


City of Brockville

2018 Budget

November 7, 2017

PROPOSED 2018 CAPITAL PROJECTS



BROCKVILLE
CITY OF THE 1000 ISLANDS

EMPLOYMENT LANDS

4

3.1 – Employment Land Services

Project Description & Rationale

Project Description:

The proposed work for the construction of services at the West End Employment Lands site includes extending sanitary and storm sewers as well as watermains. The proposed work also includes improvements to the Laurier Boulevard and Stewart Boulevard intersection and the extension of Laurier Blvd westerly to the rear property line of Home Hardware.

Project Rationale:

There is currently no infrastructure that would entice any potential employers from constructing on this site. Implementing the proper infrastructure will be a significant step forward for the employment lands.

5

3.1 – Employment Land Services

Project Budget			
	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Grants	\$900,000	\$0	\$0
Total Funding	<u>\$900,000</u>	<u>\$0</u>	<u>\$0</u>
Expenditures:			
Construction	<u>\$900,000</u>	<u>\$0</u>	<u>\$0</u>
Total Expenditures	<u>\$900,000</u>	<u>\$0</u>	<u>\$0</u>



ROADS



7

6.2 – Garden St. Reconstruction

Project Description & Rationale

Project Description:

The proposed work includes the reconstruction of storm sewers, sanitary sewers, water mains and service laterals. The existing roadway will be reconstructed including granular material, asphalt pavement, concrete curb and gutter, concrete sidewalks and restoration work.

Project Rationale:

The underground infrastructure on Garden Street is quite old. The watermain on the street was constructed in the 1890's and the storm and sanitary sewers in the late 1920's. The 100mm diameter watermain is made of cast iron while the sanitary and storm sewers are constructed of vitrified clay. With infrastructure of this age and material, there are inherited health and safety problems. Older cast iron watermain are known to be susceptible to interior encrustation which leads to low chlorine residuals. As well, through daily operations, the interior encrustation becomes loose and released into the system. This causes high levels of suspended solids and undesirable water colour. Over the years the encrustation gradually increases to the point where the hydraulic capacity of the pipe is limited. The ability of the system to provide sufficient water for fire fighting is compromised putting the public at risk. The sanitary and storm sewers are to be replaced with new pipe and the road surface and base are to be constructed to current design standards.

8

6.2- Garden St. Reconstruction

Project Budget

	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Water Fund	\$45,000	\$0	\$0
Wastewater Fund	30,000	0	0
OCIF	135,116	0	0
Water & WW Reserve	130,000	0	0
Federal Gas Tax	<u>49,884</u>	<u>0</u>	<u>0</u>
Total Funding	<u>\$390,000</u>	<u>\$0</u>	<u>\$0</u>
Expenditures:			
Construction	\$308,500	\$0	\$0
Engineering (Design & Admin)	50,000	0	0
Contingency	30,000	0	0
Advertising	<u>1,500</u>	<u>0</u>	<u>0</u>
Total Expenditures	<u>\$390,000</u>	<u>\$0</u>	<u>\$0</u>

9

6.3 – Bying Avenue Reconstruction

Project Description & Rationale

Project Description:

The proposed work includes the reconstruction of storm sewers, sanitary sewers, water mains and service laterals. The existing roadway will be reconstructed including granular material, asphalt pavement, concrete curb and gutter, concrete sidewalks and restoration work.

Project Rationale:

The underground infrastructure on Byng Avenue is quite old. The watermain on the street was constructed in the 1920's and the storm and sanitary sewers in the mid 1950's. The 100mm diameter watermain is made of cast iron and has been decommissioned as it is pitted with holes, while the sanitary and storm sewers are constructed of vitrified clay. With infrastructure of this age and material, there are inherited health and safety problems. Older cast iron watermain are known to be susceptible to interior encrustation which leads to low chlorine residuals. As well, through daily operations, the interior encrustation becomes loose and released into the system. This causes high levels of suspended solids and undesirable water colour. Over the years the encrustation gradually increases to the point where the hydraulic capacity of the pipe is limited. The ability of the system to provide sufficient water for fire fighting is compromised putting the public at risk. The sanitary and storm sewers are to be replaced with new pipe and the road surface and base are to be constructed to current design standards.

