



# 2023 ANNUAL PERFORMANCE REPORT CITY OF BROCKVILLE STORMWATER MANAGEMENT SYSTEM

June 5, 2024

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## Executive Summary

The City of Brockville Stormwater Management System is owned and operated by the City of Brockville and Cataraqui Region Conservation Authority in accordance with Environmental Compliance Approval #152-S701, issued March 7, 2023.

The Stormwater Management System consists of approximately:

- 107 kms of storm sewers
- 45 km of ditches
- 1 Stormwater Management pond - Wet
- 2 Stormwater Management pond - Dry
- 2 oil/grit separators

Throughout the reporting period (January 1, 2023, to December 31, 2023), The City of Brockville has completed several maintenance rehabilitation projects and inspections to ensure the adequacy of the City's stormwater system infrastructure. No Ministry of Environment, Conservation and Parks (MECP) inspections occurred during the reporting period.

## Reporting

**Schedule E Section 5.2 of the ECA requires the Annual Performance Report to contain the following:**

- a) Includes a summary of all monitoring data along with an interpretation of the data and an overview of the condition and operational performance of the authorized system and any adverse effects on the natural environment.
- b) Includes a summary and interpretation of environmental trends based on all monitoring information and data for the previous five years.
- c) Includes a summary of any operating problems encountered and corrective actions taken.
- d) Includes a summary of all inspections, maintenance, and repairs carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of the authorized system.
- e) Includes a summary of the calibration and maintenance carried out on all monitoring equipment.
- f) Includes a summary of any complaints related to the sewage works received during the reporting period and any steps taken to address the complaints.
- g) Includes a summary of all alterations to the authorized system within the reporting period that are authorized by this approval including a list of alterations that pose a significant drinking water threat.
- h) Includes a summary of all Spills or abnormal discharge events.
- i) Includes a summary of action taken, including timeliness, to improve or correct performance of any aspect of the authorized system.
- j) Includes a summary of the status of actions for the previous reporting year.

**a) Interpretation of Monitor Data**

The stormwater system is inspected during annual catch basin cleaning and mainline cleaning activities. The City sanitary and storm sewers are divided up into five (5) sections. Annually, one (1) of the five (5) sections of storm sewer and catch basins are cleaned such that the whole of the system is cleaned over a five (5) year period. During scheduled cleaning any identified defects are identified, evaluated and scheduled for repair. The procedure for inlet and outlet cleaning is conducted once per year and before each forecast significant rainfall. Regularly scheduled road patrols occur weekly at which time surface defects around manhole and catch basin structures are recorded and scheduled in priority for repair. Annually City engineering division staff contract CCTV camera inspection of portions of interest throughout the storm and sanitary systems looking for indications of damage and defects.

Grass cutting around stormwater ponds (i.e. Broome) is limited as allowing healthy grass growth to increase storm water quality. Grass growth around storm ponds also encourages nuisance species such as geese to enter the area. Grass cutting is only completed in select areas around storm ponds for aesthetic purposes. When grass cutting is done it is completed away from and parallel to the edge of the permanent pool with clipping ejected away from the pool.

Weed removal, if required, around stormwater ponds should be done by hand to prevent destruction of surrounding vegetation. The use of herbicides or insecticides is prohibited near stormwater ponds.

All municipal oil-grit separators installed in the City will be maintained by City staff in accordance with the manufacturer's recommended cleaning methods and intervals.

<b>Program Title</b>	<b>Program Description</b>	<b>Adverse Effects on the Natural Environment?</b>
Storm Sewer Flushing	Storm and Sewers are flushed on a 5-year cycle as per the O&M Manual.	No
Oil/Grit Separator Inspections	Annual inspection of the structure and a dip test for sediment using a sludge judge.	No
Ditch Inlet and outlet	Annual Inspection on structure and cleaning prior to significant rainfalls.	No
Outfall Inspection	Annual Inspection on structure and cleaning prior to significant rainfalls.	No
SWM Pond Inspection	Annual Inspection of asset and grass cutting and brush removal annually.	No
Catch Basin Cleaning	Catch basins are cleaned on a 5-year cycle. Priority catch basins are cleared annually.	No

**b) Interpretation of Environmental Trends**

Monitoring Data	Environmental Trend	Interpretation and Comments
N/A	N/A	N/A

**c) Operating Problems and Corrective Actions**

The Table below provides a summary of operating problems that required corrective actions.

