



# Environment and Climate Protection Committee

Rate Supported Programs

# Draft BUDGET 2018

**Balanced, Affordable and Progressive**

Tabled November 8, 2017





# Table of Contents

## Environment and Climate Protection Committee - Rate Supported

Briefing Note.....	1
Drinking Water Services.....	1
Wastewater Services.....	3
Stormwater Water Services.....	4
Operating Resource Requirement Summary.....	6
Drinking Water Services.....	7
Operating Resource Requirement.....	7
User Fees.....	8
Wastewater Services.....	14
Operating Resource Requirement.....	14
User Fees.....	15
Stormwater Services.....	18
Operating Resource Requirement.....	18
User Fees.....	19
Capital Funding Summary.....	23
Supplemental Operating and Capital Information.....	27
Analysis Summary.....	27
Drinking Water Services.....	28
Analysis.....	28
Explanatory Notes.....	29

Wastewater Services.....	30
Analysis.....	30
Explanatory Notes.....	31
Stormwater Services.....	32
Analysis.....	32
Explanatory Notes.....	33
Capital Budget.....	34
Project Details.....	35
Drinking Water Services.....	35
Integrated Water & Wastewater Services.....	58
Stormwater Services.....	63
Wastewater Services.....	95
Capital program Forecast.....	113
Capital Works-In-Program.....	120

# **Public Works & Environmental Services Department**

## **Water Services**

### **2018 Budget Briefing Note**

#### **Description**

The Water Services Branch is responsible for the management of operations, maintenance and repairs of the City's central and five (5) communal well-based drinking water systems as well as the City's stormwater collection, wastewater collection and wastewater treatment systems. This includes:

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

#### **Programs/Services Offered**

- Operation and maintenance of the City's central distribution system including the Britannia and Lemieux Island water purification plants, 17 drinking water pump stations and the 5 communal well systems: Carp Drinking Water System, Munster Hamlet Drinking Water System, Kings Park Drinking Water System, Vars Drinking Water System, and Shadow Ridge Drinking Water System
- Production and distribution of drinking water including electrical, mechanical, and instrumentation maintenance and repair
- Leak detection programs
- First Response - 24 hour per day response for drinking water and wastewater
- Operation, maintenance (including disinfection) and repair of over 3000 km of watermains and over 47,000 valves
- Provision of fire protection through inspection, maintenance and repair of over 22,000 public fire hydrants

- Maintain the City's accreditation as an Operating Authority for the Drinking Water Quality Management System
- Operational support for capital infrastructure renewal and development projects
- Operation and maintenance (including cleaning, inspection, and repair) of the wastewater collection system, comprised of over 5800 km of sanitary, combined, and storm pipes, 107,000 maintenance holes, 111,000 catch basins, 1600 stormwater outlets
- Operation and maintenance of 84 sanitary sewage and storm water pumping stations, combined sewage regulators/storage facilities, odour control facilities and the R.O. Pickard Environmental Centre
- Sewer use bylaw compliance, monitoring, and enforcement
- SCADA system operation, communication, and maintenance
- Quality assurance, compliance management and reporting

# Wastewater Services

## 2018 Budget Briefing Note

### Description

The Wastewater Services Branch, with support from the department's Environmental Business Services and Environmental Engineering Services branches, is responsible for the operational planning, development, management, and environmentally sound operation of the City's wastewater collection and treatment systems. This includes:

- Operational planning for future requirements including system growth
- Environmentally sound management of City-owned facilities and collection systems

### Programs/Services Offered

- R.O. Pickard Environmental Centre's operation and maintenance
- Operation and maintenance (including cleaning and inspection) of the wastewater collection system comprised of over 5800 km of sanitary, combined, and storm pipes
- Operation and maintenance of 85 sanitary sewage and storm water pumping stations, and odour control facilities
- Sewer use bylaw compliance, monitoring, and enforcement
- Compliance management of environmental legislation applicable to wastewater
- SCADA system operation and maintenance
- Residential Protective Plumbing and Cross Connection remediation grant programs, and Sewer Lateral replacement program
- Asset and financial resources management
- Biosolids management program, including the agricultural land application program

# **Public Works & Environmental Services Department Parks, Forestry & Stormwater Water Services 2018 Budget Briefing Note**

## **Description**

The Public Works & Environmental Services Department is responsible for overseeing drinking water production and distribution, wastewater collection and treatment, surface water management, solid waste collection, processing and disposal, roads, parks, and forestry maintenance and operations, and parking development and operations.

Public Works & Environmental Services has clear service mandates and clear lines of business accountability including:

- One-stop shop for the city's road, park and forestry operations and maintenance, parking related matters; and environmental services such as drinking water, waste water, surface water and solid waste.
- Ability to respond quickly and share resources
- Common service districts for all field operations
- Clear service standards
- Structured around community needs
- Strong focus on continuous improvement and performance management



## Programs/Services Offered

### **Parks, Forestry and Stormwater**

Provides centralized management of the City's parks including 508 sports fields and 282 ball diamonds, 4,421 hectares of parkland in more than 1,247 sites and 1984 play structures. Annually, the service area completes an average of 6,000 service requests with 97% being completed within established service levels.

Manages all aspects of the City's 10,000 hectares of urban and rural forests including 346,000 street and park trees. Plants 125,000 trees annually across the City in urban, suburban and rural areas. Manages invasive species, such as the Emerald Ash Borer. Waters and establishes maintenance of new and hard surface planted trees, removes trees and stumps as required.

Responsible for the operational planning, development and management of the City's storm water drainage and treatment systems. This includes 234 storm water management ponds, 113 underground storm treatment/control facilities, the maintenance of approximately 2,600 km of storm sewers and appurtenances. The service area conducts approximately 106,000 water quality tests annually. Oversees inter-department storm water programs and initiatives.

City of Ottawa

Environment and Climate Protection Committee - Rate Supported - Operating Resource Requirement

In Thousands (\$000)

	2016	2017		2018	\$ Change over 2018 Budget
	Actual	Forecast	Budget	Estimate	
<b>Expenditures by Program</b>					
Drinking Water Services	161,318	170,945	172,460	178,940	6,480
Wastewater Services	155,329	147,720	148,445	154,890	6,445
Stormwater Services	27,768	45,874	46,267	48,497	2,230
<b>Gross Expenditure</b>	<b>344,415</b>	<b>364,539</b>	<b>367,172</b>	<b>382,327</b>	<b>15,155</b>
Recoveries & Allocations	-18,365	-16,787	-17,065	-17,085	-20
Revenue	-339,749	-340,017	-350,107	-365,242	-15,135
<b>Net Requirement</b>	<b>-13,699</b>	<b>7,735</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>					
Salaries, Wages & Benefits	62,464	58,566	57,126	59,078	1,952
Overtime	1,637	2,025	2,550	2,603	53
Material & Services	41,508	44,480	49,021	49,872	851
Transfers/Grants/Financial Charges	171,425	184,704	184,712	196,734	12,022
Fleet Costs	4,714	4,230	4,801	4,831	30
Program Facility Costs	0	0	0	0	0
Other Internal Costs	62,667	70,534	68,962	69,209	247
<b>Gross Expenditures</b>	<b>344,415</b>	<b>364,539</b>	<b>367,172</b>	<b>382,327</b>	<b>15,155</b>
Recoveries & Allocations	-18,365	-16,787	-17,065	-17,085	-20
<b>Net Expenditure</b>	<b>326,050</b>	<b>347,752</b>	<b>350,107</b>	<b>365,242</b>	<b>15,135</b>
<b>Revenues By Type</b>					
Federal	0	0	0	0	0
Provincial	-190	-145	-145	-145	0
Municipal	0	0	0	0	0
Own Funds	-5,377	-5,726	-5,726	-5,726	0
Fees and Services	-334,182	-334,146	-344,236	-359,371	-15,135
Fines	0	0	0	0	0
Other	0	0	0	0	0
<b>Total Revenue</b>	<b>-339,749</b>	<b>-340,017</b>	<b>-350,107</b>	<b>-365,242</b>	<b>-15,135</b>
<b>Net Requirement</b>	<b>-13,699</b>	<b>7,735</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Full Time Equivalents</b>			<b>582.62</b>	<b>582.62</b>	<b>0.00</b>

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

	2016	2017		2018	\$ Change over 2017 Budget
	Actual	Forecast	Budget	Estimate	
<b>Expenditures by Program</b>					
Water share of Water Services	56,216	54,335	56,073	57,990	1,917
Technical Innovation & Engineering Support Services	7,852	6,066	6,136	6,302	166
Business & Technical Support Services	1,685	1,339	1,546	1,576	30
Non Departmental	95,565	109,205	108,705	113,072	4,367
<b>Gross Expenditure</b>	<b>161,318</b>	<b>170,945</b>	<b>172,460</b>	<b>178,940</b>	<b>6,480</b>
Recoveries & Allocations	-3,348	-3,220	-3,220	-3,220	0
Revenue	-164,466	-164,445	-169,240	-175,720	-6,480
<b>Net Requirement</b>	<b>-6,496</b>	<b>3,280</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>					
Salaries, Wages & Benefits	35,422	32,136	31,047	32,504	1,457
Overtime	977	1,185	1,685	1,718	33
Material & Services	17,047	17,267	19,547	20,116	569
Transfers/Grants/Financial Charges	79,364	86,627	86,635	90,676	4,041
Fleet Costs	3,214	2,699	3,260	3,280	20
Program Facility Costs	0	0	0	0	0
Other Internal Costs	25,294	31,031	30,286	30,646	360
<b>Gross Expenditures</b>	<b>161,318</b>	<b>170,945</b>	<b>172,460</b>	<b>178,940</b>	<b>6,480</b>
Recoveries & Allocations	-3,348	-3,220	-3,220	-3,220	0
<b>Net Expenditure</b>	<b>157,970</b>	<b>167,725</b>	<b>169,240</b>	<b>175,720</b>	<b>6,480</b>
<b>Revenues By Type</b>					
Federal	0	0	0	0	0
Provincial	0	0	0	0	0
Municipal	0	0	0	0	0
Own Funds	-1,782	-1,995	-1,995	-1,995	0
Fees and Services	-162,684	-162,450	-167,245	-173,725	-6,480
Fines	0	0	0	0	0
Other	0	0	0	0	0
<b>Total Revenue</b>	<b>-164,466</b>	<b>-164,445</b>	<b>-169,240</b>	<b>-175,720</b>	<b>-6,480</b>
<b>Net Requirement</b>	<b>-6,496</b>	<b>3,280</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Full Time Equivalents</b>			<b>333.44</b>	<b>333.44</b>	<b>0.00</b>

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2017 Revenue (\$000)
<b>Water Services Connection</b>							-25
<b>Size of Service Pipe</b>							
20 mm on Ductile Iron or Cast Iron	639.00	652.00	-	N/A	N/A	N/A	
20 mm on PVC	718.00	732.00	-	N/A	N/A	N/A	
20 mm others - Cost plus 15%, hourly	135.00	138.00	-	N/A	N/A	N/A	
20 to 50mm on concrete	1,909.00	1,947.00	-	N/A	N/A	N/A	
25 mm on Ductile Iron or Cast Iron	711.00	725.00	-	N/A	N/A	N/A	
25 mm on PVC	795.00	811.00	-	N/A	N/A	N/A	
25 mm others - Cost plus 15%, hourly	135.00	138.00	-	N/A	N/A	N/A	
40 mm on Ductile Iron or Cast Iron	947.00	966.00	-	N/A	N/A	N/A	
40 mm on PVC	1,047.00	1,068.00	-	N/A	N/A	N/A	
40 mm others - Cost plus 15%, hourly	135.00	138.00	-	N/A	N/A	N/A	
50 mm on Ductile Iron or Cast Iron	1,506.00	1,536.00	-	N/A	N/A	N/A	
50 mm on PVC	1,604.00	1,636.00	-	N/A	N/A	N/A	
50 mm others - Cost plus 15%, hourly	135.00	138.00	-	N/A	N/A	N/A	
100 mm	3,954.00	4,033.00	-	N/A	N/A	N/A	
150 mm	4,357.00	4,444.00	-	N/A	N/A	N/A	
200 mm	5,405.00	5,513.00	-	N/A	N/A	N/A	
All fees above for Water Service Connections to be replaced with Cost plus 15%, hourly	-	-	141.00	0.0%	0.0%	01-Jan-18	
100 to 200mm on concrete - Cost plus 15%, hourly	135.00	138.00	141.00	2.2%	4.4%	01-Jan-18	
Larger than 200 mm - Cost plus 15%, hourly	135.00	138.00	141.00	2.2%	4.4%	01-Jan-18	
Additional visit (service connection 20 mm-50 mm) - Cost plus 15%, hourly (new fee)	-	-	141.00	N/A	N/A	01-Jan-18	
Additional visit (service connection > 50 mm) - Cost plus 15%, hourly (new fee)	-	-	203.00	N/A	N/A	01-Jan-18	
Private service connection - Cost plus 15%, hourly (new fee)	-	-	141.00	N/A	N/A	01-Jan-18	

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2017 Revenue (\$000)
<b>Services</b>							
<b>Thawing of Services</b>							
20 mm and 25 mm (per thaw)	316.00	322.00	-	N/A	0.0%	N/A	
Other than 20mm, 25 mm - Cost plus 15%, hourly	158.00	161.00	-	N/A	0.0%	N/A	
Hot Water Thawing of Services on private property (Hourly rate)	109.00	130.00	-	N/A	0.0%	N/A	
Materials	56.00	57.00	-	N/A	0.0%	N/A	
All fees above for Thawing of Services to be replaced with Cost plus 15%, hourly	-	-	169.00	0.0%	0.0%	01-Jan-18	
Fire Flow Test Support	246.00	251.00	256.00	2.0%	4.1%	01-Jan-18	
<b>Service Charges</b>							
Turn off water services for non payment or turn on following receipt of payment (per operation)	88.00	90.00	92.00	2.2%	4.5%	01-Jan-18	
Turn off or on of water services (per operation)	88.00	90.00	92.00	2.2%	4.5%	01-Jan-18	
Permit for Flusher Hydrant Usage	261.00	266.00	271.00	1.9%	3.8%	01-Jan-18	
<b>Blanking of Water Services</b>							
All sizes	Cost plus 15% \$3,000.00 deposit	Cost plus 15% \$3,000.00 deposit	Cost plus 15% \$3,000.00 deposit	N/A	N/A	01-Jan-18	

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2017 Revenue (\$000)
<b>Inspection Fees (Inspection of activities connected to the water distribution system)</b>							
All new watermains and services that don't require full disinfection	192.00	196.00	200.00	2.0%	4.2%	01-Jan-18	
All new watermains and services up to 50m long that require full disinfection	571.00	582.00	594.00	2.1%	4.0%	01-Jan-18	
All new watermains and services over 50m long that require full disinfection	Cost plus 15%	Cost plus 15%	Cost plus 15%	N/A	N/A	01-Jan-18	
<b>Meter Service Charges</b>							-15
Inspection for New Water Meters (<= 20 mm meter)	92.00	94.00	96.00	2.1%	4.3%	01-Jan-18	
Meter Maintenance Service Call	157.00	160.00	164.00	2.5%	4.5%	01-Jan-18	
Call for Plumbing Repairs	24.00	25.00	26.00	4.0%	8.3%	01-Jan-18	
Water Meter Accuracy Test (<= 25 mm meter)	128.00	131.00	135.00	3.1%	5.5%	01-Jan-18	
Additional visits (<= 25 mm meter)	61.00	62.00	64.00	3.2%	4.9%	01-Jan-18	
Additional visits (large meters greater than 25 mm)	78.00	80.00	85.00	6.3%	9.0%	01-Jan-18	
Additional visits (fire line meters)	188.00	192.00	200.00	4.2%	6.4%	01-Jan-18	
Manual Meter Reading Fee	20.00	21.00	30.00	42.9%	50.0%	01-Jan-18	
<b>New Water Meters</b>							
<b>Size of Meter</b>							
15 mm Pos. Disp.	346.00	353.00	360.00	2.0%	4.0%	01-Jan-18	
15 mm Pos. Disp.(Carlsbad only)	527.00	538.00	549.00	2.0%	4.2%	01-Jan-18	
20 mm Pos. Disp.	387.00	395.00	403.00	2.0%	4.1%	01-Jan-18	
25 mm Pos. Disp.	455.00	464.00	474.00	2.2%	4.2%	01-Jan-18	
40 mm Pos. Disp.	849.00	866.00	883.00	2.0%	4.0%	01-Jan-18	
50 mm Pos. Disp.	947.00	966.00	985.00	2.0%	4.0%	01-Jan-18	
50 mm Turbine	-	-	1,955.00	N/A	N/A	01-Jan-18	
50 mm Compound	2,705.00	2,759.00	2,814.00	2.0%	4.0%	01-Jan-18	
75 mm Turbine	2,324.00	2,370.00	2,417.00	2.0%	4.0%	01-Jan-18	
75 mm Compound	3,403.00	3,471.00	3,540.00	2.0%	4.0%	01-Jan-18	
100 mm Turbine	2,841.00	2,898.00	2,956.00	2.0%	4.0%	01-Jan-18	
100 mm Compound	4,469.00	4,558.00	4,649.00	2.0%	4.0%	01-Jan-18	
150 mm Turbine	4,847.00	4,944.00	5,043.00	2.0%	4.0%	01-Jan-18	
150 mm Compound	7,612.00	7,764.00	7,919.00	2.0%	4.0%	01-Jan-18	
Fire Line Meter Assembly - Cost plus 15%, hourly	194.00	198.00	202.00	2.0%	4.1%	01-Jan-18	

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2017 Revenue (\$000)
<b>Replacement Water Meters</b>							
<b>Size of Meter</b>							
15 mm Pos. Disp.	251.00	256.00	261.00	2.0%	4.0%	01-Jan-18	
15 mm Pos. Disp.(Carlsbad only)	-	-	265.00	N/A	N/A	01-Jan-18	
20 mm Pos. Disp.	292.00	298.00	304.00	2.0%	4.1%	01-Jan-18	
25 mm Pos. Disp.	360.00	367.00	375.00	2.2%	4.2%	01-Jan-18	
40 mm Pos. Disp.	722.00	736.00	751.00	2.0%	4.0%	01-Jan-18	
50 mm Pos. Disp.	821.00	837.00	854.00	2.0%	4.0%	01-Jan-18	
50 mm Turbine	-	-	1,731.00	N/A	N/A	01-Jan-18	
50 mm Compound	2,512.00	2,562.00	2,613.00	2.0%	4.0%	01-Jan-18	
75 mm Turbine	2,198.00	2,242.00	2,287.00	2.0%	4.0%	01-Jan-18	
75 mm Compound	3,209.00	3,273.00	3,338.00	2.0%	4.0%	01-Jan-18	
100 mm Turbine	2,715.00	2,769.00	2,824.00	2.0%	4.0%	01-Jan-18	
100 mm Compound	4,275.00	4,361.00	4,448.00	2.0%	4.0%	01-Jan-18	
150 mm Turbine	4,695.00	4,789.00	4,885.00	2.0%	4.0%	01-Jan-18	
150 mm Compound	7,392.00	7,540.00	7,691.00	2.0%	4.0%	01-Jan-18	
Temporary removal and installation of meter	129.00	132.00	135.00	2.3%	4.7%	01-Jan-18	
City water meter reading device (new or damaged) replacement	198.00	202.00	206.00	2.0%	4.0%	01-Jan-18	
City water meter reading device and/or water meter reader wire re-location	156.00	159.00	162.00	1.9%	3.8%	01-Jan-18	

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2017 Revenue (\$000)
<b>Non Departmental</b>							
<b>Distribution of Drinking Water</b> Per cubic metre rate of drinking water on water bill (based on approx. 81M m3 of water billed)	1.801	1.891	1.953	3.3%	8.4%	01-Jan-18	-6,040
<b>Variable Rate - per cubic meter water consumed (new in 2018)</b>							
0 - 6 m3	-	-	0.78	N/A	N/A	01-Jan-18	
>6 - 25 m3	-	-	1.55	N/A	N/A	01-Jan-18	
>25 - 180 m3	-	-	1.71	N/A	N/A	01-Jan-18	
>180 m3	-	-	1.90	N/A	N/A	01-Jan-18	
<b>Annual Fixed Fee Rates - per meter size (new in 2018)</b>							
15 mm	-	-	115.08	N/A	N/A	01-Jan-18	
20 mm	-	-	172.62	N/A	N/A	01-Jan-18	
25 mm	-	-	287.70	N/A	N/A	01-Jan-18	
40 mm	-	-	575.40	N/A	N/A	01-Jan-18	
50 mm	-	-	920.64	N/A	N/A	01-Jan-18	
75 mm	-	-	1,726.20	N/A	N/A	01-Jan-18	
100 mm	-	-	2,877.00	N/A	N/A	01-Jan-18	
150 mm	-	-	5,754.00	N/A	N/A	01-Jan-18	
200 mm	-	-	9,206.40	N/A	N/A	01-Jan-18	
250 mm	-	-	13,234.20	N/A	N/A	01-Jan-18	
400 mm	-	-	52,706.64	N/A	N/A	01-Jan-18	
Compound Meter	-	-	528.12	N/A	N/A	01-Jan-18	



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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2017 Revenue (\$000)
<b>Fire Supply Charge</b>							-370
<b>Annual cost - per meter size</b>							
15 mm meter	42.38	44.50	46.28	4.0%	9.2%	01-Jan-18	
20 mm meter	75.36	79.12	82.28	4.0%	9.2%	01-Jan-18	
25 mm meter	117.74	123.63	128.58	4.0%	9.2%	01-Jan-18	
40 mm meter	301.41	316.48	329.14	4.0%	9.2%	01-Jan-18	
50 mm meter	470.96	494.51	514.29	4.0%	9.2%	01-Jan-18	
75 mm meter	1,059.65	1,112.64	1,157.15	4.0%	9.2%	01-Jan-18	
100 mm meter	1,883.83	1,978.02	2,057.14	4.0%	9.2%	01-Jan-18	
150 mm meter	4,238.61	4,450.55	4,628.57	4.0%	9.2%	01-Jan-18	
200 mm meter	7,535.33	7,912.09	8,228.57	4.0%	9.2%	01-Jan-18	
250 mm meter	11,773.94	12,362.64	12,857.15	4.0%	9.2%	01-Jan-18	
<b>Total Departmental</b>							<b>-6,450</b>

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

	2016	2017		2018	\$ Change over 2017 Budget
	Actual	Forecast	Budget	Estimate	
<b>Expenditures by Program</b>					
Wastewater share of Water Services	43,985	45,884	47,128	47,957	829
Technical Innovation & Engineering Support	4,705	5,316	5,296	5,217	-79
Business & Technical Support Services	304	324	325	257	-68
Non Departmental	106,335	96,196	95,696	101,459	5,763
<b>Gross Expenditure</b>	<b>155,329</b>	<b>147,720</b>	<b>148,445</b>	<b>154,890</b>	<b>6,445</b>
Recoveries & Allocations	-13,309	-12,098	-12,098	-12,098	0
Revenue	-174,970	-130,747	-136,347	-142,792	-6,445
<b>Net Requirement</b>	<b>-32,950</b>	<b>4,875</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>					
Salaries, Wages & Benefits	22,084	21,705	21,554	21,924	370
Overtime	642	810	810	830	20
Material & Services	22,870	25,615	27,226	27,508	282
Transfers/Grants/Financial Charges	88,703	76,945	76,945	82,811	5,866
Fleet Costs	1,291	1,301	1,311	1,321	10
Program Facility Costs	0	0	0	0	0
Other Internal Costs	19,739	21,344	20,599	20,496	-103
<b>Gross Expenditures</b>	<b>155,329</b>	<b>147,720</b>	<b>148,445</b>	<b>154,890</b>	<b>6,445</b>
Recoveries & Allocations	-13,309	-12,098	-12,098	-12,098	0
<b>Net Expenditure</b>	<b>142,020</b>	<b>135,622</b>	<b>136,347</b>	<b>142,792</b>	<b>6,445</b>
<b>Revenues By Type</b>					
Federal	0	0	0	0	0
Provincial	0	0	0	0	0
Municipal	0	0	0	0	0
Own Funds	-3,472	-3,731	-3,731	-3,731	0
Fees and Services	-171,498	-127,016	-132,616	-139,061	-6,445
Fines	0	0	0	0	0
Other	0	0	0	0	0
<b>Total Revenue</b>	<b>-174,970</b>	<b>-130,747</b>	<b>-136,347</b>	<b>-142,792</b>	<b>-6,445</b>
<b>Net Requirement</b>	<b>-32,950</b>	<b>4,875</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Full Time Equivalents</b>			<b>202.16</b>	<b>202.16</b>	<b>0.00</b>

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2018 Revenue (\$000)
<b>Sanitary Sewer Systems</b>							
<b>Sewer Use Program - Disposal Fees</b>							
Septic Tank Strength Liquid Material (per cubic meter)	15.80	16.12	16.44	2.0%	4.0%	01-May-18	
Holding Tank Strength Liquid Material (per cubic metre)	3.39	3.46	3.53	2.0%	4.0%	01-May-18	
Liquid Material Generated Outside the City of Ottawa (per cubic metre)	27.54	28.09	28.65	2.0%	4.0%	01-May-18	
<b>Sewer Use Program - Permit Fees</b>							
Annual Permit Fee	263.16	268.42	273.79	2.0%	4.0%	01-May-18	
Annual Permit Revision Fee	147.90	150.86	153.88	2.0%	4.0%	01-May-18	
<b>Sewer Use Program - Discharge Fees</b>							
Conveyance Fee	1.30	1.36	1.43	5.0%	10.3%	01-May-18	
Treatment Fee	0.81	0.85	0.89	5.0%	10.3%	01-May-18	
<b>Sewer Use Program - Discharge Fees - Parameters in Sewage</b>							
Biochemical Oxygen Demand (per kg)	1.56	1.59	1.63	2.0%	4.0%	01-May-18	
Suspended Solids (per kg)	0.83	0.85	0.86	2.0%	4.0%	01-May-18	
Phenolic Compounds (per kg)	1.56	1.59	1.63	2.0%	4.0%	01-May-18	
Kjeldahl Nitrogen (per kg)	6.22	6.34	6.47	2.0%	4.0%	01-May-18	
Phosphorus (per kg)	2.50	2.55	2.60	2.0%	4.0%	01-May-18	