10

6.3- Bying Avenue Reconstruction

Project Budget

	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Water Fund	\$80,000	\$0	\$0
Wastewater Fund	45,000	0	0
Water and WW Reserve	130,000		
OCIF	128,372	0	0
Federal Gas Tax	<u>56,628</u>	<u>0</u>	<u>0</u>
Total Funding	<u>\$440,000</u>	<u>\$0</u>	<u>\$0</u>
Expenditures:			
Construction	\$345,000	\$0	\$0
Engineering (Design & Admin)	60,000	0	0
Contingency	<u>35,000</u>	<u>0</u>	<u>0</u>
Total Expenditures	<u>\$440,000</u>	<u>\$0</u>	<u>\$0</u>

WASTEWATER PROJECTS



12

8.3 – Pre-Engineering Services

Project Description & Rationale

Project Description:

This work would include geotechnical services if necessary, camera inspection or other work to be completed by a consultant used in determining the condition of the infrastructure for projects proposed to be included in the capital budget.

Project Rationale:

A camera inspection would confirm the existing condition of the City's sewers and determined whether or not the sewers need replacing. This would provide staff with the necessary information to complete the detail design, tender documents and obtain the necessary approvals in advance of a project so that projects could proceed immediately upon approval of the Capital Budget. This would allow the City to take advantage of low tender prices traditionally received on projects tendered early in the calendar year, schedule projects throughout the year and distribute staff work assignment accordingly.

13

8.3 – Pre-Engineering Services

Project Budget			
	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Wastewater Fund	<u>\$10,000</u>	<u>\$15,000</u>	<u>\$125,000</u>
Total Funding	<u>\$10,000</u>	<u>\$15,000</u>	<u>\$125,000</u>
Expenditures:			
Engineering (Design & Admin)	<u>\$10,000</u>	<u>\$15,000</u>	<u>\$125,000</u>
Total Expenditures	<u>\$10,000</u>	<u>\$15,000</u>	<u>\$125,000</u>

14

8.4 – Water/Wastewater Meter Replacement – Phase 7 of 7

Project Description & Rationale

Project Description:

To replace all water meters in the City of Brockville to radio transmitter technology so that the meters may be read by drive-by technology.

Project Rationale:

Work on this project began in 2013, and to date 7,048 meters have been changed out of the 8,500 meters in the City.

When this project is completed, efficiencies will have been created within the meter reading department. Through a recommendation from the Internal Service Delivery Review, Council approved reducing the meter reading staff by one, from three meter readers to two. The efficiencies created by the new meters will allow the current two meter readers to perform service related tasks more timely.

15

8.4 – Water/Wastewater Meter Replacement

Project Budget			
	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Water Fund	\$162,500	\$0	\$0
Wastewater Fund	<u>162,500</u>	<u>0</u>	<u>0</u>
Total Funding	<u>\$325,000</u>	<u>\$0</u>	<u>\$0</u>
Expenditures:			
Contracted Services	<u>\$325,000</u>	<u>\$0</u>	<u>\$0</u>
Total Expenditures	<u>\$325,000</u>	<u>\$0</u>	<u>\$0</u>

16

8.5 – WPCC Equipment Program

Project Description & Rationale

Project Description:

Replacement of Capital Equipment for the Water Pollution Control Centre and associated structures and pumping stations. This is to be accomplished from the Wastewater Fund.

Project Rationale:

Routing such purchases through the Wastewater Fund provides the opportunity to account for all capital costs associated with the Water Pollution Control Centre in one place and to finance such work through the Wastewater Use Rate User Fee. As well it allows the expenditure to take place while keeping the tax rate smooth.

17


8.5 – WPCC Equipment Program

Project Budget

	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Wastewater Fund	<u>\$376,500</u>	<u>\$373,500</u>	<u>\$3,466,000</u>
Total Funding	<u>\$376,500</u>	<u>\$373,500</u>	<u>\$3,466,000</u>
Expenditures:			
Equipment	<u>\$376,500</u>	<u>\$373,500</u>	<u>\$3,466,000</u>
Total Expenditures	<u>\$376,500</u>	<u>\$373,500</u>	<u>\$3,466,000</u>


18

8.5 – WPCC Equipment Program

Location	Item	Amount
WPCC Building & Property	<ul style="list-style-type: none"> Replace Gas monitoring system for CSE 	\$8,000
		
Continued...		


19

8.5 – WPCC Equipment Program

Location	Item	Amount
WPCC Building & Property	<ul style="list-style-type: none"> Additional A/C unit and alarm for MCC #9 	\$5,000
Continued...		


20

8.5 – WPCC Equipment Program

Location	Item	Amount
WPCC General Equipment	<ul style="list-style-type: none"> Replace SCADA Prim, Sec and historian servers 	\$37,000
Continued...		