Operating Problem	Corrective Action	Date
N/A	N/A	N/A

**d) Inspections Maintenance and Repairs**

Work Description: Ditching /Culverts /Others	Work Type	Date	
Removal of grass/soil build up	Ditching	7/11/2023	74 Hillcrest Dr.
Install new culvert for new roadway extension	Culvert	7/17/2023	Laurier from Broom Rd. East
Install new culvert, replace failed steel culvert.	Culvert	7/24/2023	Chelsea St. at Steward Blvd.
Install new culvert, replace failed steel culvert.	Culvert	8/22/2023	Oxford Ave. at Broadway Ave.
Investigated odor from catch basin. Vacuumed debris. Nothing found.	Catch Basin Odor complaint	8/16/2023	58 Murray St.
Repair sink hole at trunk main. Nothing found.	Sink hole in road	8/25/2023	Water St. at Kincade St.
Cleaned culvert buried at ends	Culvert /Ditching	9/5/2023	701 Central Ave. West
Work Description: Catch Basin Deficiency	Work Type	Date	Location
Sink hole beside structure. Backfill found to be improper material and compaction.	Sink Hole / Catch Basin	6/5/2023	791 Comstock Cres.
Reset and level frame and cover	Catch Basin Overlay	6/5/2023	St. Andrew St. at Water St. West
Reset catch basin and ring on structure	Catch Basin	6/21/2023	87 Cedar St.
Reset broken frame	Catch Basin	7/7/2023	Kincade St. at Holiday St.
Reset broken frame	Catch Basin	7/7/2023	33 King St. East
Reset broken frame	Catch Basin	7/7/2023	267 Bartholomew St
Reset broken frame	Catch Basin	7/8/2023	1 Elm St.
Parging on laterals failed reinstall parging from outside structure	Catch Basin / Manhole	7/13/2023	12 Bennett St.

Reset catch basin to allow for accessible corner	Catch Basin	7/14/2023	58 Murray St.
Reset broken frame	Catch Basin	7/15/2023	Cedar at Church St.
Broken rings and broken frame	Catch Basin	7/17/2023	46 Steward Blvd.
Reset catch basin frame and repair subgrade drain	Catch Basin	7/17/2023	Steward Blvd. South of Parkdale Blvd.
Repair parging on structure at lateral	Catch Basin	7/28/2023	Front Ave. at Steward Blvd. North-West
Repair broken lateral full of roots	Catch Basin	8/23/2023	89 First Ave.
Raise and reset frame	Catch Basin	8/23/2023	84 Brighton Cres.
Repair broken frame	Catch Basin	8/30/2023	677 Laurier Blvd.
Reset Catch basin for overlay	Catch Basin	8/30/2023	100 Water St.
Reset Broken frame	Catch Basin	9/21/2023	Parkdale Ave. at Windsor Ave.
Reset broken risers and frame	Catch Basin	10/16/2023	Church St. at Perth St.
<b>Work Description: Storm Manhole</b>	<b>Work Type</b>	<b>Date</b>	<b>Location</b>
Reset broken rings	Manhole	6/5/2023	17 Cochrane Dr.
Reset broken rings	Manhole	6/5/2023	27 Cochrane Dr.
Reset broken rings	Manhole	6/16/2023	Central Ave. West of Perth St.
Parging failed on lateral at structure	Manhole (service manhole)	6/21/2023	Parkdale Ave. at 1000 Island Mall
Reset broken rings	Manhole	7/6/2023	187 Brock St.
Reset bring to grade	Manhole	7/6/2023	50 Central Ave. West
Reset broken rings	Manhole	7/28/2023	Perth St. at Havelock St.
Reset and level	Manhole	7/28/2023	Perth St. at Chaffey St.
Reset and level	Manhole	7/29/2023	Perth St. at Hubble St.
Reset broken rings	Manhole	7/29/2023	Perth St. at Central Blvd.
Reset and repair structure	Manhole	8/4/2023	Central Ave. West of Perth St.
Reset and repair structure	Manhole	8/23/2023	91 Listen Ave.
Reset and level	Manhole	8/23/2023	23 Oak St.
Reset frame and cover in boulevard	Manhole	8/24/2023	454 King St. West
Reset frame and cover in sidewalk	Manhole	8/23/2023	1218 Millwood Ave.
Reset and level	Manhole	8/23/2023	1174 Millwood Ave.
Reset and level	Manhole	8/23/2023	54 King St. East
Reset and level	Manhole	8/23/2023	14 King St. East
Reset and level	Manhole	8/24/2023	8 King St. East
Reset and level	Manhole	8/24/2023	1 King St. West
Reset and level	Manhole	8/24/2023	12 King St. West
Reset and level	Manhole	8/24/2023	154 King St. West
Reset and level	Manhole	8/24/2023	King St. at Perth St.
Reset and level	Manhole	8/24/2023	King St. at John St.