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2018 Revenue (\$000)
<b>Sewer Use Program - Administrative Fees</b>							
Special Discharge Agreement Fee	1,023.00	1,043.00	1,064.00	2.0%	4.0%	01-May-18	
Sanitary Sewer Agreement Fee	728.00	743.00	758.00	2.0%	4.1%	01-May-18	
Compliance Program Fee	1,023.00	1,043.00	1,064.00	2.0%	4.0%	01-May-18	
Combined Agreement Fee	1,023.00	1,043.00	1,064.00	2.0%	4.0%	01-May-18	
Sanitary Discharge Agreement Revision Fee							
	220.00	224.00	228.00	1.8%	3.6%	01-May-18	
Combined Agreement Revision Fee	220.00	224.00	228.00	1.8%	3.6%	01-May-18	
Sanitary Sewer Agreement Revision Fee (per revision)							
	110.00	112.00	114.00	1.8%	3.6%	01-May-18	
Compliance Program Revision Fee (per revision)							
	220.00	224.00	228.00	1.8%	3.6%	01-May-18	
<b>CPI increase to Permit, Discharge &amp; Admin Fees</b>							
<b>Non Departmental</b>							
<b>Sewer Surcharge for Sanitary and Storm Sewer Systems</b>							
For each owner or occupant receiving water supply service:							
	117%	117%	120%	2.6%	2.6%	01-Jan-18	-6,410
<b>Variable Rate - per cubic meter water consumed (new in 2018)</b>							
0 - 6 m3	-	-	0.680	N/A	N/A	01-Jan-18	
>6 - 25 m3	-	-	1.359	N/A	N/A	01-Jan-18	
>25 - 180 m3	-	-	1.495	N/A	N/A	01-Jan-18	
>180 m3	-	-	1.683	N/A	N/A	01-Jan-18	

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2018 Revenue (\$000)
<b>Annual Fixed Fee Rates - per meter size (new in 2018)</b>							
15 mm	-	-	99.48	N/A	N/A	01-Jan-18	
20 mm	-	-	149.22	N/A	N/A	01-Jan-18	
25 mm	-	-	248.70	N/A	N/A	01-Jan-18	
40 mm	-	-	497.40	N/A	N/A	01-Jan-18	
50 mm	-	-	795.84	N/A	N/A	01-Jan-18	
75 mm	-	-	1,492.20	N/A	N/A	01-Jan-18	
100 mm	-	-	2,487.00	N/A	N/A	01-Jan-18	
150 mm	-	-	4,974.00	N/A	N/A	01-Jan-18	
200 mm	-	-	7,958.40	N/A	N/A	01-Jan-18	
250 mm	-	-	11,440.20	N/A	N/A	01-Jan-18	
Compound Meter	-	-	495.77	N/A	N/A	01-Jan-18	
<b>Total Departmental</b>							<b>-6,420</b>

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

	2016	2017		2018	\$ Change over 2017 Budget
	Actual	Forecast	Budget	Estimate	
<b>Expenditures by Program</b>					
Stormwater Operations	11,531	10,875	11,268	11,393	125
Tehchnical Innovation & Engineering Support	457	409	409	409	0
Business & Technical Support Services	343	354	354	354	0
Non Departmental	15,437	34,236	34,236	36,341	2,105
<b>Gross Expenditure</b>	<b>27,768</b>	<b>45,874</b>	<b>46,267</b>	<b>48,497</b>	<b>2,230</b>
Recoveries & Allocations	-1,708	-1,469	-1,747	-1,767	-20
Revenue	-313	-44,825	-44,520	-46,730	-2,210
<b>Net Requirement</b>	<b>25,747</b>	<b>-420</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>					
Salaries, Wages & Benefits	4,958	4,725	4,525	4,650	125
Overtime	18	30	55	55	0
Material & Services	1,591	1,598	2,248	2,248	0
Transfers/Grants/Financial Charges	3,358	21,132	21,132	23,247	2,115
Fleet Costs	209	230	230	230	0
Program Facility Costs	0	0	0	0	0
Other Internal Costs	17,634	18,159	18,077	18,067	-10
<b>Gross Expenditures</b>	<b>27,768</b>	<b>45,874</b>	<b>46,267</b>	<b>48,497</b>	<b>2,230</b>
Recoveries & Allocations	-1,708	-1,469	-1,747	-1,767	-20
<b>Net Expenditure</b>	<b>26,060</b>	<b>44,405</b>	<b>44,520</b>	<b>46,730</b>	<b>2,210</b>
<b>Revenues By Type</b>					
Federal	0	0	0	0	0
Provincial	-190	-145	-145	-145	0
Municipal	0	0	0	0	0
Own Funds	-123	0	0	0	0
Fees and Services	0	-44,680	-44,375	-46,585	-2,210
Fines	0	0	0	0	0
Other	0	0	0	0	0
<b>Total Revenue</b>	<b>-313</b>	<b>-44,825</b>	<b>-44,520</b>	<b>-46,730</b>	<b>-2,210</b>
<b>Net Requirement</b>	<b>25,747</b>	<b>-420</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Full Time Equivalents</b>			<b>47.02</b>	<b>47.02</b>	<b>0.00</b>

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2018 Revenue (\$000)
<b>Laboratory Services (Tests)</b>							-5
Alkalinity, PH, Conductivity	10.18	10.39	10.60	2.0%	4.0%	01-Mar-18	
Alkalinity Brinkman (wastewater)	15.33	15.64	15.95	2.0%	4.0%	01-Mar-18	
Biochemical Oxygen Demand	16.76	17.10	17.44	2.0%	4.0%	01-Mar-18	
Carbonaceous Biochemical Demand	16.76	17.10	17.44	2.0%	4.0%	01-Mar-18	
Chloride	11.44	11.67	11.90	2.0%	4.0%	01-Mar-18	
Chemical Oxygen Demand	10.90	11.11	11.34	2.0%	4.0%	01-Mar-18	
Conductivity	10.18	10.39	10.60	2.0%	4.0%	01-Mar-18	
Dissolved Organic Carbon	14.39	14.68	14.97	2.0%	4.0%	01-Mar-18	
E. coli (wastewater)	11.47	11.70	11.93	2.0%	4.0%	01-Mar-18	
Fluoride (SIE)	16.44	16.77	17.11	2.0%	4.0%	01-Mar-18	
Heterotrophic Plate	12.18	12.43	12.68	2.0%	4.0%	01-Mar-18	
Halo Acetic Acid	130.93	133.55	136.22	2.0%	4.0%	01-Mar-18	
ICP-OES Industrial Waste - 28 elements	25.90	26.42	26.95	2.0%	4.0%	01-Mar-18	
ICP-OES Metals Scan - 5 elements	13.42	13.69	13.97	2.0%	4.0%	01-Mar-18	
ICP-OES Metal Scan - 28 elements	22.45	22.90	23.36	2.0%	4.0%	01-Mar-18	
ICP/MS Metal Scan SW/DW - 27 elements	-	36.93	37.67	2.0%	N/A	01-Mar-18	
ICP/MS Lead DW	13.42	13.69	13.96	2.0%	4.0%	01-Mar-18	
Ammonia - Surface/Waste Water	10.13	10.33	10.54	2.0%	4.0%	01-Mar-18	
Ion Chromatography	16.44	16.77	17.11	2.0%	4.0%	01-Mar-18	
Mercury	33.32	33.99	34.67	2.0%	4.0%	01-Mar-18	
Nitrates	16.44	16.77	17.11	2.0%	4.0%	01-Mar-18	
PH	10.18	10.39	10.60	2.0%	4.0%	01-Mar-18	
Reactive Phosphorus	10.13	10.33	10.54	2.0%	4.0%	01-Mar-18	
Soluble Biochemical Oxygen Demand	17.89	18.25	18.61	2.0%	4.0%	01-Mar-18	
Soluble Carbonaceous Biochemical Oxygen Demand	17.89	18.25	18.61	2.0%	4.0%	01-Mar-18	
Soluble Chemical Oxygen Demand	10.90	11.11	11.34	2.0%	4.0%	01-Mar-18	
Specific gravity	21.21	21.63	22.06	2.0%	4.0%	01-Mar-18	
Sulphate	11.44	11.67	11.90	2.0%	4.0%	01-Mar-18	
Soluble Phosphorus	14.96	15.26	15.57	2.0%	4.0%	01-Mar-18	
Soluble Kjeldahl Nitrogen	14.96	15.26	15.57	2.0%	4.0%	01-Mar-18	

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

	2016 Rate \$	2017 Rate \$	2018 Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2018 Revenue (\$000)
<b>Laboratory Services (Tests) cont'd</b>							
Total Coliforms - E-Coli (DC)	10.56	10.78	10.99	2.0%	4.0%	01-Mar-18	
Total Coliforms - E-Coli (PA)	19.89	20.29	20.69	2.0%	4.0%	01-Mar-18	
Total Coliforms - E-Coli (MPN)	20.74	21.15	21.58	2.0%	4.0%	01-Mar-18	
Total Kjeldahl Nitrogen	13.81	14.09	14.37	2.0%	4.0%	01-Mar-18	
Total Phosphorus	13.81	14.09	14.37	2.0%	4.0%	01-Mar-18	
Total Solid - Waste Water	10.72	10.94	11.16	2.0%	4.0%	01-Mar-18	
Total Solid - Solid	10.72	10.94	11.16	2.0%	4.0%	01-Mar-18	
Total Suspended Solid	10.01	10.21	10.42	2.0%	4.0%	01-Mar-18	
Trihalomethane/VOC Full Scan	60.59	61.80	63.04	2.0%	4.0%	01-Mar-18	
Volatile Acids	37.31	38.05	38.81	2.0%	4.0%	01-Mar-18	
Volatile Solids - Waste Water	11.41	11.64	11.87	2.0%	4.0%	01-Mar-18	
Volatile Solids - Solids	11.62	11.85	12.09	2.0%	4.0%	01-Mar-18	
Volatile Suspended Solid (Water)	11.56	11.79	12.03	2.0%	4.0%	01-Mar-18	
Drinking Water Anion (Chloride, fluoride, nitrite and nitrate, sulphate)	16.44	16.77	17.11	2.0%	4.0%	01-Mar-18	
Standard Chemistry (Alkalinity, Conductivity, pH)	10.18	10.39	10.60	2.0%	4.0%	01-Mar-18	
Total Nutrients (Ammonia + Ammonia, Reactive Phosphorus)	11.13	11.35	11.58	2.0%	4.0%	01-Mar-18	
TKN/TP (Total Kjeldahl Nitrogen, Total Phosphorus)	14.81	15.11	15.41	2.0%	4.0%	01-Mar-18	
ICP/MS DW/SW Scan	36.93	37.67	38.42	2.0%	4.0%	01-Mar-18	
<b>Increase to rates for various lab tests listed above</b>							



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

	2018 Phase-In Rate \$	2017 Full Tier Rate \$	2018 Full Tier Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2018 Revenue (\$000)
<b>Non Departmental</b>							
<b>Annual Stormwater Service Fees</b>							
<b>Residential Connected (new in 2018)</b>							-2,205
Urban Single/Semi	-	-	116.85	N/A	N/A	01-Jan-18	
Rural Single/Semi	-	-	116.85	N/A	N/A	01-Jan-18	
Urban Townhouse/Apt	-	-	58.42	N/A	N/A	01-Jan-18	
Rural Townhouse/Apt	-	-	58.42	N/A	N/A	01-Jan-18	
<b>Residential Non-Connected (2018 50% Phase-In Rate)</b>							
Urban Single/Semi	40.90	77.90	81.79	5.0%	N/A	01-Jan-18	
Rural Single/Semi	29.21	55.64	58.42	5.0%	N/A	01-Jan-18	
Urban Townhouse/Apt	20.45	38.95	40.90	5.0%	N/A	01-Jan-18	
Rural Townhouse/Apt	14.61	27.82	29.21	5.0%	N/A	01-Jan-18	
<b>Industrial, Commercial and Institutional (ICI)</b>							
<b>ICI Connected Urban and Rural (new in 2018)</b>							
0 to 300K Assessment	-	-	54.75	N/A	N/A	01-Jan-18	
>300K to 1M Assessment	-	-	259.10	N/A	N/A	01-Jan-18	
>1M to 5M Assessment	-	-	966.44	N/A	N/A	01-Jan-18	
>5M to 20M Assessment	-	-	4,236.83	N/A	N/A	01-Jan-18	
>20M to 50M Assessment	-	-	12,824.25	N/A	N/A	01-Jan-18	
>50M to 100M Assessment	-	-	30,951.19	N/A	N/A	01-Jan-18	
>100M to 150M Assessment	-	-	51,918.01	N/A	N/A	01-Jan-18	
>150M Assessment	-	-	109,944.41	N/A	N/A	01-Jan-18	

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

	2018 Phase-In Rate \$	2017 Full Tier Rate \$	2018 Full Tier Rate \$	% Change Over 2017	% Change Over 2016	Effective Date	2018 Revenue (\$000)
<b>ICI Non-Connected - Urban (2018 50% Phase-In Rate)</b>							
0 to 300K Assessment	27.37	52.14	54.75	5.0%	N/A	01-Jan-18	
>300K to 1M Assessment	129.55	246.76	259.10	5.0%	N/A	01-Jan-18	
>1M to 5M Assessment	483.22	920.42	966.44	5.0%	N/A	01-Jan-18	
>5M to 20M Assessment	2,118.42	4,035.08	4,236.83	5.0%	N/A	01-Jan-18	
>20M to 50M Assessment	6,412.12	12,213.57	12,824.25	5.0%	N/A	01-Jan-18	
>50M to 100M Assessment	15,475.60	29,477.33	30,951.19	5.0%	N/A	01-Jan-18	
>100M to 150M Assessment	25,959.00	49,445.72	51,918.01	5.0%	N/A	01-Jan-18	
>150M Assessment	54,972.21	104,708.97	109,944.41	5.0%	N/A	01-Jan-18	
<b>ICI Non-Connected - Rural (2018 50% Phase-In Rate)</b>							
0 to 300K Assessment	19.16	36.50	38.32	5.0%	N/A	01-Jan-18	
>300K to 1M Assessment	90.69	172.73	181.37	5.0%	N/A	01-Jan-18	
>1M to 5M Assessment	338.26	644.30	676.51	5.0%	N/A	01-Jan-18	
>5M to 20M Assessment	1,482.89	2,824.56	2,965.78	5.0%	N/A	01-Jan-18	
>20M to 50M Assessment	4,488.49	8,549.50	8,976.97	5.0%	N/A	01-Jan-18	
>50M to 100M Assessment	10,832.92	20,634.13	21,665.84	5.0%	N/A	01-Jan-18	
>100M to 150M Assessment	18,171.30	34,612.01	36,342.61	5.0%	N/A	01-Jan-18	
>150M Assessment	38,480.54	73,296.28	76,961.09	5.0%	N/A	01-Jan-18	
<b>Total Departmental</b>							<b>-2,210</b>

**City Of Ottawa**  
**2018 Draft Capital Budget**  
**Environment & Climate Protection Committee**  
**Capital Funding Summary**  
**In Thousands (\$000's)**

Project Description	Revenues	Capital Reserve Fund	Development Charges	Debt Funding	Grand Total
Drinking Water Services					
Renewal of City Assets					
906087 2018 Watermain Improvements	-	1,000	-	1,000	2,000
907654 Ops Condition Assess-Critical Sys Links	-	2,175	-	-	2,175
907655 Communal Well System Rehab 2018	-	10,413	-	-	10,413
908076 Large Water Meters Changeout Program	-	1,000	-	-	1,000
908614 LRT2 W1 Hwy 174 - Shefford Rd	-	47	-	50	97
908616 Redenda Cres (Higgins)	-	750	-	-	750
908617 Sherbourne Rd (Knightsbridge-Dovercourt)	-	550	-	-	550
908908 Small Water Meters Changeout Program	-	325	-	-	325
908931 2018 Buildings-Water Services	-	1,000	-	-	1,000
908978 2018 Transmission/Distribution WM Rehab	-	1,990	-	100	2,090
908981 Lemieux island Pipe Bridge SN 017160	-	920	-	100	1,020
908996 Meter Service Mobility	-	700	-	-	700
909035 Water Sys SCADA & Instrument Rehab 2018	-	970	-	-	970
909036 Water Treatment Rehab 2018	-	8,014	-	1,436	9,450
909037 Water Pumping Station Facility Rehab2018	-	900	-	100	1,000
909039 Proactive Lead Service Replace Prog 2018	260	140	-	-	400
909040 New Vehicles Drinking Water - 2018	-	65	-	-	65
<b>Renewal of City Assets Total</b>	<b>260</b>	<b>30,959</b>	<b>-</b>	<b>2,786</b>	<b>34,005</b>
Growth					
900632 Strandherd Road Watermain	-	163	1,462	-	1,625
908257 O/S Kanata West Transmission Mains	-	30	277	-	307
909071 2018 Off Site Reliability Links	-	15	138	-	153
909132 2018 Rural Servicing Strategy	-	102	103	-	205
909133 2018 Water & Wastewater EA Studies	-	51	204	-	255
909134 2018 Infrastructure Master Plan (Water)	-	134	16	-	150
909135 2018 Groundwater Studies	-	136	17	-	153
<b>Growth Total</b>	<b>-</b>	<b>631</b>	<b>2,217</b>	<b>-</b>	<b>2,848</b>
<b>Drinking Water Services Total</b>	<b>260</b>	<b>31,590</b>	<b>2,217</b>	<b>2,786</b>	<b>36,853</b>
Integrated Roads, Water & Wastewater					
Renewal of City Assets					

City Of Ottawa  
2018 Draft Capital Budget  
Environment & Climate Protection Committee  
Capital Funding Summary  
In Thousands (\$000's)

Project Description	Revenues	Capital Reserve Fund	Development Charges	Debt Funding	Grand Total
906056 Albert St / Scott St	-	323	7	300	630
906875 Aylmer - Fulton - Carlyle - Rosedale	-	4,520	-	3,500	8,020
906882 Elgin (Lisgar - Isabella)	-	8,967	333	12,600	21,900
906884 Glengarry-Onslow-Beckwith-Belgrade	-	3,250	-	5,400	8,650
908370 Project Information Management Systems	-	140	-	100	240
908567 Alta Vista - Summit	-	20	-	20	40
908571 Catherine St (Bronson-Elgin)	-	120	-	50	170
908575 Isabella-Chamberlain	-	30	-	10	40
908916 2018 Surveys & Mapping	-	205	-	-	205
908940 2018 Infrastructure Assess & Data Collec	-	2,200	-	-	2,200
908941 2018 Scoping Pre/Post Engineering	-	505	-	-	505
908949 2018 Road Resurfacing - CW	-	1,700	-	1,000	2,700
908998 LRT2 R2 Hwy 174 Resurfacing EBL	-	15	-	-	15
<b>Renewal of City Assets Total</b>	<b>-</b>	<b>21,995</b>	<b>340</b>	<b>22,980</b>	<b>45,315</b>
Growth					
909050 Fleet Growth - ROWHUD	-	65	-	-	65
<b>Growth Total</b>	<b>-</b>	<b>65</b>	<b>-</b>	<b>-</b>	<b>65</b>
Strategic Initiatives					
908918 2018 Public Realm Interventions	-	140	-	-	140
<b>Strategic Initiatives Total</b>	<b>-</b>	<b>140</b>	<b>-</b>	<b>-</b>	<b>140</b>
<b>Integrated Roads, Water &amp; Wastewater Total</b>	<b>-</b>	<b>22,200</b>	<b>340</b>	<b>22,980</b>	<b>45,520</b>
Integrated Water & Wastewater					
Renewal of City Assets					
908581 Valley Dr Storm Sewer	-	10,900	-	6,100	17,000
908942 2018 Sewer & Water Repairs/Improvements	-	3,000	-	2,000	5,000
908943 2018 Sewer Access & Outfalls	-	2,500	-	-	2,500
908944 2018 Trenchless Rehab - Sanitary & Storm	-	4,006	-	-	4,006

City Of Ottawa  
2018 Draft Capital Budget  
Environment & Climate Protection Committee  
Capital Funding Summary  
In Thousands (\$000's)

Project Description	Revenues	Capital Reserve Fund	Development Charges	Debt Funding	Grand Total
908997 LRT2 SS1 Sewer Upgrades	-	35	-	100	135
<b>Renewal of City Assets Total</b>	-	<b>20,441</b>	-	<b>8,200</b>	<b>28,641</b>
<b>Integrated Water &amp; Wastewater Total</b>	-	<b>20,441</b>	-	<b>8,200</b>	<b>28,641</b>
<b>Stormwater Services</b>					
<b>Renewal of City Assets</b>					
908252 Stormwater Mgmt Retrofit Master Plan	-	450	-	-	450
908619 Graham Creek Storm Sewer	-	14,000	-	1,000	15,000
908972 2018 Scoping Pre/Post Drn Culverts	-	1,200	-	-	1,200
908973 2018 Drainage Culverts (<=1m)	-	1,500	-	5,000	6,500
908974 2018 Drainage Culverts (1m-3m)	-	1,500	-	5,000	6,500
908975 2018 Drainage Culverts pre Resurfacing	-	3,000	-	-	3,000
908976 2018 Drainage Culverts - Site-Specific	-	300	-	500	800
908982 2018 Joint CA/City Renewal Activiti	-	200	-	-	200
909017 LRT2 C1 Hwy 174 Culverts	-	97	-	100	197
909027 Stormwater Mgmt: Rehab&Enviro Compliance	-	2,442	-	-	2,442
909131 2018 Stormwater Management Retrofit	-	1,500	500	-	2,000
<b>Renewal of City Assets Total</b>	-	<b>26,189</b>	<b>500</b>	<b>11,600</b>	<b>38,289</b>
<b>Growth</b>					
909152 SNDC - Chapman Mills SW Pond	-	-	827	-	827
<b>Growth Total</b>	-	-	<b>827</b>	-	<b>827</b>
<b>Regulatory</b>					
909028 Municipal Drain Improvements - 2018	825	-	-	-	825
<b>Regulatory Total</b>	<b>825</b>	-	-	-	<b>825</b>
<b>Strategic Initiatives</b>					
906632 Flood Plain Mapping	-	295	-	-	295
909026 ORAP-Water Environment Strategy (WES)PH2	-	1,000	-	-	1,000
<b>Strategic Initiatives Total</b>	-	<b>1,295</b>	-	-	<b>1,295</b>
<b>Stormwater Services Total</b>	<b>825</b>	<b>27,484</b>	<b>1,327</b>	<b>11,600</b>	<b>41,236</b>
<b>Wastewater Services</b>					

**City Of Ottawa**  
**2018 Draft Capital Budget**  
**Environment & Climate Protection Committee**  
**Capital Funding Summary**  
**In Thousands (\$000's)**

Project Description	Revenues	Capital Reserve Fund	Development Charges	Debt Funding	Grand Total
Renewal of City Assets					
905421 DCA-O/S Orleans S Business Park SanSewer	-	-	193	-	193
906100 2018 Sanitary Sewer Improvements	-	130	-	800	930
906647 ROPEC Primary Clarifier Rehab Phase 2	-	100	-	12,500	12,600
907383 ROPEC Digester Flare Expansion	-	162	262	100	524
908029 South End Remote Facil. Corrosion/Odour	-	400	-	-	400
908250 Infrastructure Planning Information Mgmt	-	445	-	-	445
908368 WWC PS Gas Monitoring Rehab & Upgrade	-	500	-	-	500
908449 Sewer Lateral Repairs 2018	-	100	-	3,900	4,000
908451 Lab Equipment Purchase/Replacement 2018	-	300	-	-	300
908455 ROPEC Process Facil - Enviro Sys Upgrade	-	100	-	400	500
908731 CWWF Flood Protection - Bridlewood North	-	1,500	-	-	1,500
908983 2018 ORAP Wet Weather IMP - Flow Reducti	-	435	65	-	500
909030 SCADA Rehab & Upgrades-Remote Sewer 2018	-	1,500	-	-	1,500
909031 Sewage Pumping Station Rehab Prog 2018	-	11,000	-	-	11,000
909032 ROPEC - SCADA Rehab. & Upgrades 2018	-	2,100	-	-	2,100
909033 ROPEC - Sewage Treatment Rehab Prog 2018	-	1,750	-	5,000	6,750
<b>Renewal of City Assets Total</b>	-	<b>20,522</b>	<b>520</b>	<b>22,700</b>	<b>43,742</b>
Growth					
904755 2018 Infrastructure Master Plan (Sewer)	-	263	262	-	525
904985 North Kanata Sewer Ph 2	-	100	-	3,100	3,200
907809 Richmond PS & Forcemain Expansion Phase1	-	250	750	-	1,000
909072 Leitrim Sanitary Pump Station Expansion	-	-	90	-	90
<b>Growth Total</b>	-	<b>613</b>	<b>1,102</b>	<b>3,100</b>	<b>4,815</b>
Strategic Initiatives					
908090 Water Env Protec Short Term Initiatives	-	150	-	-	150
909029 Protective Plumbing Program 2018	-	600	-	-	600
<b>Strategic Initiatives Total</b>	-	<b>750</b>	-	-	<b>750</b>
<b>Wastewater Services Total</b>	-	<b>21,885</b>	<b>1,622</b>	<b>25,800</b>	<b>49,307</b>
<b>Grand Total</b>	<b>1,085</b>	<b>123,600</b>	<b>5,506</b>	<b>71,366</b>	<b>201,557</b>

