0	1,160	0	1,160
910076 Carp Wastewater PS Upgrade/Overflow	2,040	0	2,040	0	2,040
910077 2021 Flood Plain Mapping	240	81	159	107	52
910087 2021 ORAP Wet Weather IMP	2,500	0	2,500	0	2,500
910120 Linear Sewage System Improve. Prog. 2021	1,000	150	850	41	809
910121 Sewer Lateral Repairs 2021	4,500	0	4,500	0	4,500
910123 DCA-O/S KW Trunk Sewers - 130 Huntmar	75	0	75	0	75
910124 Sewage Pumping Station Rehab Prog 2021	16,033	7	16,026	210	15,815
910130 ROPEC - Sewage Treatment Rehab Prog 2021	12,110	1	12,109	0	12,109
910131 ROPEC - Concrete Rehab & Repairs 2021	1,000	0	1,000	0	1,000
910132 Wastewater Facilites Upgrade 2021	500	0	500	0	500
910222 Tenth Line Forcemain Rehab	168	83	85	81	4
910223 Leitrim Forcemain Rehab	158	0	158	0	158
910224 S&D Classifiers Replacement	700	47	653	465	187
910245 East Boiler #1 and #2 Controls Upgrade	400	32	368	206	163
910258 Orient Park PS Power Supply Upgrade	60	35	25	46	-21

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910259 2020 ARC Flash WWC Remote Facilities	200	18	182	102	81
910265 Hazeldean Generator Replacement Study	100	0	100	101	-1
910279 WWC Diesel Gen & Fuel System Rehab	391	12	379	372	8
910301 ROPEC PC Air Compressors Rehab	1,000	1	999	0	999
910311 PC Sludge & Sump Pumps Rehab	250	6	244	0	244
910326 Reliability Eng Wastewater Treatment	278	21	257	48	208
Wastewater Services Total	843,298	506,664	336,634	82,182	254,452
Grand Total	1,644,759	813,211	831,548	194,195	637,353