Reset and level	Manhole	8/24/2023	North Augusta Rd. at Pearl St.
Reset and level	Manhole	8/24/2023	Hasting Dr. at Glengarry Rd.
Reset and level	Manhole	8/24/2023	King St. at Ford St.
Reset and level	Manhole	8/24/2023	King St. at Park St.
Repair parging on lateral and structure	Manhole	9/27/2023	18 Dewick Dr.
Reset and level	Manhole	10/16/2023	339 Cedar St.
Reset and level	Manhole	10/16/2023	436 Pearl St. West
Reset broken frame	Manhole	10/16/2023	34 Geneva Ct.
Reset and level	Manhole	10/16/2023	331 Pearl St. West
Reset and level	Manhole	10/23/2023	103 Margaret Pl.
Reset and level	Manhole	10/23/2023	5 Winters Ct.
Reset and level	Manhole	10/24/2023	34 Riverview Dr.
Reset and level	Manhole	11/13/2023	29 Stuart St

The City conducted inspections on municipal storm ponds and oil grit separators, in the reporting period of 2023 the following items were noted:

- Asset ID SWMP002 Flanders Road infiltration basin was inspected with no defects reported.
- Asset ID SWMP003 Buell’s Creek detention basin is inspected every Friday and debris is removed from the low flow pipe and high flow pipe.
- Asset ID SWMP002 John G. Broome stormwater management pond was inspected, grass was cut twice, and minor brushing undertaken.
- Oil Grit Separators - The City has several oil grit separators which were inspected in 2023. Oil grit separators are in the following locations:
  - Webster Crescent (2)

The following stormwater management facilities have not yet been officially transferred or operations and ownership assumed to the City and remain the responsibility of the respective developer:

- St Albans Stormtech MC-3500 SWM
- Windsor Centennial SWM
- Oil Grit Separators – Webster Crescent (2)

**e) Calibration and Maintenance of Monitoring Equipment**

Monitoring Equipment	Calibration/Maintenance	Date
N/A	N/A	N/A

**f) Complaints**

Complaint	Resolution	Date
Odor reported at catch basin 58 Murray	Street vacuum debris nothing found	8/16/2023

**g) Alterations to the Authorized System**

Alteration to the Authorized System Project Name	Project Details	Does This Project Pose a Significant Drinking Water Threat?
Sherwood St. reconstruction between Granite St. to King St. West	<p>The project was completed to replace all City below grade infrastructure on Sherwood St. from Granite St. to King St. West ROW from property line to property line. The work included the replacement of water, sanitary and storm mains with appropriate appurtenances and services. All concrete curbing and sidewalks and asphalt roadway were reconstructed.</p> <p>The City replaced a total of 122.5m of PVC storm main ranging in size from 250mm to 375mm diameter.</p>	No

**h) Spills and Discharges**

Spill/Discharge Event	Details	Date
N/A	N/A	N/A

**i) System Performance Improvements**

System Performance Improvement	Project Description
N/A	N/A



**j) Previous Reporting Year Update**

Stormwater signs were installed around the John G. Broome Stormwater Management Pond Asset ID SWMP002.