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

	2017 Baseline			2018 Adjustments					2018	\$ Change over 2017 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	Council Priorities	Service Initiatives / Savings	User Fees & Revenues	Estimate	
<b>Expenditures by Program</b>										
Drinking Water Services	170,945	172,460	0	6,466	14	0	0	0	178,940	6,480
Wastewater Services	147,720	148,445	0	6,438	7	0	0	0	154,890	6,445
Stormwater Services	45,874	46,267	0	2,230	0	0	0	0	48,497	2,230
<b>Gross Expenditure</b>	<b>364,539</b>	<b>367,172</b>	<b>0</b>	<b>15,134</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>382,327</b>	<b>15,155</b>
Recoveries & Allocations	-16,787	-17,065	0	-20	0	0	0	0	-17,085	-20
Revenue	-340,017	-350,107	0	-55	0	0	0	-15,080	-365,242	-15,135
<b>Net Requirement</b>	<b>7,735</b>	<b>0</b>	<b>0</b>	<b>15,059</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>-15,080</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>										
Salaries, Wages & Benefits	58,566	57,126	0	1,952	0	0	0	0	59,078	1,952
Overtime	2,025	2,550	0	53	0	0	0	0	2,603	53
Material & Services	44,480	49,021	0	830	21	0	0	0	49,872	851
Transfers/Grants/Financial Charges	184,704	184,712	0	12,022	0	0	0	0	196,734	12,022
Fleet Costs	4,230	4,801	0	30	0	0	0	0	4,831	30
Program Facility Costs	0	0	0	0	0	0	0	0	0	0
Other Internal Costs	70,534	68,962	0	247	0	0	0	0	69,209	247
<b>Gross Expenditures</b>	<b>364,539</b>	<b>367,172</b>	<b>0</b>	<b>15,134</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>382,327</b>	<b>15,155</b>
Recoveries & Allocations	-16,787	-17,065	0	-20	0	0	0	0	-17,085	-20
<b>Net Expenditure</b>	<b>347,752</b>	<b>350,107</b>	<b>0</b>	<b>15,114</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>365,242</b>	<b>15,135</b>
<b>Percent of 2017 Net Expenditure Budget</b>			<b>0.0%</b>	<b>4.3%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>4.3%</b>	
<b>Revenues By Type</b>										
Federal	0	0	0	0	0	0	0	0	0	0
Provincial	-145	-145	0	0	0	0	0	0	-145	0
Municipal	0	0	0	0	0	0	0	0	0	0
Own Funds	-5,726	-5,726	0	0	0	0	0	0	-5,726	0
Fees and Services	-334,146	-344,236	0	-55	0	0	0	-15,080	-359,371	-15,135
Fines	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
<b>Total Revenue</b>	<b>-340,017</b>	<b>-350,107</b>	<b>0</b>	<b>-55</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-15,080</b>	<b>-365,242</b>	<b>-15,135</b>
<b>Percent of 2017 Revenue Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>4.3%</b>	<b>4.3%</b>	
<b>Net Requirement</b>	<b>7,735</b>	<b>0</b>	<b>0</b>	<b>15,059</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>-15,080</b>	<b>0</b>	<b>0</b>
<b>Percent of 2017 Net Requirement Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	
<b>Full Time Equivalents (FTE's)</b>		582.62	0.00	0.00	0.00	0.00	0.00	0.00	582.62	0.00
<b>Percent of 2017 FTE's</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	

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

	2017 Baseline			2018 Adjustments					2018	\$ Change over 2017 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	Council Priorities	Service Initiatives / Savings	User Fees & Revenues	Estimate	
<b>Expenditures by Program</b>										
Water share of Water Services	54,335	56,073	0	1,903	14	0	0	0	57,990	1,917
Technical Innovation & Engineering Support Services	6,066	6,136	0	166	0	0	0	0	6,302	166
Business & Technical Support Services	1,339	1,546	0	30	0	0	0	0	1,576	30
Non Departmental	109,205	108,705	0	4,367	0	0	0	0	113,072	4,367
<b>Gross Expenditure</b>	<b>170,945</b>	<b>172,460</b>	<b>0</b>	<b>6,466</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>178,940</b>	<b>6,480</b>
Recoveries & Allocations	-3,220	-3,220	0	0	0	0	0	0	-3,220	0
Revenue	-164,445	-169,240	0	-30	0	0	0	-6,450	-175,720	-6,480
<b>Net Requirement</b>	<b>3,280</b>	<b>0</b>	<b>0</b>	<b>6,436</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>-6,450</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>										
Salaries, Wages & Benefits	32,136	31,047	0	1,457	0	0	0	0	32,504	1,457
Overtime	1,185	1,685	0	33	0	0	0	0	1,718	33
Material & Services	17,267	19,547	0	555	14	0	0	0	20,116	569
Transfers/Grants/Financial Charges	86,627	86,635	0	4,041	0	0	0	0	90,676	4,041
Fleet Costs	2,699	3,260	0	20	0	0	0	0	3,280	20
Program Facility Costs	0	0	0	0	0	0	0	0	0	0
Other Internal Costs	31,031	30,286	0	360	0	0	0	0	30,646	360
<b>Gross Expenditures</b>	<b>170,945</b>	<b>172,460</b>	<b>0</b>	<b>6,466</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>178,940</b>	<b>6,480</b>
Recoveries & Allocations	-3,220	-3,220	0	0	0	0	0	0	-3,220	0
<b>Net Expenditure</b>	<b>167,725</b>	<b>169,240</b>	<b>0</b>	<b>6,466</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>175,720</b>	<b>6,480</b>
<b>Percent of 2017 Net Expenditure Budget</b>			<b>0.0%</b>	<b>3.8%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>3.8%</b>	
<b>Revenues By Type</b>										
Federal	0	0	0	0	0	0	0	0	0	0
Provincial	0	0	0	0	0	0	0	0	0	0
Municipal	0	0	0	0	0	0	0	0	0	0
Own Funds	-1,995	-1,995	0	0	0	0	0	0	-1,995	0
Fees and Services	-162,450	-167,245	0	-30	0	0	0	-6,450	-173,725	-6,480
Fines	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
<b>Total Revenue</b>	<b>-164,445</b>	<b>-169,240</b>	<b>0</b>	<b>-30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-6,450</b>	<b>-175,720</b>	<b>-6,480</b>
<b>Percent of 2017 Revenue Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>3.8%</b>	<b>3.8%</b>	
<b>Net Requirement</b>	<b>3,280</b>	<b>0</b>	<b>0</b>	<b>6,436</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>-6,450</b>	<b>0</b>	<b>0</b>
<b>Percent of 2017 Net Requirement Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	
<b>Full Time Equivalents (FTE's)</b>		333.44	0.00	0.00	0.00	0.00	0.00	0.00	333.44	0.00
<b>Percent of 2017 FTE's</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	



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

2017 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Deficit in water revenues due to wet summer resulting in reduced volume of water consumed and billed.	0	-4,795	-4,795
Savings mainly due to reduced usage of chemicals and hydro, reduced watermain breaks and lower fleet costs.	1,515	0	1,515
<b>Total Surplus / (Deficit)</b>	<b>1,515</b>	<b>-4,795</b>	<b>-3,280</b>

2018 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2018 Changes	FTE Impact
<b>Maintain Services</b>				
All programs include an adjustment for potential 2018 cost of living, increments and benefit adjustments.	1,490	0	1,490	0.00
Inflationary increase to chemical costs.	365	0	365	0.00
Increase in purchased services for lab costs, cell phones, leadership training and casual labour.	190	0	190	0.00
Increase in Police costs for traffic control during water main breaks/repairs	34	0	34	0.00
Increase in Fleet costs related to inflation on compensation contracts, parts, fuel, contribution to capital reserve and maintenance.	20	0	20	0.00
Increase in leasing revenues for cell phone towers on City property.	0	-30	-30	0.00
<b>Non Departmental</b>				
Increase in debt servicing costs.	1,350	0	1,350	0.00
Increase in administrative overhead costs due to cost of living increases.	326	0	326	0.00
Increase in the contribution to the Water Capital Replacement Reserve Fund.	2,691	0	2,691	0.00
<b>Total Maintain Services</b>	<b>6,466</b>	<b>-30</b>	<b>6,436</b>	<b>0.00</b>
<b>Growth</b>				
Fleet costs for new skid loader.	14	0	14	0.00
<b>Total Growth</b>	<b>14</b>	<b>0</b>	<b>14</b>	<b>0.00</b>
<b>User Fees &amp; Revenues</b>				
See following user fee schedule for details on the specific rates.	0	-6,450	-6,450	0.00
<b>Total User Fees &amp; Revenues</b>	<b>0</b>	<b>-6,450</b>	<b>-6,450</b>	<b>0.00</b>
<b>Total Budget Changes</b>	<b>6,480</b>	<b>-6,480</b>	<b>0</b>	<b>0.00</b>

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

	2017 Baseline			2018 Adjustments					2018	\$ Change over 2017 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	Council Priorities	Service Initiatives / Savings	User Fees & Revenues	Estimate	
<b>Expenditures by Program</b>										
Wastewater share of Water Services	45,884	47,128	0	822	7	0	0	0	47,957	829
Technical Innovation & Engineering Support	5,316	5,296	0	-79	0	0	0	0	5,217	-79
Business & Technical Support Services	324	325	0	-68	0	0	0	0	257	-68
Non Departmental	96,196	95,696	0	5,763	0	0	0	0	101,459	5,763
<b>Gross Expenditure</b>	<b>147,720</b>	<b>148,445</b>	<b>0</b>	<b>6,438</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>154,890</b>	<b>6,445</b>
Recoveries & Allocations	-12,098	-12,098	0	0	0	0	0	0	-12,098	0
Revenue	-130,747	-136,347	0	-25	0	0	0	-6,420	-142,792	-6,445
<b>Net Requirement</b>	<b>4,875</b>	<b>0</b>	<b>0</b>	<b>6,413</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>-6,420</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>										
Salaries, Wages & Benefits	21,705	21,554	0	370	0	0	0	0	21,924	370
Overtime	810	810	0	20	0	0	0	0	830	20
Material & Services	25,615	27,226	0	275	7	0	0	0	27,508	282
Transfers/Grants/Financial Charges	76,945	76,945	0	5,866	0	0	0	0	82,811	5,866
Fleet Costs	1,301	1,311	0	10	0	0	0	0	1,321	10
Program Facility Costs	0	0	0	0	0	0	0	0	0	0
Other Internal Costs	21,344	20,599	0	-103	0	0	0	0	20,496	-103
<b>Gross Expenditures</b>	<b>147,720</b>	<b>148,445</b>	<b>0</b>	<b>6,438</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>154,890</b>	<b>6,445</b>
Recoveries & Allocations	-12,098	-12,098	0	0	0	0	0	0	-12,098	0
<b>Net Expenditure</b>	<b>135,622</b>	<b>136,347</b>	<b>0</b>	<b>6,438</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>142,792</b>	<b>6,445</b>
<b>Percent of 2017 Net Expenditure Budget</b>			<b>0.0%</b>	<b>4.7%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>4.7%</b>	
<b>Revenues By Type</b>										
Federal	0	0	0	0	0	0	0	0	0	0
Provincial	0	0	0	0	0	0	0	0	0	0
Municipal	0	0	0	0	0	0	0	0	0	0
Own Funds	-3,731	-3,731	0	0	0	0	0	0	-3,731	0
Fees and Services	-127,016	-132,616	0	-25	0	0	0	-6,420	-139,061	-6,445
Fines	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
<b>Total Revenue</b>	<b>-130,747</b>	<b>-136,347</b>	<b>0</b>	<b>-25</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-6,420</b>	<b>-142,792</b>	<b>-6,445</b>
<b>Percent of 2017 Revenue Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>4.7%</b>	<b>4.7%</b>	
<b>Net Requirement</b>	<b>4,875</b>	<b>0</b>	<b>0</b>	<b>6,413</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>-6,420</b>	<b>0</b>	<b>0</b>
<b>Percent of 2017 Net Requirement Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	
<b>Full Time Equivalents (FTE's)</b>		202.16	0.00	0.00	0.00	0.00	0.00	0.00	<b>202.16</b>	<b>0.00</b>
<b>Percent of 2017 FTE's</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	

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

2017 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Deficit mainly due to less sewer surcharge revenues due to reduced water revenues.	0	-5,600	-5,600
Anticipated surplus mainly in chemicals and hydro due to reduced volume of wastewater treated.	725	0	725
<b>Total Surplus / (Deficit)</b>	<b>725</b>	<b>-5,600</b>	<b>-4,875</b>

2018 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2018 Changes	FTE Impact
<b>Maintain Services</b>				
All programs include an adjustment for potential 2018 cost of living, increments and benefit adjustments.	390	0	390	0.00
Increase in costs for wet well cleaning.	150	0	150	0.00
Increase in materials/services such as water purchases, cell phones, leadership training and leasing costs.	125	0	125	0.00
Increase in Fleet costs related to inflation on compensation contracts, parts, fuel, contribution to capital reserve and maintenance.	10	0	10	0.00
Increase in lease revenues for cell phone towers on City property.	0	-25	-25	0.00
<b>Non Departmental</b>				
Increase in debt servicing costs.	7,695	0	7,695	0.00
Adjustment in administrative overhead costs based on level of support	-103	0	-103	0.00
Decrease in the contribution to the Water Capital Replacement Reserve Fund.	-1,829	0	-1,829	0.00
<b>Total Maintain Services</b>	<b>6,438</b>	<b>-25</b>	<b>6,413</b>	<b>0.00</b>
<b>Growth</b>				
Fleet costs for new forklift.	7	0	7	0.00
<b>Total Growth</b>	<b>7</b>	<b>0</b>	<b>7</b>	<b>0.00</b>
<b>User Fees &amp; Revenues</b>				
See following user fee schedule for details on the specific rates.	0	-6,420	-6,420	0.00
<b>Total User Fees &amp; Revenues</b>	<b>0</b>	<b>-6,420</b>	<b>-6,420</b>	<b>0.00</b>
<b>Total Budget Changes</b>	<b>6,445</b>	<b>-6,445</b>	<b>0</b>	<b>0.00</b>

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

	2017 Baseline			2018 Adjustments					2018	\$ Change over 2017 Budget
	Forecast	Budget	Adj. to Base Budget	Maintain Services	Growth	Council Priorities	Service Initiatives / Savings	User Fees & Revenues	Estimate	
<b>Expenditures by Program</b>										
Stormwater Operations	10,875	11,268	0	125	0	0	0	0	11,393	125
Technical Innovation & Engineering Support	409	409	0	0	0	0	0	0	409	0
Business & Technical Support Services	354	354	0	0	0	0	0	0	354	0
Non Departmental	34,236	34,236	0	2,105	0	0	0	0	36,341	2,105
<b>Gross Expenditure</b>	<b>45,874</b>	<b>46,267</b>	<b>0</b>	<b>2,230</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48,497</b>	<b>2,230</b>
Recoveries & Allocations	-1,469	-1,747	0	-20	0	0	0	0	-1,767	-20
Revenue	-44,825	-44,520	0	0	0	0	0	-2,210	-46,730	-2,210
<b>Net Requirement</b>	<b>-420</b>	<b>0</b>	<b>0</b>	<b>2,210</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-2,210</b>	<b>0</b>	<b>0</b>
<b>Expenditures by Type</b>										
Salaries, Wages & Benefits	4,725	4,525	0	125	0	0	0	0	4,650	125
Overtime	30	55	0	0	0	0	0	0	55	0
Material & Services	1,598	2,248	0	0	0	0	0	0	2,248	0
Transfers/Grants/Financial Charges	21,132	21,132	0	2,115	0	0	0	0	23,247	2,115
Fleet Costs	230	230	0	0	0	0	0	0	230	0
Program Facility Costs	0	0	0	0	0	0	0	0	0	0
Other Internal Costs	18,159	18,077	0	-10	0	0	0	0	18,067	-10
<b>Gross Expenditures</b>	<b>45,874</b>	<b>46,267</b>	<b>0</b>	<b>2,230</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>48,497</b>	<b>2,230</b>
Recoveries & Allocations	-1,469	-1,747	0	-20	0	0	0	0	-1,767	-20
<b>Net Expenditure</b>	<b>44,405</b>	<b>44,520</b>	<b>0</b>	<b>2,210</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46,730</b>	<b>2,210</b>
<b>Percent of 2017 Net Expenditure Budget</b>			<b>0.0%</b>	<b>5.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>5.0%</b>	
<b>Revenues By Type</b>										
Federal	0	0	0	0	0	0	0	0	0	0
Provincial	-145	-145	0	0	0	0	0	0	-145	0
Municipal	0	0	0	0	0	0	0	0	0	0
Own Funds	0	0	0	0	0	0	0	0	0	0
Fees and Services	-44,680	-44,375	0	0	0	0	0	-2,210	-46,585	-2,210
Fines	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0
<b>Total Revenue</b>	<b>-44,825</b>	<b>-44,520</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-2,210</b>	<b>-46,730</b>	<b>-2,210</b>
<b>Percent of 2017 Revenue Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>5.0%</b>	<b>5.0%</b>	
<b>Net Requirement</b>	<b>-420</b>	<b>0</b>	<b>0</b>	<b>2,210</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-2,210</b>	<b>0</b>	<b>0</b>
<b>Percent of 2017 Net Requirement Budget</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	
<b>Full Time Equivalents (FTE's)</b>		47.02	0.00	0.00	0.00	0.00	0.00	0.00	47.02	0.00
<b>Percent of 2017 FTE's</b>			<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>0.0%</b>	

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

2017 Forecast vs. Budget Variance Explanation	Surplus / (Deficit)		
	Expense	Revenue	Net
Surplus mainly due to phase in of new stormwater fee for non connected properties.	115	305	420
<b>Total Surplus / (Deficit)</b>	<b>115</b>	<b>305</b>	<b>420</b>

2018 Pressure Category / Explanation	Increase / (Decrease)			
	Expense	Revenue	Net 2018 Changes	FTE Impact
<b>Maintain Services</b>				
All programs include an adjustment for potential 2018 cost of living, increments and benefit adjustments.	125	0	125	0.00
Increase in recoveries for lab services.	-20	0	-20	0.00
<b>Non Departmental</b>				
Increase in debt servicing costs.	1,130	0	1,130	0.00
Adjustment in administrative overhead costs	-10	0	-10	0.00
Increase in the contribution to the Storm Capital Replacement Reserve Fund.	985	0	985	0.00
<b>Total Maintain Services</b>	<b>2,210</b>	<b>0</b>	<b>2,210</b>	<b>0.00</b>
<b>User Fees &amp; Revenues</b>				
See following user fee schedule for details on the specific rates.	0	-2,210	-2,210	0.00
<b>Total User Fees &amp; Revenues</b>	<b>0</b>	<b>-2,210</b>	<b>-2,210</b>	<b>0.00</b>
<b>Total Budget Changes</b>	<b>2,210</b>	<b>-2,210</b>	<b>0</b>	<b>0.00</b>

# Capital Budget

City of Ottawa  
 2018 Draft Capital Budget  
 Environment and Climate Protection Committee-Rate  
 In Thousands (\$000)

Service Area: Drinking Water Services											
Category	2018 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	34,005	260	0	30,959	0	0	0	2,786	0	0	2,786
Growth	2,848	0	0	631	2,217	0	0	0	0	0	0
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Strategic Initiatives	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>36,853</b>	<b>260</b>	<b>0</b>	<b>31,590</b>	<b>2,217</b>	<b>0</b>	<b>0</b>	<b>2,786</b>	<b>0</b>	<b>0</b>	<b>2,786</b>

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information				Financial Details			
---------------------	--	--	--	-------------------	--	--	--

<b>Water Meter Replacement Program</b>				<b>Class of Estimate:</b>		<b>Not Applicable</b>			
Dept:	Corporate Services Department	Category:	Renewal of City Assets	Ward:	Multiple	Year of Completion:	Various		

This multi-year program has been established to increase accuracy of water meter recordings by replacing water meters, water meter equipment, and metering softwares which have passed their life expectancy. It also covers the mobility requirements for water meter servicing.

<b>2018 Request</b>	<b>2,025</b>	Projected Yearend Unspent Bal.			0
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
Rate Supported	2,025	Rate Supported Debt			0
Develop. Charges	0	Develop. Charges Debt			0
Gas Tax	0	Gas Tax Debt			0
<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
Authority	2,025	5,325	3,325	3,375	
Spending Plan	2,025	5,325	3,325	3,375	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>908076 Large Water Meters Changeout Program</b>		<b>Class of Estimate: Not Applicable</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>Funding is required for ongoing replacement of commercial high volume water meters which have passed their life expectancy. Large volume water meters have a shorter useful lifecycle, requiring maintenance every two to eight years due to the high volume of water causing wear and tear on mechanical components of the meter. New Meters will reduce maintenance costs, increase accuracy, and provide consistent revenues.</p>			
<b>908908 Small Water Meters Changeout Program</b>		<b>Class of Estimate: Not Applicable</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>Funding is required for ongoing replacement of a growing number of residential water meters which have passed their life expectancy of 20 years. Aging water meters under record water consumption, resulting in loss of water and sewer revenues.</p>			
<b>908996 Meter Service Mobility</b>		<b>Class of Estimate: Not Applicable</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>Funding is required for meter service mobility equipment, hardware, and software. Mobilization of the meter servicing unit will will reduce duplication of efforts through the elimination of paper work orders, and streamline the data entry process. It will also decentralize the location of staff; allowing efficient route planning which reduces time spent on the road, enabling staff to complete more work orders in less time. Overall, this will improve the client experience and decrease service wait times.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information		Financial Details					
<b>Water System Rehabilitation</b>		<b>Class of Estimate: C) Planning</b>					
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The Water System Rehabilitation Program addresses the annual rehabilitation requirements for the City's piped water network to: extend the life of the infrastructure, provide continued supply of potable water, prevent failures requiring more extensive reconstruction, and ensure drinking water quality is maintained throughout the water distribution network. The program is focused on:</p> <ul style="list-style-type: none"> <li>• Proactive lifecycle renewal and rehabilitation projects</li> <li>• Level of service initiatives</li> <li>• System improvements and optimization</li> <li>• Miscellaneous upgrades and rehabilitation to support growth demand</li> <li>• Miscellaneous local repairs</li> </ul> <p>Program funding requirements to support renewal needs are defined in the Long Range Financial Plan. Forecasts are based on bulk allocations that will be detailed in future budget submissions. The funding requests for watermain costs coordinated with roadway, wastewater or stormwater rehabilitation are included within the Integrated Rehabilitation Programs.</p> <p>Detailed information and costs associated with specific stand alone (non-integrated) components and projects directly follow this program summary page.</p>		<b>2018 Request</b>	<b>6,507</b>	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	5,257	Rate Supported Debt			1,250
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
		Authority	6,507	15,733	17,262	17,500	
		Spending Plan	6,227	12,821	17,942	16,760	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

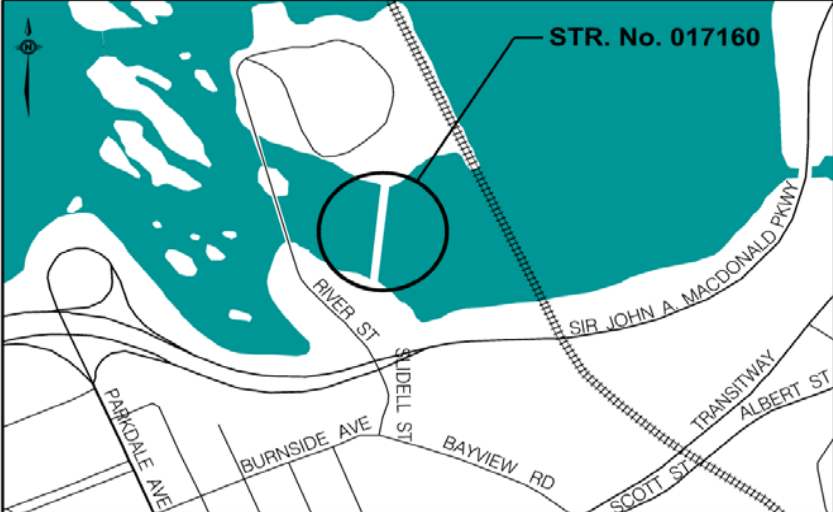
**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>906087 2018 Watermain Improvements</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>To meet long range watermain replacement goals and where normal life expectancy is surpassed, this program provides funding only for watermain replacement in areas where there are no sewer or roadway needs.</p>			
<b>908614 LRT2 W1 Hwy 174 - Shefford Rd</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2021	
<p>This project relates to the watermain crossing of Highway 174 at Shefford Rd, as part of LRT2 works.</p>			
<b>908978 2018 Transmission/Distribution WM Rehab</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<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; such as rehabilitation or replacement of defective pipes or appurtenances as a result of corrosive attack, structural deficiencies, and erosion or soil movement.</p> <p>In addition, this program will allow for construction of various watermain links and appurtenances in the transmission and distribution systems, as well as repairs and cathodic protection to improve system flexibility and reliability.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Project(s) within a Program Information		Location/Description	\$000's
<b>908616 Redenda Cres (Higgins)</b>		<b>Class of Estimate: C) Planning</b>	<b>750</b>
Category: Renewal of City Assets	Ward: 8	Year of Completion: 2020	
<p>The watermain in Redenda Cres requires rehabilitation due to its condition. The authority request will provide for construction.</p>			
<b>908617 Sherbourne Rd (Knightsbridge-Dovercourt)</b>		<b>Class of Estimate: C) Planning</b>	<b>550</b>
Category: Renewal of City Assets	Ward: 7, 15	Year of Completion: 2020	
<p>The watermain in Sherbourne Rd requires rehabilitation due to its condition. The authority request will provide for construction.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Project(s) within a Program Information	Location/Description	\$000's
<b>908981 Lemieux island Pipe Bridge SN 017160</b>		<b>Class of Estimate: C) Planning 1,020</b>
Category: Renewal of City Assets	Ward: 15	Year of Completion: 2024
<p>Funding is required for the design phase for the rehabilitation of the sub-structure in line with the recommendations obtained from the 2010 Risk Assessment Study and 2013 Seismic Retrofit Feasibility Study.</p>		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
**In Thousands (\$000)**

Project Information			Financial Details		
---------------------	--	--	-------------------	--	--

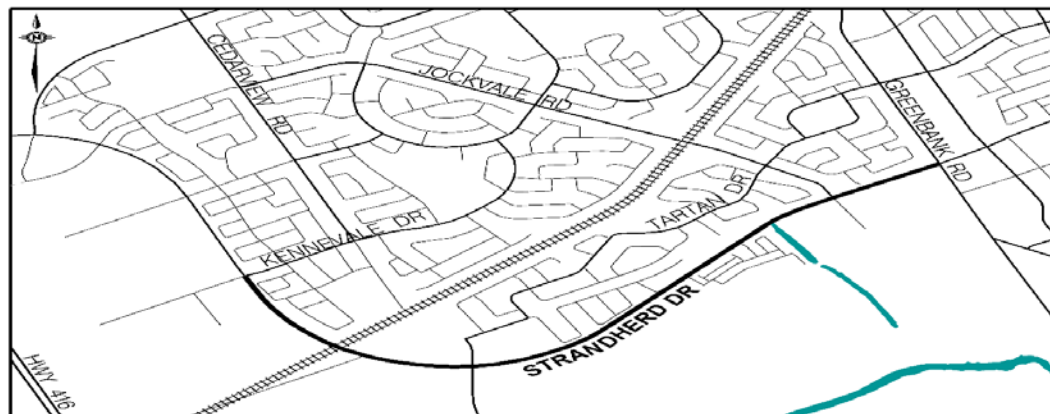
<b>900632 Strandherd Road Watermain</b>			<b>Class of Estimate: C) Planning</b>		
---	--	--	---------------------------------------	--	--

Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward 3	Year of Completion: 2017		
--	------------------	--------	--------------------------	--	--

The Strandherd Drive watermain is needed to support growth in the Barrhaven area north of the Jock River. The 305 mm/406 mm watermain will extend from the existing watermain on Strandherd Drive at Kennevale Drive to Greenbank Road. A connection on Jockvale from Strandherd to Tartan/Exeter is also included in the project scope. Construction will be coordinated with the Strandherd Road Widening project.

New estimated year of completion is 2020.