21

8.5 – WPCC Equipment Program

Location	Item	Amount
Lab Services & Abatement Equipment	<ul style="list-style-type: none"> New sampler for the head of the primary clarifiers 	\$10,000
		Continued...


22

8.5 – WPCC Equipment Program

Location	Item	Amount
Digester Operations	<ul style="list-style-type: none"> Rebuild gas booster and replace safety valve 	\$30,000
		Continued...

23

8.5 – WPCC Equipment Program

Location	Item	Amount
Digester Operations	<ul style="list-style-type: none"> Digested sludge feed grinders rebuild 	\$5,000
Continued...		

24

8.5 – WPCC Equipment Program

Location	Item	Amount
East/West Service Building Operations	<ul style="list-style-type: none"> Boiler #505 – DG/NG Replacement 	\$30,000
Continued...		


25

8.5 – WPCC Equipment Program

Location	Item	Amount
East/West Service Building Operations	<ul style="list-style-type: none"> Boiler #504 – DG/NG Replacement 	\$10,000
	Continued...	


26

8.5 – WPCC Equipment Program

Location	Item	Amount
RAS/WAS Building	<ul style="list-style-type: none"> RAS Pumps (4) rebuild/replace 	\$5,000
	Continued...	


27

8.5 – WPCC Equipment Program

Location	Item	Amount
RAS/WAS Building	<ul style="list-style-type: none"> WAS Pumps (2) rebuild/replace 	\$2,500
	Continued...	


28

8.5 – WPCC Equipment Program

Location	Item	Amount
UV Building	<ul style="list-style-type: none"> UV Banks (4) replace/rebuild bulbs and seals 	\$15,000
	Continued...	


31

8.5 – WPCC Equipment Program

Location	Item	Amount
UV Building	<ul style="list-style-type: none"> Building : Install new Gantry for bank removal 	\$25,000
		Continued...


32

8.5 – WPCC Equipment Program

Location	Item	Amount
Aeration Tanks	<ul style="list-style-type: none"> D.O Probes (9) 	\$15,000
		Continued...


33

8.5 – WPCC Equipment Program

Location	Item	Amount
Aeration Tanks	<ul style="list-style-type: none"> Anoxic Zone mixers (9) replace 	\$8,000
		Continued...

34

8.5 – WPCC Equipment Program

Location	Item	Amount
Pumping Stations	<ul style="list-style-type: none"> Main PS – VFD Replacement (3) 	\$30,000
		Continued...

35

8.5 – WPCC Equipment Program

Location	Item	Amount
Pumping Stations	<ul style="list-style-type: none"> Central PS replace (2) pumps/motors 	\$15,000
Continued...		


36

8.5 – WPCC Equipment Program

Location	Item	Amount
Pumping Stations	<ul style="list-style-type: none"> Chelsea St. PS – Replace (2) pumps/motors 	\$25,000
Continued...		

37

8.5 – WPCC Equipment Program

Location	Item	Amount
Pumping Stations	<ul style="list-style-type: none"> Chelsea St. PS – Replace check valves & fittings 	\$5,000
		Continued...


38

8.5 – WPCC Equipment Program

Location	Item	Amount
Pumping Stations	<ul style="list-style-type: none"> Broome Park PS – Replace (2) pumps/motors 	\$15,000
		Continued...

39

8.5 – WPCC Equipment Program

Location	Item	Amount
Pumping Stations	<ul style="list-style-type: none"> Broome Park PS – Replace check valves/Fittings 	\$5,000
		Continued...


40

8.5 – WPCC Equipment Program

Location	Item	Amount
Pumping Stations	<ul style="list-style-type: none"> Davit Arm System CSE and pump removal 	\$20,000
		Continued...

41

8.5 – WPCC Equipment Program

Location	Item	Amount
Septage Receiving Station	<ul style="list-style-type: none"> Grinder pumps – replace/repair 	\$26,000
	Continued...	

42

8.5 – WPCC Equipment Program

Location	Item	Amount
Contingency		\$15,000
	Total	<u>\$376,500</u>

WATER PROJECTS



44

9.3 – Water Distribution projects

Project Description & Rationale

Project Description:

Provides for the capital needs for the local water distribution system. Funding is provided through water revenues.

Project Rationale:

Allows for coordinated planning of the capital requirements needed to meet the needs of the Water Distribution System through the Water Fund. This also ensures that all costs are being captured and financed through the water rates.