**Image 2 – Stormwater Management Facility Sign**



**ECA 152-S701 Asset ID SWMP002 John G. Broome Stormwater Management Pond**

**Image 5 – Stormwater Management Facility**

## Appendix A: Inlets and Outlets

MANHOLE ID	STREET	LOCATION	Date
DI3577	Broome Rd.	Laurier Blvd/Broome Rd	
DI3576	Laurier Blvd.	Laurier Blvd/Broome Rd	
DI3578	Broome Rd.	Across from Receiving of Giant Tiger building	
DI3579	Broome Rd.	In between Giant Tiger & Wills Transport	
DI3580	Broome Rd.	Infront of Wills Transport	
DI3581	Broome Rd.	In between Fastenal and Wally Wash on empty field side.	
DI3566	Laurier Blvd.	Train tracks near Fire Station	
DI3634	California Ave.	1640 California Ave, entry way closest to Centennial	
DI3634	California Ave.	1640 California Ave, near other entry way.	
DI3632	California Ave.	1600 California Ave	
DI3631	California Ave.	Infront of Mitchell Forms	
DI3628	California Ave.	Near Messer	
DI3629	California Ave.	Across from Messer manhole	
DI3627	California Ave.	Near train tracks & 1415 California Ave (Toshack)	
DI3625	California Ave.	On California near Poplar Dr.	
DI3626	California Ave.	Across from manhole near Poplar Dr.	
DI3624	California Ave.	California Ave & Poplar Dr.	
DI3623	California Ave.	California Ave & Poplar Dr. near Hansler	
DI3621	California Ave.	California Ave, near entrance of Hansler (side closest to Poplar)	
DI3622	California Ave.	Across from DI3621, on Waste Management Side.	
DI3618	California Ave.	Snapfitness/ Purolator side closest to Snap entrance.	
DI3618	California Ave.	Across from DI3618	
DI3616	California Ave.	California Ave & Laurier Blvd on 3M side.	
DI3615	California Ave.	Across from DI3616	
DI3614	California Ave.	Corner of California Ave & Laurier Blvd Douglas Berwick	
DI3613	California Ave.	Across from DI3614	
DI3612	California Ave.	Infront of 150 California Ave (Douglas Berwick)	
DI3611	California Ave.	Across from DI3611	
DI3610	California Ave.	Near 150 California Ave entrance	
DI3609	California Ave.	Across from DI3609	
DI3608	California Ave.	Other side of 150 California Ave entrance	
DI3607	California Ave.	Across from DI3608 in the middle of Newterra entrances	
DI3606	California Ave.	Across from DI3605	
DI3605	California Ave.	Near truck entrance for Ketchum	
DI3604	California Ave.	Across Road from 1245 California Ave (Ketchum), empty field.	
DI3603	California Ave.	Infront of 1245 California Ave (Ketchum)	
DI3602	California Ave.	Entrance to 3M across from Ketchum entrance	
DI3601	California Ave.	Office entrance to Ketchum	