<b>2018 Request</b>	<b>1,625</b>	Projected Yearend Unspent Bal.			235
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
Rate Supported	163	Rate Supported Debt			0
Develop. Charges	1,462	Develop. Charges Debt			0
Gas Tax	0	Gas Tax Debt			0
<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
Authority	1,625	3,529	0	0	
Spending Plan	1,878	2,430	1,081	0	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
**In Thousands (\$000)**

Project Information			Financial Details							
<b>908257 O/S Kanata West Transmission Mains</b>			<b>Class of Estimate: Not Applicable</b>							
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 4,6,23	Year of Completion:		2018				
<p>This project accounts for the cost of oversizing water transmission mains in Kanata West. Oversizing is required to support the water network, future development, and maintain service levels as Kanata West continues to develop. This funding is required to allow for developer recoveries after they have installed these works.</p>			<b>2018 Request</b>		<b>307</b>		Projected Yearend Unspent Bal.	600		
			Revenues		0		Debt			
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0	
			Rate Supported		30		Rate Supported Debt		0	
			Develop. Charges		277		Develop. Charges Debt		0	
			Gas Tax		0		Gas Tax Debt		0	
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>		
			Authority		307	0	0	0		
			Spending Plan		907	0	0	0		
			FTE's		0	0	0	0		
			Operating Impact		0	0	0	0		
			<b>909071 2018 Off Site Reliability Links</b>			<b>Class of Estimate: Not Applicable</b>				
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion:		2020				
<p>Funds are required for the upgrade to watermains as a reliability link to service, at the time of capital road work.</p>			<b>2018 Request</b>		<b>153</b>		Projected Yearend Unspent Bal.	0		
			Revenues		0		Debt			
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0	
			Rate Supported		15		Rate Supported Debt		0	
			Develop. Charges		138		Develop. Charges Debt		0	
			Gas Tax		0		Gas Tax Debt		0	
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>		
			Authority		153	155	158	161		
			Spending Plan		78	75	100	95		
			FTE's		0	0	0	0		
			Operating Impact		0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
**In Thousands (\$000)**

Project Information			Financial Details						
<b>909132 2018 Rural Servicing Strategy</b>			<b>Class of Estimate: C) Planning</b>						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2020					
<p>The Rural Servicing Strategy is made up of a coordinated set of initiatives geared to promoting safe and sustainable rural water supply and wastewater disposal. It utilizes the findings of various groundwater studies, and provides technical direction (guidelines and policies) on private and public servicing within the rural planning context. The rural area has a variety of public and private servicing systems, and these are regularly reviewed for sustainability and future growth. This request will support completion of a village servicing study in 2018. Priority areas are currently being reviewed.</p>			<b>2018 Request</b>		205		Projected Yearend Unspent Bal.	0	
			Revenues		0		Debt		
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0
			Rate Supported		102		Rate Supported Debt		0
			Develop. Charges		103		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
			Authority		205	209	212	216	
			Spending Plan		205	209	212	216	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				
<b>909133 2018 Water &amp; Wastewater EA Studies</b>			<b>Class of Estimate: C) Planning</b>						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2020					
<p>Funds are required to support: Class Environmental Assessment; functional designs; and other area-specific studies for the planning of water, wastewater, and stormwater projects which are needed to support growth City-wide.</p>			<b>2018 Request</b>		255		Projected Yearend Unspent Bal.	0	
			Revenues		0		Debt		
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0
			Rate Supported		51		Rate Supported Debt		0
			Develop. Charges		204		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
			Authority		255	260	264	269	
			Spending Plan		255	260	264	269	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
In Thousands (\$000)

Project Information			Financial Details						
<b>909134 2018 Infrastructure Master Plan (Water)</b>			<b>Class of Estimate: C) Planning</b>						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2020					
Undertake analysis and planning for drinking water and sewer systems, for areas outside the greenbelt, to support growth related wastewater project planning.			<b>2018 Request</b>		<b>150</b>	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt			0
			Rate Supported		134	Rate Supported Debt			0
			Develop. Charges		16	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
			Authority		150	260	264		0
			Spending Plan		150	260	264		0
			FTE's		0	0	0		0
			Operating Impact		0	0	0		0
<b>909135 2018 Groundwater Studies</b>			<b>Class of Estimate: C) Planning</b>						
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2020					
These funds will be used to further the City's ongoing groundwater characterization efforts. The work to be undertaken will be in line with the City's groundwater management strategy direction set by City Council in May, 2003. The approach includes the preparation of various studies: to characterize local groundwater resources and demands; to assess existing water supply and wastewater disposal risks; and to support the development of the Rural Servicing Strategy. This request will support a groundwater characterization study for the Village of Cumberland in 2018.			<b>2018 Request</b>		<b>153</b>	Projected Yearend Unspent Bal.		0	
			Revenues		0	Debt			
			Tax Supported/Dedicated		0	Tax Supported/Dedicated Debt			0
			Rate Supported		136	Rate Supported Debt			0
			Develop. Charges		17	Develop. Charges Debt			0
			Gas Tax		0	Gas Tax Debt			0
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
			Authority		153	158	161		164
			Spending Plan		153	158	161		164
			FTE's		0	0	0		0
			Operating Impact		0	0	0		0

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information		Financial Details	
---------------------	--	-------------------	--

<b>Buildings-Water Services</b>		<b>Class of Estimate: C) Planning</b>	
---------------------------------	--	---------------------------------------	--

Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various
--	----------------------------------	----------------	-----------------------------

The Building and Park programs provide life cycle renewal and replacement work 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, park playgrounds and property elements, hard landscaping, arena and pool equipment, and unplanned emergency work.

Annual programming provides allocations as required for each of the service areas as follows:

Service Area	Buildings	Parks
By-Law Services	250	
Child Care Services	145	
Cultural Services	970	
Fire Services	650	
General Government	2,065	
Public Library	810	
Long Term Care	4,525	
Parks & Recreation Facilities	15,160	5,250
Roads Services	1,235	
Social Services	450	
Water Services	1,000	
Transit Services	3,600	
<b>TOTAL Authority Request</b>	<b>30,860</b>	<b>5,250</b>

<b>2018 Request</b>	<b>1,000</b>	Projected Yearend Unspent Bal.			0
Revenues	0	Debt			
Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
Rate Supported	1,000	Rate Supported Debt			0
Develop. Charges	0	Develop. Charges Debt			0
Gas Tax	0	Gas Tax Debt			0
<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
Authority	1,000	50	50	50	
Spending Plan	1,000	50	50	50	
FTE's	0	0	0	0	
Operating Impact	0	0	0	0	

Forecasts are based on bulk allocations that will be detailed in future budget submissions. Project cost group summaries are provided following this program summary.



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information		Financial Details					
<b>Water Distribution Systems</b>		<b>Class of Estimate: C) Planning</b>					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The City of Ottawa operates a water distribution system consisting of 3,090 km of piping, 20,563 fire hydrants, over 47,303 valves and 232,481 water service meters. The value of this buried infrastructure is over \$4.0 billion. This program is aimed at addressing annual preventive and corrective maintenance requirements for the City's existing water distribution network; 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"> <li>- Proactive life cycle renewal and rehabilitation projects</li> <li>- Level of service initiatives</li> <li>- System improvements and optimization</li> <li>- Asset life-cycle upgrades and rehabilitation to support growth demand. Some of the key infrastructure renewal projects for 2018 are as follows:</li> <li>- Large Transmission main condition assessment and risk reducing mitigation projects</li> <li>- Major preventative maintenance and water distribution system improvements</li> <li>- Lead Service Replacement program.</li> </ul>		<b>2018 Request</b>	<b>2,575</b>	Projected Yearend Unspent Bal.		0	
		Revenues	260	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	2,315	Rate Supported Debt		0	
		Develop. Charges	0	Develop. Charges Debt		0	
		Gas Tax	0	Gas Tax Debt		0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
		Authority	2,575	8,325	10,330	7,880	
		Spending Plan	2,575	5,175	7,180	4,680	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>907654 Ops Condition Assess-Critical Sys Links - 2018</b>		<b>Class of Estimate: B) Design</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>This multi-year project will provide the funding to conduct proactive condition assessment investigations of the water distribution system's key transmission mains. These are the backbone of the water system and are critical to the continued reliability of service to large portions of the urban population. As the condition assessment technology can only be used under certain conditions, this work will require a number of years to complete. This project is one of the three key capital projects which form the transmission main condition assessment program that focus on condition assessment, risk mitigation and transmission main repair and renewals. This program will improve drinking water service reliability.</p>			
<b>909039 Proactive Lead Service Replace Prog 2018</b>		<b>Class of Estimate: A) Pre-Tender</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<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. Production and distribution costs for public information bulletins are provided by this account.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Water Pumping Stations</b>		<b>Class of Estimate: C) Planning</b>				
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: communication tower replacement, electrical upgrades, various highlift pump replacements, standby power generator retrofits, flow meter replacements, and specialized Arc flash hazard studies.</p>		<b>2018 Request</b>	<b>1,000</b>	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0	
		Rate Supported	900	Rate Supported Debt	100	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	1,000	2,761	2,150	2,150
		Spending Plan	1,000	2,761	2,150	2,150
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>909037 Water Pumping Station Facility Rehab2018</b>		<b>Class of Estimate: C) Planning</b>	<b>1,000</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>To establish a funding envelope for retrofit, rehabilitation or replacement of the infrastructure as it ages. Projects for 2018 include: condition assessments activities, Arc flash hazard review, alterations to diesel stacks, and chemical system modifications.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information		Financial Details					
<b>Water Communal Well System</b>		<b>Class of Estimate: C) Planning</b>					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The City currently operates five communal well based drinking water systems. These include systems serving:</p> <ul style="list-style-type: none"> <li>• Munster Hamlet</li> <li>• Richmond – King's Park Subdivision</li> <li>• Carp</li> <li>• Vars</li> <li>• Greely - Shadow Ridge Subdivision</li> </ul> <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 these assets are maintained and the demand, quality and regulatory requirements of this service are met.</p>		<b>2018 Request</b>	<b>10,413</b>	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt			0
		Rate Supported	10,413	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
		Authority	10,413	3,113	2,590	2,590	
		Spending Plan	2,083	9,361	4,673	2,590	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>907655 Communal Well System Rehab 2018</b>		<b>Class of Estimate: C) Planning</b>	<b>10,413</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The purpose of this project is to establish a funding envelope for the retrofit, rehabilitation or replacement of asset components at the five communal well based drinking water systems serving; Munster Hamlet; Richmond, King's Park Subdivision; Carp; Vars; Greely, Shadow Ridge Subdivision. Taken collectively, the asset value for the facilities associated with these communal systems (pumping stations, reservoirs, treatment process) is estimated at \$24.8 million. Typical projects include: condition assessment; control and instrumentation rehabilitations; water treatment and process upgrades; well condition and capacity testing.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Water Treatment-Renewal</b>		<b>Class of Estimate: C) Planning</b>				
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, which have an estimated replacement value of \$550 million. In order to provide continued, uninterrupted, safe supply of potable water; to preserve and extend the life of the infrastructure; and to meet provincial and federal regulation requirements, it is necessary to invest in the ongoing rehabilitation and renewal of these assets. The program is comprised of a number of key components including:</p> <ul style="list-style-type: none"> <li>- Facilities Projects</li> <li>- Process Modifications</li> <li>- Water Quality Improvement Initiatives</li> <li>- Rehabilitation</li> <li>- Service Level Improvements</li> </ul>		<b>2018 Request</b>	<b>10,420</b>	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	8,984	Rate Supported Debt	1,436	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	10,420	18,060	8,230	14,830
		Spending Plan	1,890	8,802	12,452	9,116
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>909035 Water Sys SCADA &amp; Instrument Rehab 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The Supervisory Control and Data Acquisition (SCADA) system is a computerized system used by Certified Operators to monitor and control the drinking water treatment system. The Operator monitors all critical components of the treatment process and is able to remotely operate equipment within the purification plants, communal well systems, pump stations, reservoirs and storage tanks. The SCADA system is crucial to the operation of the treatment system for monitoring key parameters required under provincial and federal legislation. The existing SCADA system is nearing the end of its lifecycle. Various components of the system either require upgrading or replacement to maintain reliability.</p>			
<b>909036 Water Treatment Rehab 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The replacement value of the City's two 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 associated with the filter reconstruction; pilot plant work; chemical tank replacement/rehab; and chemical system control/operational improvements. It also covers the costs related to condition assessments within the water purification plants.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Water Systems General-Renewal</b>		<b>Class of Estimate: C) Planning</b>				
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>This program is aimed at addressing matters that are common to Drinking Water Services including Water Distribution, Water Production, Water Quality Assurance. These programs cover operational issues, legislative requirements, system planning, and other strategic directions such as environmental programs.</p> <p>The program is comprised of a number of key components focusing on operational issues, system planning, and other projects including:</p> <ul style="list-style-type: none"> <li>- Asset Management Strategy</li> <li>- Master Drawings Currency Update</li> <li>- Water System SCADA Upgrades</li> <li>- Water System Facility Upgrades</li> <li>- Water Facilities Roofing</li> <li>- TSSA Registration and Compliance Upgrades</li> <li>- Energy Efficiency Initiatives</li> </ul>		<b>2018 Request</b>	<b>65</b>	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	65	Rate Supported Debt	0	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	65	250	250	250
		Spending Plan	65	250	250	250
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Drinking Water Services**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>909040 New Vehicles Drinking Water - 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The Water Production section has a need for a skid steer loader to assist with moving heavy equipment including pumps and motors, as well as heavy materials from delivery trucks. The equipment also offers the opportunity to rent attachments for a number of non-standard needs, such as post hole digging or trenching. The equipment would also help reduce some Health and Safety risks, as some items have to be moved manually.</p>			


**City of Ottawa**  
**2018 Draft Capital Budget**  
**Environment and Climate Protection Committee-Rate**  
**In Thousands (\$000)**

Service Area: Integrated Water & Wastewater											
Category	2018 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	28,641	0	0	24,541	0	0	0	4,100	0	0	4,100
Growth	0	0	0	0	0	0	0	0	0	0	0
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Strategic Initiatives	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>28,641</b>	<b>0</b>	<b>0</b>	<b>24,541</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,100</b>	<b>0</b>	<b>0</b>	<b>4,100</b>

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Integrated Water & Wastewater**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Integrated Water &amp; Wastewater</b>		<b>Class of Estimate: C) Planning</b>				
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"> <li>• Functional and preliminary designs.</li> <li>• Lifecycle renewal: renewal, rehabilitation and replacements for deterioration.</li> <li>• Coordinated renewal: schedule coordination (escalation or deferral) between asset classes and with other asset classes.</li> <li>• Level of service enhancements: flooding improvements and system optimization.</li> <li>• Upgrades and rehabilitation to support growth and miscellaneous localized repairs.</li> </ul> <p>Forecasts are based on bulk allocations that will be detailed in future budget submissions. Detailed information and costs associated with specific components and projects are provided following this program summary.</p>		<b>2018 Request</b>	<b>28,641</b>	Projected Yearend Unspent Bal.		0
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	24,541	Rate Supported Debt	4,100	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	28,641	12,501	19,158	12,928
		Spending Plan	22,085	14,589	19,804	12,470
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Integrated Water & Wastewater**  
 In Thousands (\$000)

Project(s) within a Program Information		Location/Description	\$000's
<b>908581 Valley Dr Storm Sewer</b>		<b>Class of Estimate: C) Planning</b>	<b>17,000</b>
Category: Renewal of City Assets	Ward: 18	Year of Completion: 2021	
<p>The Valley Dr trunk storm sewer is in need of rehabilitation due to poor condition and inadequate hydraulic capacity. The adjacent sanitary sewer will be replaced to improve the slope. The watermain within the limit of the project does not require upgrading unless it is impacted by the construction of the adjacent sewers. Full road reconstruction including curbs and sidewalks will be included as required, and trench reinstatement with resurfacing will be implemented where appropriate. Enhancements include a new sidewalk on Valley Dr from Pleasant Park Rd to Foley Ave (660m) and on Foley Ave from Valley Dr to St. Laurent Blvd (125m). The approximate cost for the enhancements are \$210,000. Contribution to Public Art is \$118,000.</p> <p>The 2018 authority will provide for construction funding.</p>			



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Integrated Water & Wastewater**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>908942 2018 Sewer &amp; Water Repairs/Improvements</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>A number of locations have been identified to resolve surface flooding problems on private properties. Work could entail both trenchless and conventional spot repairs, as well as various hydraulic improvements such as, installing catch basins and re-profiling driveways or road grading. The authority provides for various drainage improvements throughout the City. Project estimate is comprised of: Sanitary Sewers - \$1.75M; Storm Drainage - \$1.75M; and Watermain - \$1.5M.</p>			
<b>908943 2018 Sewer Access &amp; Outfalls</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The authority will provide for the rehabilitation of the City's sewer outfalls and access structures.</p>			
<b>908944 2018 Trenchless Rehab - Sanitary &amp; Storm</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>This project provides for relining of sewers, access structures, and spot repairs at various locations. The work will improve: structural integrity, hydraulic performance, reduce basement flooding, extraneous flows, and improve the overall operation of the system.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Integrated Water & Wastewater**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>908997</b>	<b>LRT2 SS1 Sewer Upgrades</b>	<b>Class of Estimate:</b>	<b>135</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This project provides for sanitary sewer upgrades on Byron Ave and outfall replacement T04296, as part of LRT2 work.</p>			


City of Ottawa  
 2018 Draft Capital Budget  
 Environment and Climate Protection Committee-Rate  
 In Thousands (\$000)

Service Area: Stormwater Services											
Category	2018 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	38,289	0	0	26,189	500	0	0	11,600	0	0	11,600
Growth	827	0	0	0	827	0	0	0	0	0	0
Regulatory	825	825	0	0	0	0	0	0	0	0	0
Strategic Initiatives	1,295	0	0	1,295	0	0	0	0	0	0	0
<b>Total</b>	<b>41,236</b>	<b>825</b>	<b>0</b>	<b>27,484</b>	<b>1,327</b>	<b>0</b>	<b>0</b>	<b>11,600</b>	<b>0</b>	<b>0</b>	<b>11,600</b>

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Stormwater Collection Rehabilitation</b>		<b>Class of Estimate: C) Planning</b>				
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>The Stormwater Collection Rehabilitation Program addresses annual rehabilitation and operational capital requirements for the City's stormwater collection system in order to preserve and extend the life of the infrastructure, reduce flooding occurrences, and prevent failures requiring more extensive reconstruction. The program is focused on:</p> <ul style="list-style-type: none"> <li>• Flood mitigation.</li> <li>• Proactive lifecycle renewal and rehabilitation projects.</li> <li>• Level of service initiatives.</li> <li>• System improvements and optimization.</li> <li>• Miscellaneous upgrades and rehabilitation to support growth demand.</li> </ul> <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. Detailed information and costs associated with specific stand-alone (non-integrated) components and projects are provided following this program summary page. Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>		<b>2018 Request</b>	<b>15,200</b>	Projected Yearend Unspent Bal.		2,429
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	14,200	Rate Supported Debt	1,000	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	15,200	3,600	5,100	0
		Spending Plan	7,977	7,520	10,832	0
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information		Location/Description	\$000's
<b>908619 Graham Creek Storm Sewer</b>		<b>Class of Estimate: C) Planning</b>	<b>15,000</b>
Category: Renewal of City Assets	Ward: 8	Year of Completion: 2022	
<p>This project will design the rehabilitation of the Graham Creek storm infrastructure crossing Banner Rd, the CN rail tracks and Canfield Rd. The existing large diameter storm infrastructure is in poor condition and must be rehabilitated. In addition, this project will also include acquiring appropriate access easements for operation and maintenance needs as well as for future upgrades. Contribution to Public Art is \$94,000.</p> <p>An environmental assessment and functional design has been completed. This funding request will provide for property acquisition, detail design, and construction of the project.</p>			
<b>908982 2018 Joint CA/City Renewal Activiti</b>		<b>Class of Estimate: D) Conceptual</b>	<b>200</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The City and Conservation Authorities have a number of jointly managed erosion and flood protection infrastructure assets. A number of these facilities have aged to a point where remedial measures and rehabilitative works are required. This funding request provides for the City's share of the costs associated with rehabilitation, renewal and replacement needs. Conservation authority funding is provided through their respective budget allocations on an annual basis prior to implementation.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
**In Thousands (\$000)**

Project Information			Financial Details								
<b>908252 Stormwater Mgmt Retrofit Master Plan</b>			<b>Class of Estimate: C) Planning</b>								
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020								
<p>These funds will support the completion of a City-wide stormwater management (SWM) retrofit master plan to improve water quality, reduce runoff and improve stream health in older urban areas that were developed before current SWM requirements were in place. This study will focus on the remaining central area located between two previous SWM retrofit study areas: Pinecrest Creek/Westboro; and Eastern Subwatersheds.</p>			<b>2018 Request</b>		450		Projected Yearend Unspent Bal.		900		
			Revenues		0		Debt				
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0		
			Rate Supported		450		Rate Supported Debt		0		
			Develop. Charges		0		Develop. Charges Debt		0		
			Gas Tax		0		Gas Tax Debt		0		
			<b>Forecast</b>		<b>2018</b>		<b>2019</b>		<b>2020</b>		<b>2021</b>
			Authority		450		0		0		0
			Spending Plan		700		650		0		0
			FTE's		0		0		0		0
Operating Impact		0		0		0		0			
<b>909131 2018 Stormwater Management Retrofit</b>			<b>Class of Estimate: C) Planning</b>								
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020								
<p>These funds will be applied to implementing: the Pinecrest Creek/Westboro Stormwater Management Retrofit Study (approved by Council October 26, 2011); the Eastern Subwatersheds Stormwater Management Retrofit Study (anticipated to be complete by Q4-2017); and other SWM retrofit opportunities outside these two study areas. These studies and subsequent implementation are a component of the Ottawa River Action Plan. This funding will support various retrofit projects to improve stormwater management in older neighbourhoods, thereby reducing the on-going impacts of uncontrolled/untreated urban runoff to the Ottawa River and its tributaries. In addition, this funding will be applied to support the operation and maintenance of Low Impact Development (LID) retrofits in City rights-of way and on City properties for a pilot period of approximately 5 years. Maintenance efforts and costs will be tracked during the pilot period to inform longer-term budget requirements for this new type of infrastructure.</p>			<b>2018 Request</b>		2,000		Projected Yearend Unspent Bal.		0		
			Revenues		0		Debt				
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0		
			Rate Supported		1,500		Rate Supported Debt		0		
			Develop. Charges		500		Develop. Charges Debt		0		
			Gas Tax		0		Gas Tax Debt		0		
			<b>Forecast</b>		<b>2018</b>		<b>2019</b>		<b>2020</b>		<b>2021</b>
			Authority		2,000		3,054		5,180		5,275
			Spending Plan		2,000		3,000		5,000		5,000
			FTE's		0		0		0		0
Operating Impact		0		0		0		0			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
**In Thousands (\$000)**