45

9.3 – Water Distribution projects

Project Budget

	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Water Fund	\$425,000	\$455,000	\$3,910,000
Total Funding	<u>\$425,000</u>	<u>\$455,000</u>	<u>\$3,910,000</u>
Expenditures:			
Contracted Services	<u>\$425,000</u>	<u>\$455,000</u>	<u>\$3,910,000</u>
Total Expenditures	<u>\$425,000</u>	<u>\$455,000</u>	<u>\$3,910,000</u>

46

9.3 – Water Distribution projects

Location	Amount
Hydrant Replacement	\$30,000
First Ave. (Valving)	80,000
Front Ave. – Perth St. to Convey	315,000
Total	<u>\$425,000</u>

47

9.4 – Water Equipment

Project Description & Rationale

Project Description:

Provides for the capital needs of the Water Treatment Plant, Trunk Distribution System and Booster Stations. Funding is provided through water revenues.

Project Rationale:

Allows for coordinated planning of the capital requirements required to meet the needs of the Water Treatment system through the Water Fund. This also ensures that all costs are being captured and financed through the water rates.

48


9.4 – Water Equipment

Project Budget

	<u>2018</u>	<u>2019</u>	<u>2020 onward</u>
Funding:			
Water Fund	<u>\$624,000</u>	<u>\$398,320</u>	<u>\$8,005,400</u>
Total Funding	<u>\$624,000</u>	<u>\$398,320</u>	<u>\$8,005,400</u>
Expenditures:			
Contracted Services	<u>\$624,000</u>	<u>\$398,320</u>	<u>\$8,005,400</u>
Total Expenditures	<u>\$624,000</u>	<u>\$398,320</u>	<u>\$8,005,400</u>


49

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Building & Property Maintenance	<ul style="list-style-type: none"> Window replacement – Administration 	\$30,000
		
Continued...		


50

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Building & Property Maintenance	<ul style="list-style-type: none"> Energy Management – Voltage Optimization 	\$75,000
		
Continued...		

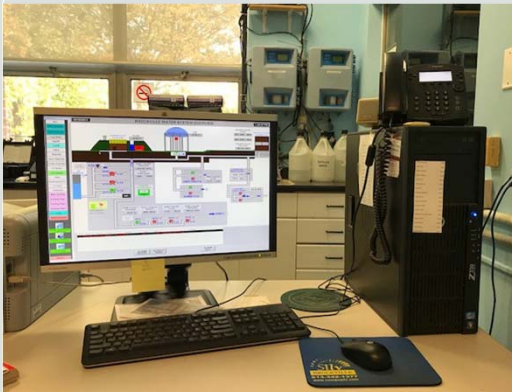
51

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Plant	<ul style="list-style-type: none"> SCADA Computers 	\$7,500
		Continued...



52

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Plant	<ul style="list-style-type: none"> SCADA Software upgrade 	\$35,000
		Continued...


53

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Plant	<ul style="list-style-type: none"> GAC Filter Media  	\$200,000
Continued...		


54

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Plant	<ul style="list-style-type: none"> Main plant pump #2 refurb 	\$13,000
Continued...		


55

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Plant	<ul style="list-style-type: none"> Backwash pump #1 refurb 	\$19,500
		
Continued...		


56

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Plant	<ul style="list-style-type: none"> Backwash motor VFD 	\$40,000
		
Continued...		


57

9.4 – Water Equipment

Location	Item	Amount
Water Treatment Plant	<ul style="list-style-type: none"> Chlorine gas leak detection 	\$7,500
	Continued...	


58

9.4 – Water Equipment

Location	Item	Amount
Booster Stations	<ul style="list-style-type: none"> First Ave. pump & motor refurb 	\$7,500
	Continued...	


59

9.4 – Water Equipment

Location	Item	Amount
Low Lift Station	<ul style="list-style-type: none"> Gas Heating 	\$15,000
Continued...		

60

9.4 – Water Equipment

Location	Item	Amount
Trunk Water Feeder Main	<ul style="list-style-type: none"> Environmental Assessment 2nd Feedermain 	\$150,000
Continued...		

61

9.4 – Water Equipment

Location	Item	Amount
Contingency		<u>\$24,000</u>
	Total	<u>\$624,000</u>

62

10.4 - Minor Capital Projects

Department / Board	Description	Amount
Env. Services - Solid Waste	<ul style="list-style-type: none"> Compost site pad rehabilitation (clean up, grade and level with new stone) 	15,000