DI3600	California Ave.	Infront of 3M parking lot across from 1201 California Ave (Hendrix)	
DI3599	California Ave.	Infront of 1201 California Ave (Hendrix)	
DI3594	California Ave.	60 California 3M side, across from Hendrix Entrance.	
DI3595	California Ave.	Hendrix entrance	
DI3592	California Ave.	60 California truck entrance	
DI3596	California Ave.	Entrance to 1185 California Ave	
DI3593	California Ave.	Across from DI3592	
DI3591	California Ave.	Corner of California Ave & Waltham Rd.	
DI3590	California Ave.	Across from DI3590	
DI3588	California Ave.	Entrance to Northern Cables closest to Waltham Rd	
DI3589	California Ave.	Across from DI3588	
DI3584	California Ave.	Second entrance of Northern Cables	
DI3587	California Ave.	Across from DI3584	
DI3584	California Ave.	Across from Home Depot Yard	
DI3585	California Ave.	Across from DI3584	
DI3582	California Ave.	On California Ave but close to Parkedale	
DI3583	California Ave.	Across from DI3582	
DI3635	Parkedale Ave.	2135 Parkedale Entrance (Yoga Studio)	
DI3636	Parkedale Ave.	2170 Parkedale Ave- Canarm in grass near sidewalk closet to new build.	
DI3657	Parkedale Ave.	Beside First Ave	
DI3658	Parkedale Ave.	In between First Ave & Last KM	
DI3656	Parkedale Ave.	Near entrance of Last KM on KD Construction Side	
	Oxford Ave.	In front of 344 Oxford Ave.	
	Oxford Ave.	Corner of Oxford Ave. and Scace Ave.	
	Oxford Ave.	Other side of Oxford Ave. and Scace Ave.	
	Oxford Ave.	In front of 300 Oxford Ave.	
	Oxford Ave.	Corner of Oxford and Reynolds Dr., near 288 Oxford Ave.	
	Scace Ave.	East of 14 Scace Ave.	
	Scace Ave.	East of 10 Scace Ave.	
	Waverly Dr.	In front of 15 Waverly Dr.	
	Manor Dr.	West of 192 Manor Dr.	
	Broadway Dr.	Corner of First Ave and Broadway Ave (Salvation Army)	
	Broadway Dr.	179 Broadway Ave	
	Ann St.	26 Ann St.	
	Hartley St.	162 Hartley St.	
	King St. West	East of Bayview Rd.	
	King St. West	Hansler Smith	
	King St. West	Just east of Golf Side Lane, near entry way of 584 King St. West driveway	
	Centre St.	Just west of 54 Centre St.	

	Centre St	66 Centre St, closed to property of 62 Centre St.	
	Centre St	Across from 68 Centre St.	
	Centre St.	Across from 71 Centre St.	
	Centre St.	Across from 80 Centre St. beside 440 Brock St.	
	Malloch Ct.	In between 5 & 6 Malloch Ct.	
	Pearl St. West	Behind 381 Pearl St. West	
	Cedar St.	End of Cedar St. West corner	
	Cedar St.	Corner of Brock St. & Cedar St. near 348 Brock St.	
	Cedar St.	Cedar St. & Church St. near Brock Trail.	
	Central Ave. West	700 Central Ave. West	
	Central Ave. West	440 Central Ave. West	
	Central Ave. West	East of driveway of 440 Central Ave. West	
	Central Ave. West	380 Central Ave. West	
	Central Ave. West	340 Central Ave. West	
	Central Ave. West	In between 300 and 260 Central Ave. West	
	Central Ave. West	260 Central Ave. West	
	Central Ave. West	Across from Black & Decker, near house with wooden fence.	
	Central Ave. West	Corner of Central Ave W and road into Apartments.	
	Stewart Blvd.	In front of 50 Central Ave (Apartments)	
	Parkedale Ave.	3040 Parkedale Ave.	
	Parkedale Ave.	3027 Parkedale Ave.	
	Stewart Blvd. & Parkedale Ave.	near cross walk	
	Stewart Blvd.	Entry way of Swiss Chalet	
	Stewart Blvd & Chelsea St.	Near Chelsea Ct. Enterprise	
	Stewart Blvd.	in between the Brick and 497 Stewart Blvd.	
	Stewart Blvd.	in between 497 and 501 Stewart Blvd.	
	Stewart Blvd.	541 Stewart Blvd.	
	Stewart Blvd.	near Stewart Blvd. entrance to Toyota	
	Laurier Blvd.	820 Laurier Blvd.	
	Laurier Blvd.	Near entrance of Quickie closest to Peden Blvd.	
DI3637	Brockmount Pl.	In between 1286 & 1282 Brockmount Pl.	
	Lindsay Pl.	807 Lindsay Pl.	
	Centennial Rd.	Centennial Rd. & Kensington Pkwy. empty lot	
DI3641	Centennial Rd.	Centennial Rd. & Stewart Blvd. On 1096 Centennial Blvd. property	
DI3643	Centennial Rd.	Centennial/Windsor Dr opposite Bridlewood property	
DI3639	Comstock Cres.	End of path between 728 & 730 Comstock Cres.	
DI3649	Duke St.	Corner of Duke St. & Windsor Dr. near stop sign	
DI3650	Duke St.	Corner of Duke St. & Windsor Dr. near 205 Windsor Dr.	
DI3640	Hillcrest Dr.	In between 36 & 38 Hillcrest Dr.	
DI3651	Windsor Dr.	In between 203 & 199 Windsor Dr.	