Project Information			Financial Details					
<b>906632 Flood Plain Mapping</b>			<b>Class of Estimate: C) Planning</b>					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Strategic Initiatives	Ward: CW	Year of Completion: 2018				
<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 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 agreement.</p> <p>The new Year of Completion is 2021.</p>			<b>2018 Request</b>	<b>295</b>	Projected Yearend Unspent Bal.		354	
			Revenues	0	Debt			
			Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt	0		
			Rate Supported	295	Rate Supported Debt	0		
			Develop. Charges	0	Develop. Charges Debt	0		
			Gas Tax	0	Gas Tax Debt	0		
			<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
			Authority	295	301	306	311	
			Spending Plan	649	301	306	311	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Program Information		Financial Details					
<b>Structures-Stormwater</b>		<b>Class of Estimate: C) Planning</b>					
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The Structures Stormwater Program provides for condition assessments, preventative maintenance, rehabilitation and reconstruction works undertaken on the City's existing drainage culverts. Program funding requirements to support renewal needs are defined in the Long Range Financial Plan. Detailed information and costs associated with specific components and projects directly follow this program summary page. Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>		<b>2018 Request</b>	<b>18,197</b>	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	7,597	Rate Supported Debt			10,600
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
		Authority	18,197	16,810	19,019	14,310	
		Spending Plan	18,197	16,810	19,019	14,310	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>908972 2018 Scoping Pre/Post Drn Culverts</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<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>			
<b>908976 2018 Drainage Culverts - Site-Specific</b>		<b>Class of Estimate: D) Conceptual</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>This program provides the authority to undertake engineering, design and construction of renewal works, that are not budgeted through any other renewal program that arise over the course of the year. Many culvert assets have reached or will reach the end of their service life, thus an increased number of reactive replacements are anticipated.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>908973</b>	<b>2018 Drainage Culverts (&lt;=1m)</b>	<b>Class of Estimate: C) Planning</b>	<b>6,500</b>
Category: Renewal of City Assets		Ward: CW	Year of Completion: 2020
<p>The City has a significant inventory of drainage culverts ranging from small diameter roadway culverts (typically non-urbanized ditch drainage under roadways and intersections) to larger span drainage structures. This program provides authority to address the most critical needs for this asset group.</p>			
	Renewal - Drainage Culvert (<1m Condition)		
10	Ramsayville Rd Culvert	A222880	
19	Russell Rd Culvert	A224120	
19	Trim Rd Culvert	A892580	
20	Dalmeny Rd Culvert	A882100	
19	Old Montreal Rd Culvert	A894540	
20	River Rd Culvert	A881170	
8	Moodie Dr Culvert	A111810	
8	Moodie Dr Culvert	A111840	
21	Dwyer Hill Rd Culvert	A751080	
8	Moodie Dr Culvert	A111610	
21	Moodie Dr Culvert	A111770	
03/09	Cedarview Rd Culvert	A111890	
21	Dwyer Hill Rd Culvert	A861650	
21	Dwyer Hill Rd Culvert	A861690	
7	Davidson's Side Rd Culvert	L115490	
5	Torbolton Ridge Rd Culvert	L337140	
5	Torbolton Ridge Rd Culvert	L337390	
5	Shanna Rd Culvert	L543390	
9	Greenbank Rd Culvert	A113320	
5	Kilmaurs Rd Culvert	L336460	
21/22	Jockvale Rd Culvert	A113110	
5	Glennview PI Culvert	L544112	
5	Glennview PI Culvert	L544114	
21	Eagleson Rd Culvert	A111130	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts (<1m) - Continued			
21	Eagleson Rd Culvert	A111150	
5	Machardy Rd Culvert	L431420	
21	Donnelly Rd Culvert	A862360	
21	Donnelly Rd Culvert	A862340	
21	Conley Rd Culvert	L753630	
19	Carol Todd Dr Culvert	L894240	
19	Apple Lane Culvert	L895160	
19	Emmett Rd Culvert	L897250	
19	French Hill Rd Culvert	L896575	
20	Dowser St Culvert	L884615	
20	Stone School Rd Culvert	L886170	
20	Wild Cherry Dr Culvert	L881340	
21	Fairmile Rd Culvert	L872060	
21	Kelly Marie Dr Culvert	L876350	
21	Kelly Marie Dr Culvert	L876354	
20	Ranita Cres Culvert	L886425	
21	Kelly Marie Dr Culvert	L876352	
20	Pearl St Culvert	L882690	
21	West Ave Culvert	L220055	
20	Andrew Simpson Dr Culvert	L887350	
21	Carter Rd Culvert	L871940	
20	Gabert Rd Culvert	L882160	
21	Carter Rd Culvert	L871950	
5	Burnt Lands Rd Culvert	L541400	
21	Conley Rd Culvert	L753550	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts (<1m) - Continued			
5	John Asselford Rd Culvert	L646870	
5	Stonecreste Rd Culvert	L335850	
5	Kerwin Rd Culvert	L649290	
5	Pineridge Dr Culvert	L544136	
19	Eigth Line Rd Culvert	L222810	
19	Emmett Rd Culvert	L897350	
19	Hall Rd Culvert	L225010	
10	Ramseyville Rd Culvert	A221780	
19	Dunning Rd Culvert	A891750	
20	Acres Rd Culvert	L885250	
19	Old Montreal Rd Culvert	A894820	
1	North Service Rd Culvert	L898570	
20	Hawthorne Rd Culvert	L221994	
19	Russell Rd Culvert	A892360	
19	Regimbald Rd Culvert	L896210	
19	Farmers Way Culvert	L223370	
19	Devine Rd Culvert	L892108	
10	Ridge Rd Culvert	L224205	
19	Farmers Way Culvert	L223420	
21	Richmond Rd Culvert	A111430	
5	Thomas Dolan Pkwy Culvert	A434020	
5	Carp Rd Culvert	A541750	
5	Panmure Rd Culvert	A432160	
5	Panmure Rd Culvert	A432170	
7	Corkstown Rd Culvert	L114105	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts (<1m) - Continued			
5	Kinburn Side Rd Culvert	A434460	
5	Kinburn Side Rd Culvert	A434480	
5	Carp Rd Culvert	A431170	
5	Kinburn Side Rd Culvert	A434300	
5	Vance's Side Rd Culvert	L332910	
21	Roger Stevens Dr Culvert	A864080	
21	Century Rd E Culvert	L876710	
21	Malakoff Rd Culvert	L865090	
8	Moodie Dr Culvert	A111830	
21	Ashton Station Rd Culvert	L751310	
21	Ashton Station Rd Culvert	L751320	
21	Ashton Station Rd Culvert	L751325	
5	Ferry Rd Culvert	A431430	
5	Ferry Rd Culvert	A431450	
3	Cedarview Rd Culvert	A111870	
21	Steeple Hill Rd Culvert	L111810	
21	Steeple Hill Rd Culvert	L111730	
2	Renaud Rd Culvert	L224610	
20	River Rd Culvert	A881370	
19	Russell Rd Culvert	A224210	
19	Saumure Rd Culvert	A891850	
20	Rideau Rd Culvert	A222480	
20	Victoria St Culvert	A882980	
10	Ridge Rd Culvert	L224290	
19	Ridge Rd Culvert	L224390	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information			Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>				
Category:	Ward:	Year of Completion:		
Drainage Culverts (<1m) - Continued				
19	Ted Kelly Lane Culvert	L893415		
5	Dwyer Hill Rd Culvert	A751510		
5	Thomas Dolan Pkwy Culvert	A434160		
5	Thomas Dolan Pkwy Culvert	A434220		
21	Roger Stevens Dr Culvert	A862720		
21	Roger Stevens Dr Culvert	A872140		
5	Diamondview Rd Culvert	L433360		
5	Grants Side Rd Culvert	L432790		
5	Grants Side Rd Culvert	L432810		
8	Moodie Dr Culvert	A111850		
5	Thomas Dolan Pkwy Culvert	A434000		
21	Donnelly Rd Culvert	A862420		
21	Dwyer Hill Rd Culvert	A861410		
21	Dwyer Hill Rd Culvert	A861430		
21	Dwyer Hill Rd Culvert	A861490		
21	Roger Stevens Dr Culvert	A862920		
21	Rideau Valley Dr N Culvert	A871530		
21	Rideau Valley Dr N Culvert	A871620		
21	Rideau Valley Dr N Culvert	A871610		
21	Rideau Valley Dr N Culvert	A871630		
21	Rideau Valley Dr N Culvert	A871430		
21	Rideau Valley Dr N Culvert	A871450		
21	Rideau Valley Dr N Culvert	A871550		
5	Carp Rd Culvert	A541690		
5	Thomas Dolan Pkwy Culvert	A332040		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts (<1m) - Continued			
5	Vances Side Rd Culvert	L332950	
5	Dunrobin Rd Culvert	A641130	
5	Ritchie Side Rd Culvert	L436010	
21	Donnelly Rd Culvert	A862400	
3	Fallowfield Rd Culvert	A112270	
21	Malakoff Rd Culvert	L865030	
20	Mitch Owens Rd Culvert	A222340	
1	North Service Rd Culvert	L898563	
5	Carp Rd Culvert	A541670	
5	Kinburn Side Rd Culvert	A434360	
21	Roger Stevens Dr Culvert	A862660	
21	Malakoff Rd Culvert	L865370	
21	Malakoff Rd Culvert	L865390	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts (<1m) - Continued			
	Below the Line		
21	Malakoff Rd Culvert	L865410	
21	Fallowfield Rd Culvert	A752300	
21	Roger Stevens Dr Culvert	A864160	
21	Roger Stevens Dr Culvert	A872300	
10/22	River Rd Culvert	A221310	
10	River Rd Culvert	A221330	
19	Russell Rd Culvert	A224220	
20	Victoria St Culvert	A882940	
19	Thunder Rd Culvert	L222330	
10	Mary Dr Culvert	L224070	
19	Boundary Rd Culvert	A221990	
20	Mitch Owens Rd Culvert	A222180	
19	Devine Rd Culvert	L892110	
19	Russell Rd Culvert	A224100	
19	Russell Rd Culvert	A224070	
19	Russell Rd Culvert	A224080	
19	Devine Rd Culvert	L892104	
20	Tomkins Farm Cres Culvert	L888830	
20	Owen St Culvert	L882525	
20	Owen St Culvert	L882528	
20	Loyalist St Culvert	L882500	
19	Maglady Rd Culvert	L894570	
19	Birchgrove Rd Culvert	L897580	
20	Marionville Rd Culvert	L882100	



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>908974 2018 Drainage Culverts (1m-3m)</b>		<b>Class of Estimate: C) Planning</b>	<b>6,500</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>The City has a significant inventory of drainage culverts with spans of 1m to 3m (typically non-urbanized ditch drainage under roadways and intersections). This program provides authority to address the most critical needs for this asset group.</p>			
	Renewal - Drainage Culvert (1-3m)		
21	Eagleson Rd Culvert at Flewellen MD	110390	
19	Russell Rd Culvert	220920	
20	Bank St Culvert	228590	
20	Bank St Culvert	228595	
10	Airport Pkwy Culvert	228670	
20	Anderson Rd Culvert	228790	
19	Thunder Rd Culvert	228830	
19,20	Piperville Rd Culvert Eighth Line Rd	228880	
5	Torwood Dr Twin Culvert	338750-1/2	
21	Joy's Rd Culvert	758060	
21	Malakoff Rd John Paden MD Culvert	868460	
21	Rideau Valley N Culvert	878210	
21	Fourth Line Culvert	878950	
20	Castor Rd Culvert	880760	
19	Dunning Rd Culvert	898130	
5	Carp Rd Culvert	548270	
20	Mitch Owens Rd Culvert	228250	
5	Upper Dwyer Hill Rd Culvert	438491	
21	Donnelly Dr Culvert	868180	
19	Saumure Rd Culvert	898910	
20	River Rd Culvert	888050	
21	Purdy Rd Twin Culvert	758230-1/2	
9	Cedarview Rd Culvert	118570	
19	Boundary Rd Culvert	220860	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts (1-3m) - Continued			
20	Mitch Owens Rd Culvert	228740	
5	Diamondview Rd Culvert	430230	
5	March Rd Culvert	548980	
21	Proven Line Rd Culvert	868380	
21	Malakoff Rd Culvert	868400	
20	Parkway Rd Culvert	880440	
20	Blanchfield Rd Culvert	880550	
20	Blanchfield Rd Culvert	880560	
19	Frontier Rd Culvert	890920	
21	Walgreen Rd West Culvert	540350-1/2	
20	Marionville Rd Culvert	880720	
20	River Rd Culvert	888090	
5	Creek Dr [N] Culvert	438390	
21	Purdy Rd Twin Culvert	758880-1/2	
19	Lockwood Ln Twin Culvert	890260-1/2	
5	Ivy Acres Rd Culvert	438730	
5	Pinhey Rd Culvert	648030	
21	Douglas/King Richmond Village Culvert	750110	
19	McKinnons Creek Milton Rd Culvert Savage MD	898870	
16	Airport Pkwy Twin Culvert	058780-1/2	
19	Birchgrove Rd Culvert	890870	
19	Canaan Rd Culvert	890890	
21	Fallowfield Rd Culvert	758420	
21	Donnelly Dr Culvert	868170	
21	Phelan Rd West Culvert	878480	



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts (1-3m) - Continued			
	Below the Line		
1	Jeanne D'Arc Blvd N Culvert		898020
10	River Rd Culvert		220240
22	River Rd Culvert		220270
5	Breezy Hts Rd Culvert		438791
20	Boundary Rd Culvert		888790
19	Frank Kenny Rd Culvert		890460
20	Mitch Owens Rd Culvert		228800
5	Vances Side Rd Culvert		338270
5	Second Line Rd Culvert		648130
19	Frank Kenny Rd Culvert		890470
8	Robertson Rd Culvert		110120
22,20	Armstrong Rd Culvert		220100
21	Fourth Line Rd Twin Culvert at John Padden MD	878850-1/2	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>908975 2018 Drainage Culverts pre Resurfacing</b>		<b>Class of Estimate: C) Planning</b>	<b>3,000</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>This program provides authority for replacing culverts located within roads that are scheduled for resurfacing, in advance of the resurfacing work. These culverts are in poor condition and expected to reach a state which will affect road functionality. Replacing culverts ahead of roadwork is part of the coordinated approach to Transportation Asset Renewal.</p>			
	Renewal - Drainage Culvert (pre Resurfacing)		
22	Lowen Dr Culvert	L222878	
20	River Rd Culvert	A881090	
20	River Rd Culvert	A881110	
20	River Rd Culvert	A881130	
20	Cabin Rd Culvert	L884010	
5	Ferry Rd Culvert	A431510	
5	John Shaw Rd Culvert	L433200	
5	John Shaw Rd Culvert	L433230	
19	French Hill Rd Culvert	L896610	
19	French Hill Rd Culvert	L896630	
19	Watson Rd Culvert	L894730	
19	Canaan Rd Culvert	L899210	
19	Watson Rd Culvert	L894710	
19	Birchgrove Rd Culvert	L897510	
19	Canaan Rd Culvert	L899230	
19	Wilhaven Dr Culvert	L898450	
19	Canaan Rd Culvert	L899190	
19	Canaan Rd Culvert	L899250	
19	Farmers Way Culvert	L223310	
19	Farmers Way Culvert	L223330	
21	Barnsdale Rd Culvert	L112010	
21	Malakoff Rd Culvert	L865230	
20	Grey's Creek Rd Culvert	L885432	
21	Mackey Rd Culvert	L864190	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts pre Resurfacing - Continued			
5	Farmview Rd Culvert	L431290	
5	Marchurst Rd Culvert	L647810	
21	Joy's Rd Culvert	L755090	
5	Keatley Rd Culvert	L431260	
5	Flynn Ave Culvert	L438790	
21	Joy's Rd Culvert	L755070	
5	Stonecreste Rd Culvert	L335750	
5	Stonecreste Rd Culvert	L335780	
5	John Kennedy Way Culvert	L541250	
5	Hamilton Side Rd Culvert	L542250	
5	Hamilton Side Rd Culvert	L542310	
5	Hamilton Side Rd Culvert	L542330	
5	Northshire Dr Culvert	L545170	
20	River Rd Culvert	A881150	
20	Snake Island Rd Culvert	A882640	
20	Mitch Owens Rd Culvert	A222020	
10/22	Leitrim Rd Culvert	A222680	
20	Grey's Creek Rd Culvert	L885470	
10/22	Leitrim Rd Culvert	A222700	
20	River Rd Culvert	A881070	
22	Fenton Rd Culvert	L222890	
19	Birchgrove Rd Culvert	L897550	
20	River Rd Culvert	A881030	
20	River Rd Culvert	A881050	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts pre Resurfacing - Continued			
19	Colonial Rd Culvert	A892740	
19	Colonial Rd Culvert	A892760	
19	Birchgrove Rd Culvert	L897570	
20	Downey Rd Culvert	L221650	
20	Gregoire Rd Culvert	A883150	
20	Parkway Rd Culvert	L888340	
20	River Rd Culvert	A881010	
19	O'Toole Rd Culvert	L893810	
19	Colonial Rd Culvert	A892640	
19	O'Toole Rd Culvert	L893830	
20	Emerald Links Dr (E) Culvert	L883465	
10	Airport Pkwy Culvert	A221413	
20	Blanchfield Rd Culvert	L883345	
20	Parkway Rd Culvert	L888303	
20	McGuire Rd Culvert	L883070	
5	Dwyer Hill Rd Culvert	A541390	
5	Thomas Dolan Pkwy Culvert	A332200	
5	Ferry Rd Culvert	A431550	
5	John Shaw Rd Culvert	L433240	
5	John Shaw Rd Culvert	L433260	
5	Constance Creek Dr Culvert	L331040	
21	Malakoff Rd Culvert	L865330	
21	Southwick Dr Culvert	L876315	
21	Kelly Marie Dr Culvert	L876360	
21	Huntley Rd Culvert	A751790	

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts pre Resurfacing - Continued			
21	Mansfield Rd Culvert	L756540	
21	Mansfield Rd Culvert	L756590	
5	Rochon Way Culvert	L646292	
21	Mansfield Rd Culvert	L756510	
5	Ferry Rd Culvert	A431530	
21	Mansfield Rd Culvert	L756550	
21	Pollock Rd Culvert	L874830	
5	Howie Rd Culvert	L543010	
21	Huntley Rd Culvert	A751830	
6	Shea Rd Culvert	L757070	
21	Roger Stevens Dr Culvert	A872220	
21	Rideau Valley Dr N Culvert	A871570	
21	Rideau Valley Dr N Culvert	A871625	
23	Marcasite Rd Culvert	L758920	
21	Malakoff Rd Culvert	L865340	
5	Thomas Dolan Pkwy Culvert	A332220	
20	Marionville Rd Culvert	L882095	
19	Navan Rd Culvert	A892560	
19	Wilhaven Dr Culvert	L898430	
19	Milton Rd Culvert	A891090	
2	Navan Rd Culvert	A224540	
2	Navan Rd Culvert	A224500	
2	Navan Rd Culvert	A224520	
2	St Joseph Blvd Culvert	A228030	
2	St Joseph Blvd Culvert	A228070	





**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project Information		Location/Description	\$000's
<b>Class of Estimate: C) Planning</b>			
Category:	Ward:	Year of Completion:	
Drainage Culverts pre Resurfacing - Continued			
	Below the Line		
21	Huntley Rd Culvert	A751870	
21	Roger Stevens Dr Culvert	A872300	
3	Fallowfield Rd Culvert	A112270	
21	Malakoff Rd Culvert	L865270	
21	Malakoff Rd Culvert	L865290	
20	Broadway St Culvert	L885750	
20	Alfalfa St Culvert	L882370	
20	Alfalfa St Culvert	L882380	
20	Alfalfa St Culvert	L882390	
20	Popham St Culvert	L882405	
20	Talbot St Culvert	L885710	
20	Broadway St Culvert	L885730	
21	Pollock Rd Culvert	L864850	
21	Pollock Rd Culvert	L864870	
5	Kilkenny Rd Culvert	L332670	
5	Larne Lane Culvert	L335900	
5	Early Ave Culvert	L432950	
5	Sherruby Way Culvert	L646241	
5	Rochon Way Culvert	L646295	
5	Constance Lake Rd Culvert	L646610	
21	Purdy Rd Culvert	L752030	
21	Purdy Rd Culvert	L752050	
21	McCordick Rd Culvert	L867350	
5	William Mooney Dr Culvert	L545890	



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
**In Thousands (\$000)**

Project Information			Financial Details					
<b>909152 SNDC - Chapman Mills SW Pond</b>			<b>Class of Estimate: C) Planning</b>					
Dept:	Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 22	Year of Completion: 2020				
<p>This funding request is for the reimbursement to South Nepean Development Corporation (SNDC) for work associated with construction of the Chapman Mills stormwater pond by SNDC and eligible trunk stormwater as per Council Report ACS2009-CMR-LEG-0023 dated September 23, 2009.</p>			<b>2018 Request</b>	<b>827</b>	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	827	Develop. Charges Debt			0
			Gas Tax	0	Gas Tax Debt			0
			<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
			Authority	827	0	0	0	
			Spending Plan	827	0	0	0	
			FTE's	0	0	0	0	
Operating Impact	0	0	0	0				

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Ottawa River Fund-Strategic</b>		<b>Class of Estimate: A) Pre-Tender</b>				
Dept: Public Works & Environmental Services Department	Category: Strategic Initiatives	Ward: Multiple	Year of Completion: Various			
<p>The health of the Ottawa River is directly related to the quality of discharges from its tributaries and the volume, concentration, and frequency of discharges from industrial users and urban communities. In Ottawa, the main sources of discharges to the Ottawa River are: stormwater run-off directly from storm sewers and indirectly via local rivers and creeks; treated effluent from the Robert O. Pickard Environmental Centre (ROPEC); and Combined Sewer Overflows (CSOs) during wet weather events.</p> <p>The Ottawa River Action Plan (ORAP) was developed to ensure regulatory compliance with respect to CSO control, optimize recreational use of local beaches, and minimize the impact of direct discharges to the river.</p>		<b>2018 Request</b>	<b>1,000</b>	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	1,000	Rate Supported Debt	0	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	1,000	1,000	1,000	1,000
		Spending Plan	1,000	1,000	1,000	1,000
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>909026 ORAP-Water Environment Strategy (WES)PH2</b>		<b>Class of Estimate: A) Pre-Tender</b>	
Category: Strategic Initiatives	Ward: CW	Year of Completion: 2019	
<p>As part of the Water Environment Strategy (WES) Phase 2, this funding is primarily used to cover the City's contribution to the various conservation authorities.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Program Information			Financial Details						
<b>Stormwater Management Facilities</b>			<b>Class of Estimate: C) Planning</b>						
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various						
<p>Stormwater Management facilities serve to protect homes, business and the road network from flooding and also mitigate erosion and water quality impacts from the growing city. Currently, the most visible infrastructure the city owns, operates and maintains in this category encompasses over 250 pond facilities. While most SWM ponds appear very natural and simple, these are complicated engineered facilities that include significant hard elements such as concrete hydraulic structures, large valves and flow control gates. Other assets the city is required to maintain under this category include 100 underground treatment tanks, 25 specialty treatment systems, 10 pumping stations and 25 underground flow diversion structures.</p> <p>In order to ensure these facilities provide flood protection and environmental impact mitigation, as required by the MOECC and other environmental regulations, major repair or rehabilitation of hydraulic structures and flow regulation equipment is required as well as: removal/disposal of accumulated contaminants (oil and sediments); odor control; and rehabilitation of constructed wetlands. Specialized monitoring activities to optimize facility performance are conducted on specific facilities to assist the City in meeting compliance goals.</p> <p>Currently, as new developments have progressed, the number of SWM ponds the city is responsible for has been increasing at the rate of 5-10 per year. In addition, in recent years Council has adopted capital plans to install Stormwater Management Retrofits for large areas of the city developed before 1990's (i.e. Pincrest SW, Eastern SW) and the MOECC new draft SWM Guidelines which are pending adoption, will also require more diverse Stormwater Management Infrastructure. As such, the demands on City Operations in this portfolio have been increasing at an unprecedented rate.</p>			<b>2018 Request</b>		2,442		Projected Yearend Unspent Bal.	0	
			Revenues		0		Debt		
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0
			Rate Supported		2,442		Rate Supported Debt		0
			Develop. Charges		0		Develop. Charges Debt		0
			Gas Tax		0		Gas Tax Debt		0
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
			Authority		2,442	620	1,450	706	
			Spending Plan		2,442	620	1,450	706	
			FTE's		0	0	0	0	
Operating Impact		0	0	0	0				

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>909027 Stormwater Mgmt: Rehab&amp;Enviro Compliance 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2019	
<p>The City owns, operates and maintains over 200 stormwater facilities for the management of stormwater runoff. This number is increasing at the rate of 5-10 per year. The facilities provide flow attenuation and water quality treatment, ensuring that stream corridors and water quality are not degraded. In order to ensure combined compliance with environmental regulations and MOECC discharge criteria, these facilities require non-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**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Program Information			Financial Details				
<b>Municipal Drains</b>			<b>Class of Estimate: B) Design</b>				
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 / rural lands and roads in the City. However, the impetus for the majority of projects in this program are from land and road developments mainly in the rural and suburban areas, thus the timing of the works hinges on the particular development project which, can span several years. In most cases the entire cost of the drainage works, including engineering and construction costs, is paid by the developer and/or landowners and in all cases the costs are recovered by the City once the drainage works are completed.</p>			<b>2018 Request</b>	<b>825</b>	Projected Yearend Unspent Bal.		0
			Revenues	825	Debt		
			Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
			Rate Supported	0	Rate Supported Debt	0	
			Develop. Charges	0	Develop. Charges Debt	0	
			Gas Tax	0	Gas Tax Debt	0	
			<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
			Authority	825	500	500	500
			Spending Plan	825	500	500	500
			FTE's	0	0	0	0
Operating Impact	0	0	0	0			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Stormwater Services**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>909028 Municipal Drain Improvements - 2018</b>		<b>Class of Estimate: B) Design</b>	
Category: Regulatory	Ward: 21	Year of Completion: 2021	
<p>The Drainage Act provides landowners with a tool to help resolve drainage concerns. Once a request is received from a landowner the Drainage Act process is initiated. The project costs are initially paid by the City and are subsequently recovered through provincial funding and landowner assessment, as determined by the Engineers Report and By-law.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Environment and Climate Protection Committee-Rate**  
**In Thousands (\$000)**

Service Area: Wastewater Services											
Category	2018 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	43,742	0	0	20,522	520	0	0	22,700	0	0	22,700
Growth	4,815	0	0	613	1,102	0	0	3,100	0	0	3,100
Regulatory	0	0	0	0	0	0	0	0	0	0	0
Strategic Initiatives	750	0	0	750	0	0	0	0	0	0	0
<b>Total</b>	<b>49,307</b>	<b>0</b>	<b>0</b>	<b>21,885</b>	<b>1,622</b>	<b>0</b>	<b>0</b>	<b>25,800</b>	<b>0</b>	<b>0</b>	<b>25,800</b>

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
 In Thousands (\$000)

Program Information		Financial Details					
<b>Sanitary Sewer Rehabilitation</b>		<b>Class of Estimate: C) Planning</b>					
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The Sanitary Sewer Rehabilitation Program addresses annual rehabilitation requirements for the City's wastewater collection system to extend the life of the infrastructure, provide continued service, mitigate property flooding and prevent failures requiring more extensive reconstruction. The program is focused on:</p> <ul style="list-style-type: none"> <li>• Proactive lifecycle renewal and rehabilitation projects.</li> <li>• Level of service initiatives.</li> <li>• System improvements and optimization.</li> <li>• Miscellaneous upgrades and rehabilitation to support growth demand.</li> </ul> <p>The funding requests for wastewater costs coordinated with roadway, stormwater or watermain rehabilitation are included within the Integrated Rehabilitation Programs. Program funding requirements to support renewal needs are defined in the Long Range Financial Plan. Detailed information and costs associated with specific stand-alone (non-integrated) components and projects are provided following this program summary page. Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>		<b>2018 Request</b> 930		Projected Yearend Unspent Bal. 0			
		Revenues 0		Debt			
		Tax Supported/Dedicated 0		Tax Supported/Dedicated Debt 0			
		Rate Supported 130		Rate Supported Debt 800			
		Develop. Charges 0		Develop. Charges Debt 0			
		Gas Tax 0		Gas Tax Debt 0			
		<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority		930	4,900	0	8,500
		Spending Plan		650	3,620	1,070	6,440
		FTE's		0	0	0	0
Operating Impact		0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
 In Thousands (\$000)

Project(s) within a Program Information			\$000's
<b>906100</b>	<b>2018 Sanitary Sewer Improvements</b>	<b>Class of Estimate: C) Planning</b>	<b>930</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2021	
<p>This program provides for the rehabilitation of deficient sanitary sewers at various locations.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project Information			Financial Details								
<b>908250 Infrastructure Planning Information Mgmt</b>			<b>Class of Estimate: D) Conceptual</b>								
Dept: Planning, Infrastructure & Economic Development Department	Category: Renewal of City Assets	Ward: CW	Year of Completion: 2018								
<p>Development and implementation of information management systems to support infrastructure planning and related City functions. The 2018 request is to fund on-going development of a system for City-wide geotechnical data, supporting open access to existing geotechnical data from local consulting firms and other sources. The system will support improved planning and project decisions and reduced project costs.</p> <p>New estimated year of completion 2020.</p>			<b>2018 Request</b>		445		Projected Yearend Unspent Bal.		737		
			Revenues		0		Debt				
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0		
			Rate Supported		445		Rate Supported Debt		0		
			Develop. Charges		0		Develop. Charges Debt		0		
			Gas Tax		0		Gas Tax Debt		0		
			<b>Forecast</b>		<b>2018</b>		<b>2019</b>		<b>2020</b>		<b>2021</b>
			Authority		445		453		0		0
			Spending Plan		737		453		445		0
			FTE's		0		0		0		0
			Operating Impact		0		0		0		0
<b>904755 2018 Infrastructure Master Plan (Sewer)</b>			<b>Class of Estimate: C) Planning</b>								
Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: CW	Year of Completion: 2020								
<p>Undertake wastewater sewer system analysis and planning work for areas outside the greenbelt to support growth related wastewater project planning.</p>			<b>2018 Request</b>		525		Projected Yearend Unspent Bal.		0		
			Revenues		0		Debt				
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0		
			Rate Supported		263		Rate Supported Debt		0		
			Develop. Charges		262		Develop. Charges Debt		0		
			Gas Tax		0		Gas Tax Debt		0		
			<b>Forecast</b>		<b>2018</b>		<b>2019</b>		<b>2020</b>		<b>2021</b>
			Authority		525		209		0		0
			Spending Plan		527		207		0		0
			FTE's		0		0		0		0
			Operating Impact		0		0		0		0

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project Information			Financial Details							
<b>904985 North Kanata Sewer Ph 2</b>			<b>Class of Estimate: C) Planning</b>							
Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 4,7	Year of Completion: 2017							
<p>This project involves construction of a 2.4 km trunk sewer to support growth in the West Urban Community. The new sewer will be located mainly within the NCC Greenbelt. This request is needed to cover the updated cost estimate for a section of the project in the vicinity of Herzberg Road. The existing forcemain has been identified as vulnerable to failure, relative to other City forcemains. The potential impact of forcemain failure include basement flooding and environmental impacts.</p> <p>New estimated year of completion 2019.</p>			<b>2018 Request</b>		3,200		Projected Yearend Unspent Bal.	15,907		
			Revenues		0		Debt			
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0	
			Rate Supported		100		Rate Supported Debt		3,100	
			Develop. Charges		0		Develop. Charges Debt		0	
			Gas Tax		0		Gas Tax Debt		0	
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>		
			Authority		3,200	0	0	0		
			Spending Plan		15,907	3,200	0	0		
			FTE's		0	0	0	0		
			Operating Impact		0	0	0	0		
			<b>907809 Richmond Pumping Station &amp; Forcemain Expansion Phase1</b>			<b>Class of Estimate: C) Planning</b>				
Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 21	Year of Completion: 2019							
<p>The Master Servicing Plan for the Village of Richmond provides for the design and construction of a new 600 mm dia forcemain. Phase 1 includes forcemain upgrades to existing pumping station and new collector gravity sewer, which is needed to accommodate the first stage of the new village development. This budget request is for the construction stage of the forcemain work.</p>			<b>2018 Request</b>		1,000		Projected Yearend Unspent Bal.	3,503		
			Revenues		0		Debt			
			Tax Supported/Dedicated		0		Tax Supported/Dedicated Debt		0	
			Rate Supported		250		Rate Supported Debt		0	
			Develop. Charges		750		Develop. Charges Debt		0	
			Gas Tax		0		Gas Tax Debt		0	
			<b>Forecast</b>		<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>		
			Authority		1,000	0	0	0		
			Spending Plan		3,503	1,000	0	0		
			FTE's		0	0	0	0		
			Operating Impact		0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
 In Thousands (\$000)

Program Information		Financial Details					
<b>Wet Weather Program</b>		<b>Class of Estimate: C) Planning</b>					
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. Detailed information and costs associated with specific non-integrated components and projects are provided following this program summary page. Forecasts are based on bulk allocations that will be detailed in future budget submissions.</p>		<b>2018 Request</b>	<b>2,000</b>	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/ Dedicated	0	Tax Supported/ Dedicated Debt			0
		Rate Supported	1,935	Rate Supported Debt			0
		Develop. Charges	65	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
		Authority	2,000	2,000	2,000	2,000	
		Spending Plan	1,400	1,800	2,000	2,000	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			



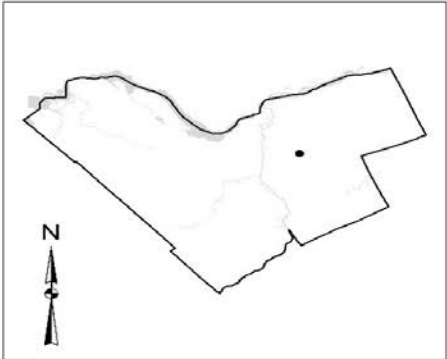

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>908731 CWWF Flood Protection - Bridlewood North</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: 23	Year of Completion: 2019	
<p>This project includes the design and construction of improvements to the storm sewer system in the Bridlewood Area. Altering existing sewer alignments as well as upsizing existing storm sewers will be included in the scope of work. The improvements will improve the hydraulics of the storm sewer system and reduce the risk of basement flooding.</p>			
<b>908983 2018 ORAP Wet Weather IMP - Flow Reduction</b>		<b>Class of Estimate: D) Conceptual</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2020	
<p>This project is required for the development of programs needed to support the objectives of the Wet Weather Infrastructure Management Plan (WW-IMP). Once developed, these programs will define and prioritize the specific actions to be implemented, which will increase the capacity of the sewer systems; reduce the risk of property flooding; and reduce impacts related to combined sewer overflows. This project is considered for development charge (DC) funding pursuant to the 2014 Development Charge By-Law 2014-229. This project also includes the installation of Inlet Control Devices (ICDs) into catch basins throughout various areas in the City. The intent is to reduce sewer surcharge during major rainfall events, and to diminish the incidences of basement flooding as a result of sewer surcharge.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project Information		Financial Details									
<b>905421 DCA-O/S Orléans S Business Park SanSewer</b>		<b>Class of Estimate: Not Applicable</b>									
Dept:	Planning, Infrastructure & Economic Development Department	Category:	Renewal of City Assets	Ward:	1,2						
		Year of Completion: 2020									
<p>This request is for the repayment of sanitary sewer oversizing in the proposed Orléans South Business Park, in accordance with the DC By-law. Trunk sanitary sewers will be constructed by developers moving ahead with plans of subdivision in the South Business Park. These trunk sewers have been identified in the Orléans South Business Campus Development Plan report.</p>		<b>2018 Request</b>		193		Projected Yearend Unspent Bal.		650			
		Revenues		0		Debt					
		Tax Supported/ Dedicated		0		Tax Supported/ Dedicated Debt		0			
		Rate Supported		0		Rate Supported Debt		0			
		Develop. Charges		193		Develop. Charges Debt		0			
		Gas Tax		0		Gas Tax Debt		0			
		<b>Forecast</b>		<b>2018</b>		<b>2019</b>		<b>2020</b>		<b>2021</b>	
		Authority		193		0		0		0	
		Spending Plan		700		100		43		0	
		FTE's		0		0		0		0	
Operating Impact		0		0		0		0			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project Information		Financial Details					
<b>909072 Leitrim Sanitary Pump Station Expansion</b>		<b>Class of Estimate: Not Applicable</b>					
Dept: Planning, Infrastructure & Economic Development Department	Category: Growth	Ward: 22	Year of Completion: 2022				
<p>The Leitrim Updated Servicing Report (2016) states all wastewater flows from the Leitrim Development Area are tributary to the Leitrim Sanitary Pump Station. The station was built and commissioned by the City of Ottawa in 2002 and the station's Amended Environmental Compliance Approval (ECA), was issued by the provincial Ministry of Environment on June 12, 2012 through Capital Works. The Leitrim Sanitary Pump Station requires an overflow system to help eliminate the possibility of property flooding in the event the pump station fails. The existing sanitary overflow was commissioned in 2014. The pump station was identified for an upgrade between 2016 and 2020 for an additional pump and increase in capacity of the two existing pumps.</p>		<b>2018 Request</b>	<b>90</b>	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	90	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
		Authority	90	92	93	0	
		Spending Plan	90	92	93	0	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			
							

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Wastewater &amp; Stormwater Collection</b>		<b>Class of Estimate: C) Planning</b>				
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various			
<p>The City's wastewater and stormwater collection system includes over 5,600 km of sanitary, storm, and combined pipes with a replacement value of over \$10 billion. The Wastewater &amp; Stormwater Collection Rehabilitation Program addresses the annual condition assessment, replacement, rehabilitation, and capitalized maintenance requirements to preserve and extend the life of the infrastructure, reduce flooding occurrences, and prevent failures requiring more extensive reconstruction. The program is focused on:</p> <ul style="list-style-type: none"> <li>• Flood Mitigation.</li> <li>• Proactive life cycle renewal and rehabilitation projects.</li> <li>• Level of service initiatives.</li> <li>• System improvements and optimization.</li> <li>• Upgrades and rehabilitation to support growth demand.</li> <li>• Miscellaneous local repairs.</li> </ul> <p>Program funding requirements to support renewal needs are defined in the Long Range Financial Plan. The 2018 forecast is based on bulk allocations that will be detailed in future budget submissions.</p> <p>Major 2018 Projects:</p> <ul style="list-style-type: none"> <li>• Collection System Condition Assessment</li> <li>• Linear Sewage Systems Improvements</li> <li>• SCADA Rehabilitation and Upgrades - Remote Sewer Facilities</li> <li>• Sewage Pumping Station Rehabilitation</li> </ul>		<b>2018 Request</b>	<b>5,500</b>	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	1,600	Rate Supported Debt	3,900	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	5,500	11,838	10,498	10,294
		Spending Plan	18,377	17,427	13,578	11,629
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>908449 Sewer Lateral Repairs 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2019	
<p>The sewer collection systems includes 219,000 service connections, which are 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>			
<b>909030 SCADA Rehab &amp; Upgrades-Remote Sewer 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2019	
<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 require upgrades or replacement to maintain reliability.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
 In Thousands (\$000)

Program Information		Financial Details					
<b>Wastewater Collection Pump Stn</b>		<b>Class of Estimate: C) Planning</b>					
Dept: Public Works & Environmental Services Department	Category: Renewal of City Assets	Ward: Multiple	Year of Completion: Various				
<p>The Collection Pumping Station Program covers all the wastewater pumping stations and associated forcemains in the city. The objective of this program is to manage the lifecycle replacement and capitalized maintenance costs of this asset. Projects under this program will maintain or extend the life of the pumping processes and equipment.</p> <p>2018 Major Spending Projects:</p> <ul style="list-style-type: none"> <li>• Gas monitoring and Rehab program, South End Odour and Corrosion Study.</li> <li>• SCADA Rehabilitation and Upgrades, including cybersecurity.</li> </ul>		<b>2018 Request</b>	<b>11,900</b>	Projected Yearend Unspent Bal.		0	
		Revenues	0	Debt			
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt			0
		Rate Supported	11,900	Rate Supported Debt			0
		Develop. Charges	0	Develop. Charges Debt			0
		Gas Tax	0	Gas Tax Debt			0
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	
		Authority	11,900	10,060	9,135	9,135	
		Spending Plan	3,449	10,612	8,563	8,820	
		FTE's	0	0	0	0	
Operating Impact	0	0	0	0			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>908029 South End Remote Facil. Corrosion/Odour</b>		<b>Class of Estimate: B) Design</b>	
Category: Renewal of City Assets	Ward: 18	Year of Completion: 2020	
<p>Under specific conditions, sewage in the collection system creates corrosive and odorous gases. This authority will enable Wastewater Services to proceed with a corrosion and odour study for the south end portion of the collection system. This study will drive, if required, additional odour and corrosion mitigation measures in the following years.</p>			
<b>908368 WWC PS Gas Monitoring Rehab &amp; Upgrade</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2018	
<p>This project is necessary to review all wastewater pump stations to determine the condition of gas detection equipment, and upgrade where required. This project is a priority due to health and safety risks.</p>			
<b>909031 Sewage Pumping Station Rehab Prog 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2019	
<p>The City wastewater collection system currently includes 85 pumping stations and related buildings. This project provides funding for the operational studies, condition assessment, life-cycle rehabilitation, and replacement of critical components; such as mechanical / electrical stand-by power and facility odour &amp; corrosion control equipment, in order to ensure operational efficiency, continued reliability and environmental protection. Also included in this program is assessment and repair of forcemains associated with the pumping stations.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Wastewater Treatment-Renewal</b>		<b>Class of Estimate: C) Planning</b>				
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>2018 Major Spending Projects:</p> <ul style="list-style-type: none"> <li>• HVAC upgrades at various plant buildings</li> <li>• Rehabilitation of Digesters</li> <li>• Sewage Treatment Rehabilitation Program</li> <li>• SCADA Rehabilitation and Upgrades, including cybersecurity.</li> </ul>		<b>2018 Request</b>	<b>22,774</b>	Projected Yearend Unspent Bal.		0
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	4,512	Rate Supported Debt	18,000	
		Develop. Charges	262	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	22,774	22,982	13,660	13,660
		Spending Plan	13,033	19,136	17,659	14,302
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		



**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>906647 ROPEC Primary Clarifier Rehab Phase 2</b>		<b>Class of Estimate: B) Design</b>	
<b>12,600</b>			
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2018	
<p>The scum handling facility function is to remove fat, oil and grease extracted from the wastewater flow as it enters the treatment process. This facility is not functioning properly and is creating difficulties. Significant annual operational costs are being spent in contracted services for the removal, transportation and disposal of the waste to the digester process located elsewhere within the treatment plant. A technology review and design of a new scum removal system will be completed in 2017 and construction would be completed in 2018-2019 eliminating the annual scum removal costs.</p> <p>New estimated year of completion 2020.</p>			
<b>908451 Lab Equipment Purchase/Replacement 2018</b>		<b>Class of Estimate: C) Planning</b>	
<b>300</b>			
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2019	
<p>Laboratory Services are provided to the Public Works and Environmental Services Department and other City departments on a cost recovery basis. Analytical equipment required to support this function have a life cycle of approximately 5-10 years. This project provides for an equalized replacement schedule of this highly specialized and automated equipment. This replacement is necessary to maintain service and quality levels related to laboratory licensing, and accreditation as required by Ontario's Safe Drinking Water Regulations.</p>			
<b>908455 ROPEC Process Facil - Enviro Sys Upgrade</b>		<b>Class of Estimate: C) Planning</b>	
<b>500</b>			
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2019	
<p>The environmental control systems (i.e. HVAC ventilation) are reaching the end of their useful life in various buildings at ROPEC. The existing components of the various atmospheric and process ventilators are outdated and repair parts are not available in some cases.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>909032 ROPEC - SCADA Rehab. &amp; Upgrades 2018</b>		<b>Class of Estimate: C) Planning</b>	<b>2,100</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2019	
<p>The Supervisory Control and Data Acquisition (SCADA) system is a computerized system that is used by Certified Operators to monitor and control the waste water treatment system. The Operator monitors all critical components of the treatment process and is able to remotely operate equipment within the treatment plant. 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; to ensure efficient process operation; maintain asset functionality through equipment overhauls; adapt to changing regulations; and take advantage of new technologies, including cybersecurity. A master plan for the SCADA system was delivered in 2017. Specific projects have been identified for the next 10 years to refurbish and maintain the system.</p>			
<b>909033 ROPEC - Sewage Treatment Rehab Prog 2018</b>		<b>Class of Estimate: C) Planning</b>	<b>6,750</b>
Category: Renewal of City Assets	Ward: 11	Year of Completion: 2019	
<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>			
<b>907383 ROPEC Digester Flare Expansion</b>		<b>Class of Estimate: C) Planning</b>	<b>524</b>
Category: Renewal of City Assets	Ward: CW	Year of Completion: 2018	
<p>As identified in the 2013 ROPEC Development Plan, expansion of this process is required to meet growth-related increases in plant volumes and loadings, while also improving process reliability.</p> <p>New estimated year of completion 2019.</p>			

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
 In Thousands (\$000)

Program Information		Financial Details				
<b>Wastewater Services General</b>		<b>Class of Estimate: C) Planning</b>				
Dept: Public Works & Environmental Services Department	Category: Strategic Initiatives	Ward: Multiple	Year of Completion: Various			
<p>The wastewater general program consists of sub-programs and projects that support the entire wastewater collection and treatment programs. Examples of these are the Residential Protective Plumbing Program and the Drainage Roofing Rehab Program.</p>		<b>2018 Request</b>	<b>750</b>	Projected Yearend Unspent Bal.	0	
		Revenues	0	Debt		
		Tax Supported/Dedicated	0	Tax Supported/Dedicated Debt	0	
		Rate Supported	750	Rate Supported Debt	0	
		Develop. Charges	0	Develop. Charges Debt	0	
		Gas Tax	0	Gas Tax Debt	0	
		<b>Forecast</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
		Authority	750	1,150	1,150	1,150
		Spending Plan	750	1,150	1,150	1,150
		FTE's	0	0	0	0
Operating Impact	0	0	0	0		

**City of Ottawa**  
**2018 Draft Capital Budget**  
**Service Area: Wastewater Services**  
**In Thousands (\$000)**

Project(s) within a Program Information			\$000's
<b>908090 Water Environment Protection: Short Term Initiatives - 2018</b>		<b>Class of Estimate: B) Design</b>	
Category: Strategic Initiatives	Ward: CW	Year of Completion: 2020	
<p>This initiative provides for the investigation and on-going evaluation of water resource management approaches and monitoring technologies, to recommend cost effective rehabilitation solutions and implementation strategies in support of the Ottawa River Action Plan. Projects include: eco-system monitoring of city tributaries; monitoring of emerging parameters/contaminates of concern; cross-connection identification program to support the Lower Rideau River Strategy, endorsed by Council on 2006-11-22. Environment Effects Monitoring of the ROPEC effluent and combined sewer overflow sites, is required by Environment Canada and MOE Regulations (F5.5); studies to investigate upstream pollution sources at city beaches.</p>			
<b>909029 Protective Plumbing Program 2018</b>		<b>Class of Estimate: C) Planning</b>	
Category: Strategic Initiatives	Ward: CW	Year of Completion: 2019	
<p>The City of Ottawa's Residential Protective Plumbing Program provides financial assistance towards a portion of the costs of the installation of protective plumbing for eligible property owners. Protective plumbing describes the devices and/or means used to protect homeowners against the entry of stormwater and/or wastewater into basements, resulting from a storm or sanitary sewer backup.</p>			

**City Of Ottawa**  
**2018 Capital Draft Budget**  
**Environment and Climate Protection Committee**  
**Capital Forecast Summary**  
**In Thousands (000's)**

Projects by Service Area and Category	2018	2019	2020	2021	Total
Drinking Water Services					
Renewal of City Assets					
906642 Munster Well System Rehab	-	-	5,054	-	5,054
907640 Water Storage Tanks & Reservoir	-	1,728	1,350	1,350	4,428
907649 Service Posts Rehab	-	-	-	400	400
907654 Ops Condition Assess-Critical Sys Links	2,175	3,175	3,180	3,180	11,710
907655 Communal Well System Rehab 2018	10,413	3,113	2,590	2,590	18,706
907795 Business Technology Opportunities	-	1,000	1,000	1,000	3,000
908075 Critical Links Risk Mitigation Meas 2018	-	3,150	3,150	3,200	9,500
908076 Large Water Meters Changeout Program	1,000	1,000	1,000	1,000	4,000
908080 Water Distribution Sys Improvements	-	-	1,000	1,000	2,000
908435 Water Facilities Roofing	-	293	250	240	783
908436 Cathodic Protection	-	1,250	1,250	1,250	3,750
908613 Bank St (Rideau Rd-Mitch Owens)	-	5,900	-	-	5,900
908614 LRT2 W1 Hwy 174 - Shefford Rd	97	351	702	350	1,500
908615 Leitrim Rd (Bank-550m East)	-	700	-	-	700
908616 Redenda Cres (Higgins)	750	-	-	-	750
908617 Sherbourne Rd (Knightsbridge-Dovercourt)	550	-	-	-	550
908633 Enhanced Corrosion Control	-	6,118	-	-	6,118
908908 Small Water Meters Changeout Program	325	4,325	2,325	2,375	9,350
908931 2018 Buildings-Water Services	1,000	50	50	50	1,150
908978 2018 Transmission/Distribution WM Rehab	2,090	4,782	9,450	10,000	26,322
908981 Lemieux island Pipe Bridge SN 017160	1,020	-	2,110	2,150	5,280
908995 Advanced Metering Infra. (AMI) Software	-	-	600	-	600
908996 Meter Service Mobility	700	-	-	-	700
909035 Water Sys SCADA & Instrument Rehab 2018	970	2,400	2,400	2,400	8,170
909036 Water Treatment Rehab 2018	9,450	15,660	5,830	12,430	43,370
909037 Water Pumping Station Facility Rehab2018	1,000	2,761	2,150	2,150	8,061
909039 Proactive Lead Service Replace Prog 2018	400	2,000	4,000	1,500	7,900
909040 New Vehicles Drinking Water - 2018	65	250	250	250	815
906087 2018 Watermain Improvements	2,000	4,000	5,000	5,000	16,000
<b>Renewal of City Assets Total</b>	<b>34,005</b>	<b>64,006</b>	<b>54,691</b>	<b>53,865</b>	<b>206,567</b>

City Of Ottawa  
2018 Capital Draft Budget  
Environment and Climate Protection Committee  
Capital Forecast Summary  
In Thousands (000's)

Projects by Service Area and Category	2018	2019	2020	2021	Total
<b>Growth</b>					
900632 Strandherd Road Watermain	1,625	3,529	-	-	5,154
901144 Glen Cairn Reservoir Expansion	-	-	326	-	326
904916 DCA-Kanata West Feedermain	-	1,043	-	-	1,043
904918 Limebank Feedermain	-	-	-	3,429	3,429
904982 Zone 2W West march Rd 406 to 6	-	-	622	1,688	2,310
905992 Manotick Supply Watermain	-	9,849	-	9,727	19,576
907008 Treatment Plant Process Expansion	-	-	20,000	17,497	37,497
907099 Carp Reservoir Cell	-	-	-	454	454
907101 River Ridge 3C Elevated Tank	-	-	-	3,165	3,165
907453 Britannia WPP Capacity Upgrade	-	-	518	-	518
907456 Manotick North Island Link	-	5,823	-	-	5,823
907467 SUC Greenbank	-	3,716	-	-	3,716
908257 O/S Kanata West Transmission Mains	307	-	-	-	307
909071 2018 Off Site Reliability Links	153	155	158	161	627
909132 2018 Rural Servicing Strategy	205	209	212	216	842
909133 2018 Water & Wastewater EA Studies	255	260	264	269	1,048
909134 2018 Infrastructure Master Plan (Water)	150	260	264	-	674
909135 2018 Groundwater Studies	153	158	161	164	636
<b>Growth Total</b>	<b>2,848</b>	<b>25,002</b>	<b>22,525</b>	<b>36,770</b>	<b>87,145</b>
<b>Regulatory</b>					
908434 Water Efficiency	-	-	400	400	800
<b>Regulatory Total</b>	<b>-</b>	<b>-</b>	<b>400</b>	<b>400</b>	<b>800</b>
<b>Drinking Water Services Total</b>	<b>36,853</b>	<b>89,008</b>	<b>77,616</b>	<b>91,035</b>	<b>294,512</b>
<b>Integrated Roads, Water &amp; Wastewater</b>					
<b>Renewal of City Assets</b>					
906056 Albert St / Scott St	630	-	-	-	630
906735 Bank St (Riverside-Belanger)	-	14,155	28,145	-	42,300
906875 Aylmer - Fulton - Carlyle - Rosedale	8,020	-	-	-	8,020
906882 Elgin (Lisgar - Isabella)	21,900	-	-	-	21,900
906884 Glengarry-Onslow-Beckwith-Belgrade	8,650	-	-	-	8,650
906900 Concord - Echo - Greenfield	-	19,800	-	-	19,800

**City Of Ottawa  
2018 Capital Draft Budget  
Environment and Climate Protection Committee  
Capital Forecast Summary  
In Thousands (000's)**

Projects by Service Area and Category	2018	2019	2020	2021	Total
907322 Carling Ave (Churchill-Kirkwood)	-	-	1,370	-	1,370
908137 CWWF Hillard-Millbrk-Deerpk-Farlane-Wall	-	14,800	-	-	14,800
908138 CWWF Avenue P-Q-R-S-T-U	-	-	9,000	-	9,000
908139 Montreal Rd (N River Rd-St Laurent)	-	12,900	-	-	12,900
908140 Carling (Bronson - Trillium Li	-	-	-	17,870	17,870
908141 ORAP Albert St-Slater-Bronson	-	-	14,000	-	14,000
908142 CWWF McLeod - Florence	-	-	5,900	-	5,900
908370 Project Information Management Systems	240	-	-	-	240
908487 Scoping Pre/Post Engineering	-	-	500	500	1,000
908567 Alta Vista - Summit	40	1,800	-	-	1,840
908568 Ashburn-Hogan-Wigan	-	-	8,600	-	8,600
908569 Borthwick-Quebec-Gardenvale	-	5,800	-	-	5,800
908570 Byron-Highcroft-Athlone	-	1,200	-	-	1,200
908571 Catherine St (Bronson-Elgin)	170	6,540	-	-	6,710
908572 Fairbairn-Bellwood-Willard-Belmont	-	4,400	-	-	4,400
908573 Gibson-Denver-Tampa-Orlando	-	3,300	-	-	3,300
908574 Grove Ave	-	500	-	-	500
908575 Isabella-Chamberlain	40	1,900	-	-	1,940
908576 Larkin-Larose-Lepage	-	2,400	-	-	2,400
908577 Mailes Ave (Patricia-Oakdale)	-	1,100	-	-	1,100
908578 Ryder - Featherston	-	700	-	-	700
908582 N River Rd (Montreal-Dead EndNof Coupal)	-	-	2,450	-	2,450
908645 St Denis - Lavergne	-	7,400	-	-	7,400
908646 Integrated Program - Bulk Proj	-	-	35,673	105,589	141,262
908835 Range-Mann-Russell	-	5,880	-	-	5,880
908916 2018 Surveys & Mapping	205	240	270	240	955
908940 2018 Infrastructure Assess & Data Collec	2,200	1,750	2,200	2,200	8,350
908941 2018 Scoping Pre/Post Engineering	505	660	850	850	2,865
908949 2018 Road Resurfacing - CW	2,700	1,500	1,650	1,800	7,650
908998 LRT2 R2 Hwy 174 Resurfacing EBL	15	36	72	36	159
909021 Woodroffe Ave (Saville-Richmond)	-	-	-	1,100	1,100
909041 Dow's Lake Rd / Kippewa Dr	-	-	800	-	800
909157 Integrated Water & WW LRFP V Recovery	-	(72,232)	(36,000)	(36,000)	(144,232)

City Of Ottawa  
2018 Capital Draft Budget  
Environment and Climate Protection Committee  
Capital Forecast Summary  
In Thousands (000's)