DI3652	Windsor Dr.	Parkedale Ave. & Windsor Dr. sidewalk on apartment side	
DI3653	Windsor Dr	Parkedale Ave. & Windsor Dr. sidewalk on Subway side	
DI3647	Cuthbertson Ave.	Parking lot entrance beside 1131 Cuthbertson Ave.	
DI3648	Steady Gardens	Across from 109 Steady Gardens	
DI3644	Morris Ct.	Parking lot entrance	
DI3645	Memorial Centre	In between first and second row of parking closet to main entrance of building	
DI3644	Memorial Centre	Near guard rail at Memorial Centre -main entrance of building	



### Appendix B: Mainline Cleaning 2023



## Appendix C: Swales and In-Dented CB's

<b><u>SWALES</u></b>		
<b>STREET</b>	<b>NUMBER OF THEM</b>	<b>LOCATION</b>
Stewart Blvd	1	In front of Home Hardware, near no parking sign.
Stewart Blvd	1	In front of Ultramar Gas station, near maximum speed sign.
Stewart Blvd	1	In front of 574 Stewart Blvd
Stewart Blvd	1	In front of the old Rona near the no stopping sign
Stewart Blvd	1	In front of Jiffy near no stopping sign
Stewart Blvd	1	In front of Benson Auto Parts
Stewart Blvd	2	In front of Riverside Chev
Stewart Blvd/ Chelsea St	1	In front of Enterprise
Stewart Blvd	2	In front of CES
Stewart Blvd	1	Tree area in between CES and 404 Stewart Blvd
Parkedale Ave	1	In between LCBO and Daltco entrance
Centennial/ Kensington Pkwy	1	Corner of Centennial/Kensington Pkwy near hydrant on 807 Centennial Rd
North Augusta Rd	1	Before on ramp to 401 at Waverly Dr.
Waverly Dr	2	Just after the corner on Waverly Dr. either side of the road.
Metro Parking Lot	3	Parking lot of Metro near tree line
<b><u>In Dented CB</u></b>		
<b>STREET</b>	<b>NUMBER OF THEM</b>	<b>LOCATION</b>
Hartley St	18	Rivers Ave to Thomas St all along Hartley St
Beecher/ George St	1	Behind narrowing road sign
Chislett St/Perth	1	Beginning of Chislett on the Greek Orthodox Church Side
Front Ave W/ Ferguson Dr	1	Before stop sign on Ferguson Drive
Central Ave W- St. Mary	1	Near second entrance to St. Mary across from Westminster school parking
Glengarry Rd	4	Near Rifle Rd, in front of 5 Glengarry, corner of Glengarry and Ormond
Hastings Dr	7	2 at Hastings Dr/ Central, Hastings & Royal Cres, 2 Hastings Dr and Rifle, Hastings drive on the corner across from Apartments
North Augusta Rd	2	North of lights at North Augusta Rd & Reynolds Dr near Red Bus Stop sign
North Augusta Rd	2	At Hydro One fenced area
North Augusta Rd	2	Before Gord Watts entrance
North Augusta Rd	7	On overpass and at the bottom of overpass after GWMC
Broadway Ave	1	Broadway & First Ave- Salvation Army side.
Crawford St	7	From First Ave to Oxford Ave
Scace Ave	9	Scace at First to Toniata school.
Parkedale Ave	2	In front of Canadian Tire and Tim Hortons near Canadian Tire entrance
Parkedale Ave	2	Just before Police Station, and in front of St. Lawrence College.
Parkedale Ave	2	2 after train tracks first entrance at Wills and entrance at Commerce Crt
Parkedale Ave	2	2 at Parkedale and Ormand light- Canarm new building
Parkedale Ave	2	Just after or before green box
Parkedale Ave	2	Infront of True North? (pot shop)