Projects by Service Area and Category	2018	2019	2020	2021	Total
909156 Wastewater LRFP V Recovery	-	(14,700)	-	-	(14,700)
<b>Renewal of City Assets Total</b>	<b>45,315</b>	<b>21,829</b>	<b>75,480</b>	<b>94,185</b>	<b>236,809</b>
Growth					
909050 Fleet Growth - ROWHUD	65	-	-	-	65
<b>Growth Total</b>	<b>65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>65</b>
Strategic Initiatives					
908918 2018 Public Realm Interventions	140	165	130	130	565
<b>Strategic Initiatives Total</b>	<b>140</b>	<b>165</b>	<b>130</b>	<b>130</b>	<b>565</b>
<b>Integrated Roads, Water &amp; Wastewater Total</b>	<b>45,520</b>	<b>21,994</b>	<b>75,610</b>	<b>94,315</b>	<b>237,439</b>
Integrated Water & Wastewater					
Renewal of City Assets					
908580 CWWF Queensway Terrace North Sewer	-	-	10,000	-	10,000
908581 Valley Dr Storm Sewer	17,000	-	-	-	17,000
908942 2018 Sewer & Water Repairs/Improvements	5,000	2,370	4,000	5,000	16,370
908943 2018 Sewer Access & Outfalls	2,500	2,000	1,000	1,000	6,500
908944 2018 Trenchless Rehab - Sanitary & Storm	4,006	7,502	2,900	6,300	20,708
908997 LRT2 SS1 Sewer Upgrades	135	629	1,258	628	2,650
<b>Renewal of City Assets Total</b>	<b>28,641</b>	<b>12,501</b>	<b>19,158</b>	<b>12,928</b>	<b>73,228</b>
<b>Integrated Water &amp; Wastewater Total</b>	<b>28,641</b>	<b>12,501</b>	<b>19,158</b>	<b>12,928</b>	<b>73,228</b>
Stormwater Services					
Renewal of City Assets					
903324 Kennedy Burnett SW Pond	-	12,216	-	-	12,216
908252 Stormwater Mgmt Retrofit Master Plan	450	-	-	-	450
908619 Graham Creek Storm Sewer	15,000	-	-	-	15,000
908726 CWWF Vanier Parkway Storm Sewer Renewal	-	3,600	-	-	3,600
908972 2018 Scoping Pre/Post Drn Culverts	1,200	600	600	600	3,000
908973 2018 Drainage Culverts (<=1m)	6,500	4,700	5,200	4,450	20,850
908974 2018 Drainage Culverts (1m-3m)	6,500	4,700	5,200	4,450	20,850
908975 2018 Drainage Culverts pre Resurfacing	3,000	4,000	3,000	2,000	12,000
908976 2018 Drainage Culverts - Site-Specific	800	800	1,000	800	3,400
908982 2018 Joint CA/City Renewal Activiti	200	-	-	-	200



City Of Ottawa  
2018 Capital Draft Budget  
Environment and Climate Protection Committee  
Capital Forecast Summary  
In Thousands (000's)

Projects by Service Area and Category	2018	2019	2020	2021	Total
909017 LRT2 C1 Hwy 174 Culverts	197	2,010	4,019	2,010	8,236
909027 Stormwater Mgmt: Rehab&Enviro Compliance	2,442	620	1,450	706	5,218
909131 2018 Stormwater Management Retrofit	2,000	3,054	5,180	5,275	15,509
909150 2018 Stormwater Improvements	-	-	5,100	-	5,100
<b>Renewal of City Assets Total</b>	<b>38,289</b>	<b>36,300</b>	<b>30,749</b>	<b>20,291</b>	<b>125,629</b>
Growth					
907485 2018 Stormwater Master Planning	-	321	378	385	1,084
909152 SNDC - Chapman Mills SW Pond	827	-	-	-	827
<b>Growth Total</b>	<b>827</b>	<b>321</b>	<b>378</b>	<b>385</b>	<b>1,911</b>
Regulatory					
909028 Municipal Drain Improvements - 2018	825	500	500	500	2,325
<b>Regulatory Total</b>	<b>825</b>	<b>500</b>	<b>500</b>	<b>500</b>	<b>2,325</b>
Strategic Initiatives					
906632 Flood Plain Mapping	295	301	306	311	1,213
909026 ORAP-Water Environment Strategy (WES)PH2	1,000	1,000	1,000	1,000	4,000
<b>Strategic Initiatives Total</b>	<b>1,295</b>	<b>1,301</b>	<b>1,306</b>	<b>1,311</b>	<b>5,213</b>
<b>Stormwater Services Total</b>	<b>41,236</b>	<b>38,422</b>	<b>32,933</b>	<b>22,487</b>	<b>135,078</b>
<b>Wastewater Services</b>					
Renewal of City Assets					
905421 DCA-O/S Orleans S Business Park SanSewer	193	-	-	-	193
906100 2018 Sanitary Sewer Improvements	930	4,900	-	8,500	14,330
906647 ROPEC Primary Clarifier Rehab Phase 2	12,600	-	-	-	12,600
906648 ROPEC - Digester Gas Utilization	-	7,412	-	-	7,412
907060 ROPEC Secondary Clarifier Upgrades	-	-	3,569	4,054	7,623
907382 ROPEC Aeration Blower Expansion	-	-	1,300	6,000	7,300
907383 ROPEC Digester Flare Expansion	524	112	-	-	636
907387 ROPEC Raw Sewage Pumping Station Expan.	-	-	-	1,000	1,000
907623 West End Remote Facility Corrosion/Odour	-	2,500	-	-	2,500
907675 New Vehicles Waste Water	-	100	100	100	300
908029 South End Remote Facil. Corrosion/Odour	400	2,500	-	-	2,900
908092 Flow Monitoring System Rehab.	-	200	200	200	600
908097 ROPEC - Concrete Rehab & Repairs	-	1,000	1,000	1,000	3,000

City Of Ottawa  
2018 Capital Draft Budget  
Environment and Climate Protection Committee  
Capital Forecast Summary  
In Thousands (000's)

Projects by Service Area and Category	2018	2019	2020	2021	Total
908102 Wastewater Facilities Upgrade	-	-	505	510	1,015
908250 Infrastructure Planning Information Mgmt	445	453	-	-	898
908368 WWC PS Gas Monitoring Rehab & Upgrade	500	-	-	-	500
908445 Wastewater Drainage Roofing	-	180	110	80	370
908446 Collection System Condition Assess.	-	-	1,160	1,160	2,320
908447 Linear Sewage System Improve. Prog.	-	2,000	2,000	2,000	6,000
908449 Sewer Lateral Repairs 2018	4,000	5,500	5,500	5,575	20,575
908451 Lab Equipment Purchase/Replacement 2018	300	325	325	325	1,275
908454 ROPEC Ops & Technical Bldg Space Upgrade	-	-	-	8,089	8,089
908455 ROPEC Process Facil - Enviro Sys Upgrade	500	6,000	-	-	6,500
908683 Old Digester Decommissioning	-	4,200	-	-	4,200
908731 CWWF Flood Protection - Bridlewood North	1,500	-	-	-	1,500
908983 2018 ORAP Wet Weather IMP - Flow Reducti	500	2,000	2,000	2,000	6,500
909030 SCADA Rehab & Upgrades-Remote Sewer 2018	1,500	1,838	1,838	1,559	6,735
909031 Sewage Pumping Station Rehab Prog 2018	11,000	7,560	9,135	9,135	36,830
909032 ROPEC - SCADA Rehab. & Upgrades 2018	2,100	2,100	2,100	2,100	8,400
909033 ROPEC - Sewage Treatment Rehab Prog 2018	6,750	14,445	11,235	11,235	43,665
<b>Renewal of City Assets Total</b>	<b>43,742</b>	<b>65,325</b>	<b>42,077</b>	<b>64,622</b>	<b>215,766</b>
<b>Growth</b>					
904755 2018 Infrastructure Master Plan (Sewer)	525	209	-	-	734
904986 Tri-Township/March Ridge Replacement	-	15,270	-	-	15,270
904987 Fernbank Collector Sewer & Oversizing	-	1,018	-	-	1,018
904988 March PS Conversion	-	7,686	-	-	7,686
905416 South Nepean Collector Ph 3	-	1,069	6,423	-	7,492
907107 Acres Road PS Upgrade	-	662	3,047	-	3,709
907462 Pump Stations Capacity Increase	-	326	445	464	1,235
907463 Stittsville PS Gravity Connect	-	-	228	1,350	1,578
908247 Richmond PS & Forcemain Expans	-	1,043	8,599	-	9,642
908626 Signature Ridge PS Expansion -	-	-	-	580	580
909072 Leitrim Sanitary Pump Station Expansion	90	92	93	-	275
904985 North Kanata Sewer Ph 2	3,200	-	-	-	3,200
907809 Richmond PS & Forcemain Expansion Phase1	1,000	-	-	-	1,000
<b>Growth Total</b>	<b>4,815</b>	<b>27,375</b>	<b>18,835</b>	<b>2,394</b>	<b>53,419</b>

City Of Ottawa  
 2018 Capital Draft Budget  
 Environment and Climate Protection Committee  
 Capital Forecast Summary  
 In Thousands (000's)

Projects by Service Area and Category	2018	2019	2020	2021	Total
Strategic Initiatives					
908090 Water Env Protec Short Term Initiatives	150	150	150	150	600
908660 Sewer Use Prog-Short Term Initiatives	-	50	50	50	150
909029 Protective Plumbing Program 2018	600	1,000	1,000	1,000	3,600
<b>Strategic Initiatives Total</b>	<b>750</b>	<b>1,200</b>	<b>1,200</b>	<b>1,200</b>	<b>4,350</b>
<b>Wastewater Services Total</b>	<b>49,307</b>	<b>93,900</b>	<b>62,112</b>	<b>68,216</b>	<b>273,535</b>
<b>Grand Total</b>	<b>201,557</b>	<b>255,825</b>	<b>267,429</b>	<b>288,981</b>	<b>1,013,792</b>

The Integrated Roads, Water & Wastewater program totals do not include the roads portion of the project.

**City of Ottawa**  
**Environment and Climate Protection Committee - Rate**  
**Capital Works-In-Progress**  
**In Thousands (\$000's)**

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
Drinking Water Services					
Renewal of City Assets					
900631 Carlington Heights Pumping Stn Expansion	13,918	1,530	12,388	1,374	11,015
901139 1W/2W Feedermain Link	42,554	40,736	1,818	301	1,517
901141 Orleans Transmission Main	31,308	30,123	1,185	951	234
904976 Infrastructure Management Support System	450	412	38	27	11
904981 3C/2W Pressure Zone Separation	5,822	3,599	2,223	160	2,062
905681 Water System SCADA & Instrument Rehab	2,400	2,259	141	125	17
905741 Meter Lifecycle Replacement Program	7,500	3,892	3,608	7	3,601
906088 Transmission Main Rehab	2,000	1,614	386	98	288
906197 Water System Facilities Upgrades 2011	1,926	794	1,132	491	641
906199 Condition Assess -Critical Sys Links2011	970	836	134	-	134
906350 Water Treatment Rehab. - 2012	4,550	4,390	160	84	76
906352 Water Storage Tanks & Reservoirs 2014	629	275	354	207	147
906353 Water Facilities Roofing 2016	200	-	200	-	200
906354 Water Pumping Stn Facility Rehab. 2012	1,300	1,251	49	56	(7)
906358 Transmission Mains Condition Assessment	1,600	1,349	251	-	251
906539 Large Transmission Mains Risk Mitigation	1,000	328	672	67	606
906642 Munster Well System Rehab	1,780	794	986	720	267
906659 Water Facilities Space Upgrades	8,800	4,344	4,456	609	3,847
906660 Britannia & Lemieux Intake ScreenRenewal	568	267	301	12	289
906662 CWWF Village/Carp Water Quality TreatFac	6,850	106	6,744	1,070	5,673
906664 Hurdman Bridge PS Renewal	16,491	1,049	15,442	2,160	13,282
906665 Lemieux WPP Intake Ice Mgmt	17,300	461	16,839	1,446	15,393
906795 Condition Assess - Critical System Links	5,000	2,014	2,986	1,590	1,396
906796 Proactive Lead Service Replace 2013-2014	2,000	1,602	398	279	118
906797 Service Posts Rehabilitation 2013-2014	1,200	1	1,199	-	1,199
906798 Water Distribution Sys Improvements	4,885	2,204	2,681	112	2,570
906800 Water Treatment Rehabilitation 2013-2014	4,260	3,568	692	622	70
906801 Communal Well System Rehab 2013-2014	599	509	90	50	40
906802 Water Pumping Station Facility Rehab.	2,396	1,667	729	315	413
906836 Critical Sys Links Mitigation Measures	3,000	-	3,000	-	3,000
907007 TSSA Registration and Compliance Upgrade	1,517	630	887	18	869

City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
907141 Drinking Water Services New Vehicles	35	49	(14)	-	(14)
907304 Trenchless Rehab-Water	2,880	392	2,488	83	2,405
907347 Richmond Village	500	-	500	-	500
907348 Munster Village	500	-	500	-	500
907471 Water Storage Tank & Res Condition Asses	300	17	283	-	283
907472 Water Pumping Stn Condition Assess Prog	150	20	130	2	128
907473 Communal Well Sys Condition Assess Prog	254	153	101	108	(7)
907476 WPP Chemical Systems Modifications	1,200	418	782	87	695
907477 TSSA Diesel Compliance Upgrades at WPPS	300	-	300	-	300
907568 EAM Maximo Data Optimization	1,200	420	780	16	764
907605 Carlington Heights Reservoir Remediation	400	-	400	-	400
907640 Water Storage Tanks & Reservoir 2017	1,270	-	1,270	2	1,268
907641 Water Storage Tanks & Reservoirs 2015	128	-	128	-	128
907642 Water Treatment Rehab 2015	3,500	1,837	1,663	1,443	221
907643 Water System SCADA & Instrument Rehab	3,380	411	2,969	164	2,804
907646 Water Pumping Station Facility Rehab	520	38	482	538	(56)
907648 Proactive Lead Service Replacement Prog	1,000	338	662	220	442
907650 Meter Change out 2015	500	-	500	-	500
907652 Cathodic Protection Water System 2015	3,100	2,932	168	262	(93)
907655 Communal Well System Rehab 2018	-	-	-	-	-
907656 Communal Well System Rehab 2017	735	90	645	13	632
907663 Water Pressure Relief Valve Survey	400	2	398	-	398
907672 Remote Station WAFL Assessment/Design	150	15	135	-	135
907726 LeBreton Flats/Fleet St DWS Facilities	190	73	117	80	37
907733 Covered Aqueduct Structural Repairs	3,000	1,679	1,321	331	990
907734 Britannia G4	550	240	310	226	84
907772 Trenchless Rehab-Water	2,100	1,660	440	443	(3)
907773 Transmission Main Rehab	3,188	2,869	319	340	(20)
907774 Watermain Improvements	2,439	1,111	1,328	796	532
907792 CWWF Maplehurst Ave-Carling intersection	1,280	210	1,070	646	424
907793 Rosebella Ave (Conroy Rd-Albion Rd)	2,700	2,084	616	170	446
907794 Sandridge Rd (Merriman-St Laurent)	1,300	762	538	345	193
907795 Business Technology Opportunities	3,600	-	3,600	-	3,600

**City of Ottawa**  
**Environment and Climate Protection Committee - Rate**  
**Capital Works-In-Progress**  
**In Thousands (\$000's)**

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
908062 Lifecycle Renewal Fleet - Water Services	588	65	523	96	426
908067 Water Storage Tanks & Reservoirs 2016	300	35	265	3	261
908069 Water Treatment Rehab 2016	930	122	808	18	791
908073 Water Pumping Station Facility Rehab2017	1,237	20	1,217	-	1,217
908074 Cathodic Protection Water System 2016	2,200	207	1,993	730	1,262
908077 Ops Condition Assess-Critical Sys Links	250	-	250	-	250
908078 Proactive Lead Service Replace Prog 2017	1,250	106	1,144	219	924
908119 2016 Buildings-Water Services	50	13	37	-	37
908172 2016 Transmission Main Rehab	3,600	166	3,434	94	3,340
908173 2016 Watermain Improvements	1,794	444	1,350	20	1,330
908174 Seraphin Marion (Cumberland-Waller)	600	486	114	-	114
908175 Crichton St (Keefer-Dufferin)	1,150	680	470	78	392
908176 Marquis Ave (Naskapi-Mulberry)	1,000	273	727	455	272
908177 Brittany Dr-Bangs St-Chelsea Dr	3,500	648	2,852	1,779	1,073
908178 Goth Ave (Albion-Fortier)	2,500	696	1,804	1,408	396
908179 CWWF Glynn Ave (Edith-Lola)	1,309	474	835	353	482
908180 CWWF Helena St (Clarendon-Mayfair)	2,500	74	2,426	1,026	1,400
908326 Britannia Chem System Mods - DWS	150	0	150	-	150
908327 Lemieux Chem System Mods - DWS	150	142	8	-	8
908372 Ammonia Rm Ventilation Lemieux-Britannia	250	8	242	-	242
908375 WPP Diesel Exhaust Stack Upgrades	500	316	184	235	(51)
908376 Montreal Road PS Lifecycle Replacements	4,200	6	4,194	802	3,393
908377 Britannia WPP Basin Railings Replacement	150	-	150	-	150
908378 Britannia HLPump #5 Motor & Starter Repl	150	-	150	-	150
908379 Britannia WPP Expansion Joint Rehab	200	-	200	-	200
908432 Water Sys SCADA & Instrument Rehab 2017	1,166	-	1,166	-	1,166
908433 Water Treatment Rehab 2017	900	39	861	50	811
908435 Water Facilities Roofing 2017	150	-	150	-	150
908474 2017 Buildings-Water Services	50	-	50	-	50
908479 Carp Diesel Pump Upgrades	925	118	807	86	722
908509 2017 Transmission Main Rehab	1,000	409	591	486	105
908511 2017 Watermain Improvements	2,636	175	2,461	233	2,228
908613 Bank St (Rideau Rd-Mitch Owens)	1,000	37	963	331	633

City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
908615 Leitrim Rd (Bank-550m East)	1,000	-	1,000	-	1,000
908616 Redenda Cres (Higgins)	150	2	148	82	66
908617 Sherbourne Rd (Knightsbridge-Dovercourt)	100	2	98	65	33
908620 2017 Groundwater Studies	150	-	150	-	150
908621 2017 Infrastructure Master Plan (Water)	250	-	250	-	250
908643 Fleet Growth 2017	250	-	250	-	250
908743 CWWF Drinking Water Plants Lighting Upgr	800	-	800	14	786
908744 CWWF Lemieux Island High Lift Stn HVAC	1,000	-	1,000	-	1,000
908745 CWWF [Design] Lemieux Island WPP Intake	1,900	-	1,900	-	1,900
908746 CWWF Drinking Water Pumping Stn Lighting	300	1	299	6	293
908747 CWWF Billings Bridge PS Diesel System Up	1,720	4	1,716	798	918
908748 CWWF [Construct] Munster PS Generator Up	1,500	-	1,500	-	1,500
908798 Lemieux High Lift Vault & Tunnels Rehab.	1,520	20	1,500	80	1,420
908801 Britannia Medium Voltage Maintenance	1,120	117	1,003	140	863
908818 Britannia HLPS HVAC Upgrade Design Build	450	-	450	355	95
908825 Lemieux Sludge Line Repairs	200	-	200	-	200
908842 Vars Reliability & Process Upgrades	1,000	-	1,000	-	1,000
908866 DWS Concrete Repairs	150	-	150	-	150
908911 Britannia Compressed Air Improvements	30	-	30	22	8
909003 DWS Ladder Trolley & Rail System Upgrade	482	-	482	-	482
<b>Renewal of City Assets Total</b>	<b>289,929</b>	<b>136,326</b>	<b>153,603</b>	<b>29,333</b>	<b>124,270</b>
<b>Growth</b>					
900632 Strandherd Road Watermain	273	38	235	0	235
901142 Barrhaven Pumping Station Expansion	350	218	132	17	115
901183 Trim Road / St Joseph Watermains	6,373	3,451	2,922	280	2,642
902206 Ottawa South Pumping Station Upgrade	12,890	971	11,919	312	11,606
903295 Brittany Pumping Station	7,436	168	7,268	16	7,252
904916 DCA-Kanata West Feedermain	2,772	118	2,654	-	2,654
904918 Limebank Feedermain	3,374	-	3,374	-	3,374
904975 Barrhaven PS Conversion to 3C	4,873	3,818	1,055	704	352
904980 Fallowfield Rd (Reservoir to Cedarview)	3,473	2,738	735	478	257
905429 DCA-Mer Bleue Rd Reliability Links	1,232	677	555	49	505
905992 Manotick Supply Watermain	2,260	199	2,061	0	2,061



City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
906623 2012 Water & Wastewater EA Studies	300	299	1	0	1
906629 2015 Rural Servicing Strategy	257	40	217	216	1
907008 Treatment Plant Process Expansion	6,900	175	6,725	263	6,462
907098 2014 Rural Servicing Strategy	200	162	38	38	(0)
907101 River Ridge 3C Elevated Tank	514	0	514	-	514
907455 Hurdman Bridge/Billings BridgePS Upgrade	1,700	-	1,700	-	1,700
907456 Manotick North Island Link	1,309	124	1,185	75	1,111
907467 SUC Greenbank	1,130	-	1,130	-	1,130
907481 2014 Water & Wastewater EA Studies	300	274	26	23	3
907863 2015 Water & Wastewater EA Studies	257	88	169	70	99
908244 2016 Rural Servicing Strategy	257	-	257	-	257
908245 2016 Water & Wastewater EA Studies	257	7	250	1	249
908257 O/S Kanata West Transmission Mains	600	-	600	-	600
908384 Tenth Line Feedermain	1,400	281	1,119	553	566
908622 2017 Rural Servicing Strategy	200	-	200	-	200
908623 2017 Water & Wastewater EA Studies	250	-	250	-	250
908749 FEA2016-Kanata West Feedermain	5,788	-	5,788	-	5,788
<b>Growth Total</b>	<b>66,925</b>	<b>13,847</b>	<b>53,078</b>	<b>3,094</b>	<b>49,984</b>
Strategic Initiatives					
903298 DCA -Shadow Ridge Exploratory/Well	99	96	3	-	3
904174 Water Rate Review	425	364	61	1	60
905427 Groundwater Management Phase 2	500	107	393	393	0
905428 Groundwater Studies	182	99	83	84	(1)
906355 Water Efficiency	582	286	296	56	240
906628 2014 Groundwater Studies	200	40	160	160	-
907131 Energy Efficiency Initiatives - Water	140	-	140	-	140
907482 2015 Infrastructure Master Plan (Water)	268	135	133	63	70
907607 Drinking Water Vibration Analysis	200	134	66	73	(7)
907633 ESD Asset Management Roadmap	510	215	295	11	284
907645 Water Efficiency 2015	582	-	582	-	582
907864 2015 Ground Water Studies	155	7	148	146	2
908071 Water Efficiency 2016	250	-	250	-	250
908242 2016 Groundwater Studies	154	-	154	-	154



City of Ottawa  
 Environment and Climate Protection Committee - Rate  
 Capital Works-In-Progress  
 In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
908243 2016 Infrastructure Master Plan (Water)	257	29	228	3	225
<b>Strategic Initiatives Total</b>	<b>4,504</b>	<b>1,510</b>	<b>2,994</b>	<b>990</b>	<b>2,004</b>
<b>Drinking Water Services Total</b>	<b>361,358</b>	<b>151,683</b>	<b>209,675</b>	<b>33,417</b>	<b>176,258</b>
<b>Integrated Roads, Water &amp; Wast</b>					
<b>Renewal of City Assets</b>					
907344 Woodcrest (Kilborn-Kilborn)	2,991	2,181	811	365	445
907791 Meath St (Thames-Carling)	930	821	109	79	30
908139 Montreal Rd (N River Rd-St Laurent)	2,510	19	2,491	100	2,392
<b>Renewal of City Assets Total</b>	<b>6,431</b>	<b>3,020</b>	<b>3,411</b>	<b>544</b>	<b>2,867</b>
<b>Integrated Roads, Water &amp; Wast Total</b>	<b>6,431</b>	<b>3,020</b>	<b>3,411</b>	<b>544</b>	<b>2,867</b>
<b>Integrated Water &amp; Wastewater</b>					
<b>Renewal of City Assets</b>					
906899 Sewer Access & Outfalls	5,850	4,581	1,269	237	1,031
907084 Water & Sewer Utility Billing System	8,300	3,830	4,470	1,954	2,516
907303 Sewer Access & Outfalls	5,860	489	5,371	1,418	3,953
907468 EAM Maximo Sustainment	3,000	2,702	298	217	81
907469 ITX Historical Reporting	300	-	300	-	300
907500 Ontario 1 Call	800	310	490	-	490
907501 SAP Integration & Mobility Deployment	6,153	2,958	3,195	22	3,173
907747 Sewer & Water Repairs/Improvements	3,795	3,235	560	512	49
907748 Sewer Access & Outfalls	5,900	-	5,900	-	5,900
908145 2016 Sewer & Water Repairs/Improvements	4,983	2,238	2,745	472	2,273
908146 2016 Sewer Access & Outfalls	3,000	6	2,994	88	2,906
908147 2016 Trenchless Rehab - Sanitary & Storm	4,400	1,942	2,458	2,428	30
908424 Environmental Time Series Database	1,490	-	1,490	-	1,490
908484 2017 Sewer & Water Repairs/Improvements	2,920	157	2,763	488	2,275
908485 2017 Sewer Access & Outfalls	2,500	-	2,500	-	2,500
908486 2017 Trenchless Rehab - Sanitary & Storm	2,610	626	1,984	1,066	917
908580 CWWF Queensway Terrace North Sewer	800	56	744	413	331
908581 Valley Dr Storm Sewer	3,000	-	3,000	-	3,000
908720 CWWF 2017 Trenchless Sewer Rehabilitate	500	98	402	265	137

City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
908721 CWWF 2017 Sewer Access Structure Upgrade	500	139	361	195	166
908722 CWWF 2017 Buried Infrastruct-Bld & Parks	1,500	-	1,500	-	1,500
<b>Renewal of City Assets Total</b>	<b>68,161</b>	<b>23,368</b>	<b>44,793</b>	<b>9,776</b>	<b>35,017</b>
<b>Integrated Water &amp; Wastewater Total</b>	<b>68,161</b>	<b>23,368</b>	<b>44,793</b>	<b>9,776</b>	<b>35,017</b>
<i>Stormwater Services</i>					
<i>Renewal of City Assets</i>					
903324 Kennedy Burnett SW Pond	1,000	3	997	-	997
904470 LI-Britannia Villge-OttRivr FloodProtect	1,945	1,688	257	256	0
905004 ORAP-Ottawa River Quality Model	422	304	118	3	115
905555 Sawmill Creek SWM Pond	500	-	500	-	500
905757 Monahan Constructed Wetland Rehab.	5,750	5,249	501	514	(13)
905762 ORAP-Monitoring & Source Control Program	520	285	235	32	203
906479 Municipal Drain Culvert (1-3m) Prgm	3,575	3,479	96	5	90
906494 Joint CA/City Renewal Activities	245	16	229	-	229
906636 Rickey PI Park Retaining Wall rehab	890	717	173	23	150
907394 Stormwater Mgmt: Misc Rehab & Env Compli	1,015	898	117	152	(35)
907618 Stormwater Storage Tanks Rehab	170	-	170	-	170
907670 Cardinal Crk S. Forebay Sediment Removal	270	117	153	130	23
907671 Nepean Crk MTSS Forebay Sediment Remov	125	84	41	4	37
907680 Stream Restoration Projects - 2016	500	36	464	-	464
907683 Lab Equipment Purchase/Replacement 2016	600	-	600	-	600
907715 SCADA Rehab & Upgrades - Remote Sewer	602	-	602	-	602
907759 Scoping Pre/Post Drn Culverts	960	896	64	11	53
907760 Drainage Culverts (1m-3m)	2,970	2,521	449	360	90
907761 Drainage Culverts (<=1m)	2,500	2,366	134	67	66
907762 Drainage Culverts (<=1m) Resurfacing	905	750	155	111	45
907763 Drainage Culverts - Site-Specific	1,805	1,681	124	62	62
907775 Trenchless Rehab - Storm	700	640	60	55	6
907778 Inlet Control Devices - CW	400	174	226	114	112
908101 Stormwater Mgmt: Rehab &Enviro Complince	440	154	286	178	108
908165 2016 Scoping Pre/Post Drn Culverts	1,500	1,304	196	142	53
908166 2016 Drainage Culverts (1m-3m)	6,075	4,233	1,842	1,551	291

City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
908167 2016 Drainage Culverts (<=1m)	3,425	2,049	1,376	809	567
908168 2016 Drainage Culverts (<=1m) Resur	1,400	945	455	269	186
908169 2016 Drainage Culverts - Site-Speci	1,800	1,597	203	203	0
908185 2016 Inlet Control Devices - CW	400	15	385	85	301
908252 Stormwater Mgmt Retrofit Master Plan	900	-	900	-	900
908441 Stormwater Mgmt: Rehab&Enviro Compliance	250	-	250	-	250
908497 2017 Drn Culverts - Site-Specific	760	117	643	381	262
908498 2017 Drn Culverts (<=1m)	806	139	667	157	511
908499 2017 Drn Culverts (<=1m) Resurfacing	1,985	121	1,864	772	1,092
908500 2017 Drn Culverts (1m-3m)	4,650	1,031	3,619	1,633	1,986
908501 2017 Drn Culverts-Scoping Pre/Post Eng	1,000	-	1,000	291	709
908512 2017 Joint CA/City Renewal Activities	200	-	200	-	200
908618 CWWF Convent Glen North Storm Sewer	2,000	18	1,982	728	1,253
908619 Graham Creek Storm Sewer	2,000	1	1,999	-	1,999
908723 CWWF 2017 Drainage Culvert Renewal	8,250	972	7,278	3,658	3,620
908724 CWWF 2017 Drainage Culvert Renew-Design	1,500	49	1,451	453	999
908725 CWWF Stillwater Creek Storm Sewer Upgrad	300	78	222	183	39
908726 CWWF Vanier Parkway Storm Sewer Renewa	400	53	347	221	126
908733 CWWF SW Retrofit - Hemmingwood Way	118	-	118	99	19
908734 CWWF SW Retrofit - Navaho Drive	72	-	72	-	72
908736 CWWF Didsbury Stormwater Facility Rehab.	100	-	100	-	100
908737 CWWF Graham Creek Slope Stabilization	250	-	250	-	250
908738 CWWF Mud Creek Bank Stabilization	100	-	100	-	100
908739 CWWF Shields Creek/Findlay Creek Rehab	50	-	50	-	50
908852 Bilberry Creek - Slope Stabilization	2,000	2,721	(721)	1,681	(2,403)
908855 Sprucewood Slope Stabilization	100	17	83	119	(36)
908858 Bank Street Storm Sewer Repairs	100	80	20	-	20
<b>Renewal of City Assets Total</b>	<b>71,300</b>	<b>37,600</b>	<b>33,700</b>	<b>15,510</b>	<b>18,191</b>
Growth					
903223 Cardinal Creek Erosion Monitor	1,403	236	1,167	182	985
903226 DCA-Leitrim SW Pond 1	12,512	12,305	207	193	14
903230 DCA-SWM Ponds E 1&2 Shirley's Brook	3,250	2,482	768	646	122
903250 DCA-Storm Water Pond - Monahan Drain	6,361	7,074	(712)	728	(1,440)

City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
903328 DCA-Area W-2 Shirleys Brook W SWM Pond	1,284	780	503	474	30
905993 Richmond Village Stormwater Retrofit	185	1	184	-	184
907536 DCA-Riverside South SW Pond 3	18,797	-	18,797	-	18,797
907537 DCA-Riverside S. Pond3 Trunk Storm Sewer	10,051	-	10,051	-	10,051
907538 DCA-Riverside South - Tributary No. 3	1,165	-	1,165	-	1,165
907539 DCA-Riverside South - Tributary No. 4	499	-	499	-	499
907540 DCA-Riverside South - Tributary No. 7A	403	-	403	-	403
907541 DCA-Riverside South - Tributary No. 7B	876	-	876	-	876
907542 DCA-Riverside South - Tributary No. 10	1,489	-	1,489	-	1,489
907543 DCA-Riverside South - Fish Habitat	2,809	-	2,809	-	2,809
907558 DCA-N5 Ultimate SW Pond	14,229	1,538	12,691	562	12,129
907560 DCA-EUC SW Pond 1 Trunk Sewers	11,045	-	11,045	-	11,045
907561 DCA-EUC SW Pond 3 Trunk Sewers	1,700	554	1,146	-	1,146
907562 DCA-Leitrim SW Pond 1 Trunk Sewers	8,687	1,573	7,114	5,176	1,938
907563 DCA-Riverside South SW Pond2 Trunk Sewer	5,306	381	4,925	-	4,925
907602 DCA-Glou. EUC SWM Pond 1 Modification	6,864	-	6,864	-	6,864
907603 DCA-Glou. EUC SWM Pond 1 Fish Habitat	1,132	-	1,132	-	1,132
907900 DCA-Mud Creek Erosion Monito E3 Glou EUC	250	-	250	-	250
907952 DCA-Monahan Drain Strmwter FacilityRehab	2,400	908	1,492	1,301	191
908385 Utman Park Stormwater Facility	463	-	463	-	463
908386 Taylor Creek Erosion Works Phase 2	279	-	279	-	279
<b>Growth Total</b>	<b>113,438</b>	<b>27,831</b>	<b>85,607</b>	<b>9,263</b>	<b>76,344</b>
<b>Strategic Initiatives</b>					
905787 ORAP-Water Environment Strategy	1,000	667	333	350	(17)
905792 Manotick Special Des Area SW Monitoring	74	-	74	-	74
905816 Const. to David Adams Municipal Drain	880	756	124	16	108
906194 Municipal Drain Improvements	258	126	132	11	121
906631 Stream Restoration Projects	960	613	347	14	333
906632 Flood Plain Mapping	1,284	930	354	20	333
907102 2013 Infrastruct Master Plan(Stormwater)	250	37	213	155	58
907103 2013 Stormwater Managment Retrofit	2,000	792	1,208	166	1,042
907395 Municipal Drain Improvements - 2016	345	62	282	79	203
907483 2014 Infrastruct Master Plan(Stormwater)	300	22	278	156	122

City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
907484 2015 Stormwater Management Retrofit	9,243	-	9,243	-	9,243
907486 Van Gaal Municipal Drain	100	47	53	38	15
907570 Hazeldean Municipal Drain	51	11	41	41	0
907572 Arbuckle Municipal Drain	661	439	222	51	172
907669 ORAP-Water Environment Strategy 2015 Ph2	1,000	-	1,000	425	575
907677 Water Env Protec Short Term Initiatives	270	74	196	81	114
907718 Kizell Municipal Drain	1,716	88	1,628	97	1,532
907720 Cranberry Creek Municipal Drain	2,385	162	2,223	109	2,114
907725 Monahan Municipal Drain	1,537	1,323	214	205	9
908084 ORAP-Water Environment Strategy (WES)PH2	1,000	-	1,000	-	1,000
908085 Cassidy Municipal Drain	42	38	4	4	0
908087 John Taylor Municipal Drain	50	11	39	26	13
908246 2016 Stormwater Management Retrofit	1,000	-	1,000	-	1,000
908251 2016 Flood Plain Mapping	200	12	188	51	136
908360 Eastboro Municipal Drain	98	17	80	80	0
908361 Seabrook Municipal Drain	63	11	52	52	0
908426 Hawkins Municipal Drain	68	7	61	61	0
908427 Thomas Baxter Municipal Drain	72	4	67	67	0
908440 ORAP-Water Environment Strategy (WES)PH2	1,000	-	1,000	-	1,000
908443 Municipal Drain Improvements - 2017	970	-	970	-	970
908625 2017 Stormwater Management Retrofit	2,810	-	2,810	-	2,810
908816 Flowing Creek Municipal Drain	34	-	34	34	0
908817 McKinnons Creek Municipal Drain	109	23	86	86	0
909001 Hobbs Municipal Drain	80	-	80	-	80
909002 Tompkins Diversion Municipal Drain	75	-	75	-	75
<b>Strategic Initiatives Total</b>	<b>31,983</b>	<b>6,272</b>	<b>25,711</b>	<b>2,476</b>	<b>23,235</b>
<b>Stormwater Services Total</b>	<b>216,721</b>	<b>71,703</b>	<b>145,018</b>	<b>27,249</b>	<b>117,769</b>
<b>Wastewater Services</b>					
<b>Renewal of City Assets</b>					
900820 Foster SWMF Expansion & Ditch	14,000	9,209	4,791	326	4,465
902140 Sewage Pumping Station Rehab. Program	9,026	8,940	86	57	29
902962 Sewage Collection Sys. Improvements Prog	4,074	2,802	1,272	109	1,162

**City of Ottawa**  
**Environment and Climate Protection Committee - Rate**  
**Capital Works-In-Progress**  
**In Thousands (\$000's)**

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
903437 ROPEC West Boiler Plant Replacement	670	233	437	56	381
903438 ROPEC East Boiler Plant Upgrade	200	-	200	-	200
903439 ROPEC Outfall	1,250	-	1,250	-	1,250
903940 Carp River Restoration	6,361	4,272	2,089	19	2,070
904752 DCA-Barhaven S. O/S(South of Jock River)	1,100	496	604	-	604
904939 ORAP-Wet Weather IMP - Flow Reduction	8,005	4,384	3,621	1,159	2,462
905421 DCA-O/S Orleans S Business Park SanSewer	650	-	650	-	650
905423 DCA-O/S - Riverside S Community Sanitary	2,388	0	2,388	-	2,388
905424 DCA-O/S -BarrhavenS Oversize NJock River	600	1	599	-	599
905560 ORAP-Eastern Subwatershed SWM Retrofit	750	617	133	-	133
905653 ORAP-Stormwater Mgmt Retrofit MasterPlan	2,360	1,111	1,249	434	815
905705 ORAP-Combined Sewage Overflow Storage	209,700	44,158	165,542	155,077	10,465
905806 Flow Monitoring System Rehab. Program	1,088	31	1,057	2	1,055
906096 Trenchless Rehab-Sanitary	4,500	4,420	80	73	6
906099 Trunk Sewer Reliability	3,500	271	3,229	1,653	1,576
906186 ROPEC - Sewage Treatment Rehab. Program	7,174	7,038	136	48	88
906496 Acres Pump Station Overflow	2,195	1,508	687	95	592
906576 New Vehicles Wastewater 2014	140	32	108	-	108
906643 ROPEC-Ops & Technical Bldg Space Renewa	3,950	3,631	319	70	249
906645 ROPEC - Primary Clarifier Upgrades	13,100	10,207	2,893	1,169	1,724
906646 ROPEC Aeration Piping &Diffusers Replace	2,320	38	2,282	-	2,282
906647 ROPEC - Scum Removal Facility Replacemnt	3,400	1,111	2,289	262	2,027
906648 ROPEC - Digester Gas Utilization	1,300	10	1,290	-	1,290
906649 Hauled Waste/Septage Receiving Facility	400	39	361	-	361
906650 ROPEC - Process Facility - Environ. Sys	7,825	7,437	388	1,280	(892)
906670 ROPEC Treatment Facility Develop. Plan	832	769	63	2	61
906671 Collection Sys. Condition Assesment Prog	2,020	1,337	683	680	3
907060 ROPEC Secondary Clarifier Upgrades	8,296	1,907	6,389	852	5,536
907061 ROPEC Concrete Rehab & Repairs	1,000	484	516	246	270
907109 Carp Wastewater PS Upgrade/Overflow	501	-	501	-	501
907115 2013 Stormwater Master Planning	300	226	74	17	57
907381 Wastewater Facilities Upgrades 2014	2,700	2,109	591	197	394
907382 ROPEC Aeration Blower Expansion	1,265	7	1,258	-	1,258



City of Ottawa  
 Environment and Climate Protection Committee - Rate  
 Capital Works-In-Progress  
 In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
907383 ROPEC Digester Flare Expansion	112	-	112	-	112
907384 ROPEC Sludge Thickening Centrifuge Expan	500	-	500	-	500
907391 ROPEC WAS Pumps Expansion	275	-	275	-	275
907392 Raw Sewage Pumping Station Upgrade	8,425	6,231	2,194	2,012	182
907393 ROPEC Condition Assessment Program	500	55	445	13	432
907590 Old Montreal Rd/St Joseph Blvd Sanitary	800	492	308	127	181
907596 Hazeldean Pumping Station HVAC Rehab	500	201	299	300	(2)
907598 Tartan Pumping Station Generator Rehab	610	69	541	510	31
907599 Richmond Pumping Station Rehab	180	-	180	-	180
907615 Don B. Munroe Pumping Station Rehab	150	0	150	-	150
907616 Decommission Cathcart Regulator	200	-	200	-	200
907617 Critical Manholes- Electrical / Mechanic	480	-	480	-	480
907620 Keefer Odour Control Fac.Modification	4,400	1,038	3,362	2,526	836
907623 West End Remote Facility Corrosion/Odour	400	-	400	-	400
907624 Wastewater Effluent Water Grid Rehab	2,750	284	2,466	302	2,164
907627 WW Pumping Stations Inflow / Infiltrate	100	-	100	-	100
907629 ROPEC-Sub#1 Switchgear & Sub#2 Transform	200	191	9	8	1
907630 ROPEC-High Volt Transform Replace/Rehab	200	-	200	-	200
907667 Wastewater Drainage Roofing 2015	40	1	39	-	39
907678 Linear Sewage System Improve Prog 2015	500	158	342	60	282
907679 Sewer Lateral Repairs 2015	7,058	5,122	1,936	1,360	576
907681 Sewage Pumping Station Rehab Prog 2015	1,325	1,233	92	96	(4)
907682 Wastewater Facilities Upgrade 2015	500	121	379	91	289
907684 ROPEC-Sewage Treatment Rehab Prog 2015	5,301	3,974	1,327	1,062	265
907685 ROPEC-Concrete Rehab & Repairs 2015	2,000	-	2,000	45	1,955
907686 ROPEC-SCADA Rehab & Upgrades 2015	-	-	-	-	-
907688 Collection System Condition Assessment	1,000	432	568	496	72
907689 Flow Monitoring Rehab Program	675	-	675	8	667
907716 ROPEC Rehab of Digester	16,115	3,472	12,643	1,464	11,178
907777 Trenchless Rehab - Sanitary	2,100	1,236	864	838	26
907807 N5 Sanitary Pumping Station Overflow	949	-	949	-	949
907841 Sanitary Sewer Improvements	3,467	1,548	1,919	971	948
907912 ROPEC Gas Flare Piping Project	800	220	580	-	580

City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
907928 Thare Crescent Pumping Station Decommiss	450	56	394	123	271
907932 Richmond Forcemain Construction	6,800	4,034	2,766	1,402	1,364
907940 ROPEC RAS / WAS Ferrous Platform Rehab	168	4	164	-	164
907941 Remote Operations - Station Modification	270	41	229	171	58
907942 Keefer Blofilter Upgrades & Media Replac	360	316	44	12	32
907961 East End Odour and Corrosion Study	400	149	251	72	179
908061 Lifecycle Renewal Fleet - Wastewater	205	-	205	-	205
908083 Wastewater Drainage Roofing 2016	250	-	250	-	250
908091 Collection System Condition Assess. 2016	1,000	-	1,000	48	952
908093 Linear Sewage System Improve. Prog. 2016	2,000	69	1,931	-	1,931
908094 SCADA Rehab & Upgrades - Remote Sewer	1,250	-	1,250	-	1,250
908095 Sewer Lateral Repairs 2016	5,000	1,323	3,677	2,239	1,438
908096 Tartan PS Reliability Improvements	250	86	164	17	146
908098 ROPEC - SCADA Rehab. & Upgrades 2016	614	-	614	-	614
908099 ROPEC - Sewage Treatment Rehab Prog 2016	9,083	177	8,906	211	8,695
908102 Wastewater Facilities Upgrade 2017	500	-	500	-	500
908107 ROPEC Process Facil - Enviro Sys Upgrade	3,482	898	2,584	2,585	(1)
908108 ROPEC Ops & Technical Bldg Space Upgrade	500	41	459	3	456
908182 2016 Sanitary Sewer Improvements	2,000	0	2,000	11	1,988
908183 Tri-Township Collector	1,500	94	1,406	831	574
908184 2016 ORAP-Wet Weather IMP - Flow Reduct.	1,500	-	1,500	54	1,446
908250 Infrastructure Planning Information Mgmt	785	48	737	-	737
908280 Kanata West Pump Station (KWOOG)	948	288	660	165	495
908328 ROPEC - Tech Building 2nd Floor Retrofit	700	-	700	-	700
908330 RS-PS HVAC Boilers & SCADA Upgrade Cons	8,967	2,470	6,497	5,698	799
908367 Lees Ave SCADA Tower Rehab	500	40	460	14	447
908368 WWC PS Gas Monitoring Rehab & Upgrade	500	151	349	93	257
908425 ROPEC Screen & Degrit Repairs-Construct.	1,200	-	1,200	-	1,200
908429 ROPEC Digester 5 & 6 Mixing Pump Upgrade	1,000	31	969	120	849
908446 Collection System Condition Assess. 2017	1,000	-	1,000	-	1,000
908447 Linear Sewage System Improve. Prog. 2017	800	-	800	-	800
908448 SCADA Rehab & Upgrades-Remote Sewer 20	2,250	-	2,250	-	2,250
908450 Sewage Pumping Station Rehab Prog 2017	8,498	72	8,426	456	7,969



City of Ottawa  
Environment and Climate Protection Committee - Rate  
Capital Works-In-Progress  
In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
908452 ROPEC - SCADA Rehab. & Upgrades 2017	2,764	-	2,764	-	2,764
908453 ROPEC - Sewage Treatment Rehab Prog 2017	2,225	71	2,154	1,343	810
908454 ROPEC Ops & Technical Bldg Space Upgrade	500	-	500	-	500
908476 Cumberland #1 PS Decommissioning	300	23	277	69	208
908513 CWWF Inlet Control - Bilberry/Chatelaine	500	45	455	47	409
908514 2017 ORAP Wet Weather IMP - Flow Reduct.	2,000	-	2,000	-	2,000
908521 ROPEC Electrical Master Plan	690	136	554	429	125
908558 O/S N5 Trunk Sewer Oversizing	60	-	60	-	60
908658 Chemical System Upgrades - Remote WW PS	345	43	302	268	34
908727 CWWF Inlet Control Devices -Bridlewood N	500	55	445	0	445
908728 CWWF Inlet Control Devices - Craig Henry	1,600	107	1,493	69	1,424
908729 CWWF Inlet Control Device -Flood Protect	250	27	223	12	212
908730 CWWF Flood Protection - Bilberry/Chatela	2,600	74	2,526	192	2,333
908731 CWWF Flood Protection - Bridlewood North	1,750	85	1,665	101	1,565
908732 CWWF Flood Protection - Craig Henry	3,200	92	3,108	232	2,877
908740 CWWF Wastewater Pumping Stations Light	1,000	-	1,000	11	989
908741 CWWF ROPEC Lighting Upgrades	1,250	-	1,250	1,250	0
908742 CWWF [Construct] ROPEC Thicken & Dewater	20,000	126	19,874	252	19,621
908785 Cyrville Rd. Pumping Station Upgrades	350	6	344	73	271
908790 Glen Cairn Water Reservoir SCADA Tower	260	67	193	115	79
908799 ROPEC Substation Structural Rehab.	150	41	109	89	19
908834 WWS SCADA LAN/WAN Standards Rehab.	575	-	575	-	575
908836 Pumping Station Capitalized Maintenance	2,000	18	1,982	67	1,916
908843 Delorme PS & FM Upgrades	1,500	4	1,496	-	1,496
908845 ROPEC Digester 5 Condition Assessmnt Pln	275	-	275	233	42
908860 Walkley Biofilter Replacement	870	11	859	11	849
908892 ROPEC Activated Sludge Screws Overhaul	2,450	-	2,450	-	2,450
908902 Shadow Ridge Station Upgrades	2,000	-	2,000	-	2,000
908904 Decommission West End Pump Stns &Manhol	3,000	-	3,000	-	3,000
908906 Wastewater SCADA Standards Development	480	-	480	-	480
908912 Woodroffe PS Improvements	350	1	349	67	282
<b>Renewal of City Assets Total</b>	<b>512,075</b>	<b>156,336</b>	<b>355,738</b>	<b>195,422</b>	<b>160,316</b>
Growth					

**City of Ottawa**  
**Environment and Climate Protection Committee - Rate**  
**Capital Works-In-Progress**  
**In Thousands (\$000's)**

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
900812 DCA-Cardinal Creek-Stormwater Facility	24,856	22,543	2,313	-	2,313
900814 DCA-EUC SW Pond 1	7,810	6,892	918	379	540
902200 Servicing Studies Development Program	2,645	2,616	29	134	(105)
903252 DCA-Sanitary Sewer Oversizing Program	1,816	605	1,211	-	1,211
903345 Kanata West Pump Station & Forcemain	55,716	43,474	12,242	9,862	2,380
903346 DCA-O/S - Kanata West Sewer OverSizing	2,000	137	1,863	556	1,307
904984 South Nepean Collector Ph2& Decommission	11,428	8,010	3,418	1,367	2,050
904985 North Kanata Sewer Ph 2	16,782	875	15,907	1,316	14,591
904986 Tri-Township/March Ridge Replacement	5,622	-	5,622	-	5,622
904987 Fernbank Collector Sewer & Oversizing	2,823	2,036	787	509	278
904988 March PS Conversion	1,219	45	1,174	583	591
904989 Hazeldean Pump Station Upgrade	1,111	918	193	-	193
905416 South Nepean Collector Ph 3	450	-	450	-	450
905425 DCA-O/S - Kanata Town Centre Trunk Sewer	349	-	349	-	349
905964 DCA-O/S Jackson Trails Sewer	252	-	252	-	252
905990 DCA-O/S Kanata Lakes North	59	-	59	-	59
905991 DCA-O/S -SUC NepeanS Oversize SJock Rivr	1,638	794	844	-	844
906022 DCA-O/S KW Collector Sewers	5,838	2,961	2,877	26	2,850
906383 DCA-South Merivale Business Park Soil	1,338	1,181	157	-	157
906626 2012 Servicing Studies Development	200	162	38	38	-
907106 2014 Servicing Studies Development	200	6	194	194	-
907107 Acres Road PS Upgrade	309	-	309	-	309
907114 Stittsville/Fernbank Intercept-Diversion	20,000	665	19,335	417	18,918
907528 DCA-Riverside South SW Treatment Chamber	421	244	177	-	177
907529 DCA-Leitrim SW Pond 2	12,884	-	12,884	-	12,884
907535 DCA-Leitrim Pond 2 Trunk Storm Sewer	3,735	0	3,734	-	3,734
907805 DCA-Riverside South Pond 5	10,097	451	9,646	58	9,588
907808 DCA-O/S - Cardinal Creek Village San Sew	379	-	379	-	379
907809 Richmond PS & Forcemain Expansion Phase1	3,503	-	3,503	-	3,503
907840 FEA2018 Shea Road Pump Station	3,359	-	3,359	-	3,359
907870 2015 Servicing Studies Development	309	-	309	-	309
907897 DCA-Cardinal Creek East Sanitary Ovrsize	75	-	75	-	75
908624 2017 Infrastructure Master Plan (Sewer)	286	-	286	-	286

City of Ottawa  
 Environment and Climate Protection Committee - Rate  
 Capital Works-In-Progress  
 In Thousands (\$000's)

Project Description	Total Authority	Total Expenditures as of August 31, 2017	Unspent Cash Balance as of August 31, 2017	Total Contractual Obligation	Unspent/ Uncommitted Balance as of August 31, 2017
908767 FEA2018-Richmond Sanitary Trunk Sewer	2,838	-	2,838	-	2,838
<b>Growth Total</b>	<b>202,347</b>	<b>94,617</b>	<b>107,730</b>	<b>15,438</b>	<b>92,292</b>
Strategic Initiatives					
904176 Sewer Rate Review	425	378	47	10	37
905745 Compassionate Grant Program	200	49	151	-	151
906193 Quality Management System	350	1	349	-	349
906842 TSSA Registration & Compliance Upgrades	4,688	1,011	3,677	54	3,623
907597 WWS Remote Pump Stns Arc Flash Study	250	147	103	-	103
907658 ROPEC-Working SafelyAbove Floor Level	1,800	62	1,738	14	1,724
907676 Protective Plumbing Program 2015	1,000	824	176	176	1
907871 2015 Infrastructure Master Plan (Sewer)	257	-	257	-	257
908089 Protective Plumbing Program 2016	1,000	2	998	52	946
908105 2016 Infrastructure Master Plan (Sewer)	284	24	260	-	260
908444 Protective Plumbing Program 2017	1,000	-	1,000	-	1,000
908660 Sewer Use Prog-Short Term Initiatives	200	-	200	-	200
908874 ROPEC Fire Damper Rehab	400	-	400	31	369
<b>Strategic Initiatives Total</b>	<b>11,854</b>	<b>2,497</b>	<b>9,357</b>	<b>336</b>	<b>9,020</b>
<b>Wastewater Services Total</b>	<b>726,276</b>	<b>253,450</b>	<b>472,825</b>	<b>211,196</b>	<b>261,629</b>
<b>Grand Total</b>	<b>1,378,947</b>	<b>503,225</b>	<b>875,722</b>	<b>282,182</b>	<b>593,540</b>