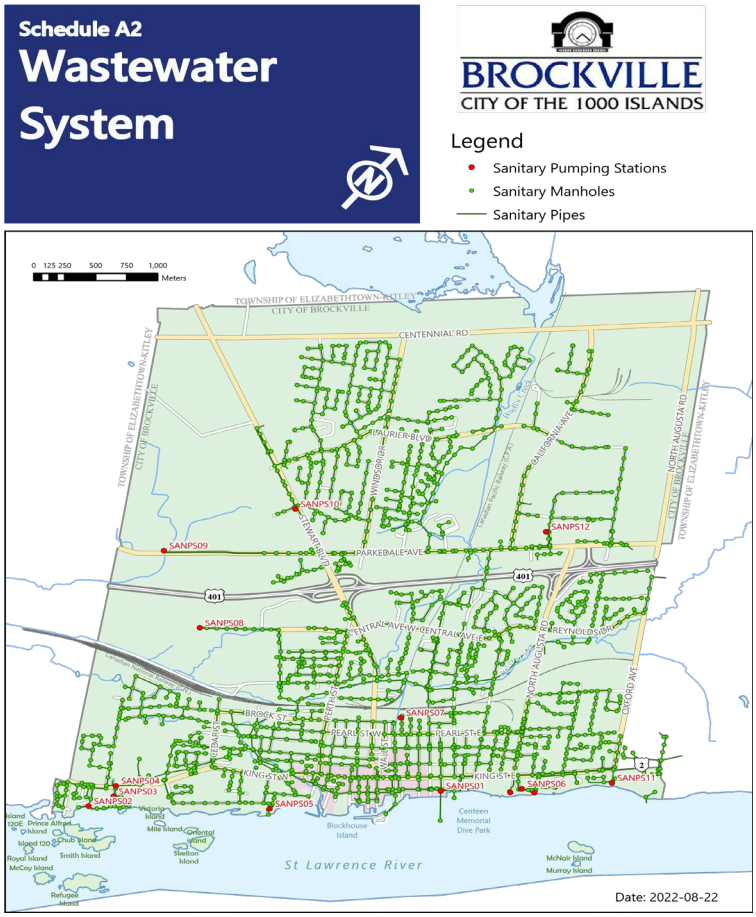
BROCKVILLE
CITY OF THE 1000 ISLANDS



CITY OF BROCKVILLE
Sewage Collection System

2025 ANNUAL REPORT

Peter Raabe, P. Eng., Director of Engineering and Infrastructure
Brandon Goddard, Supervisor – Wastewater Systems Division

DATE: February 24, 2026

EXECUTIVE SUMMARY

The enclosed 2025 Annual Report is prepared in accordance with the Environmental Compliance Approval (ECA) for the City of Brockville's Sewage Collection System for submission to the Ontario Ministry of the Environment, Conservation and Parks (MECP). A copy of this report is also made available at City Hall and on the City's website for public viewing. Included with this report is a summary of all monitoring data, operational issues, maintenance issues, complaints, system alterations, spills and efforts made to reduce collection system overflows, spills or bypasses.

TABLE OF CONTENTS

		PAGE #
EXECUTIVE SUMMARY		2
TABLE OF CONTENTS		3
1.	INTRODUCTION	4
2.	SYSTEM DESCRIPTION	4
3.	APPROVALS AND CERTIFICATION	4
4.	REPORTING REQUIREMENTS	5-9
5.	KEY CONTACTS AND REFERENCES	9

APPENDICES 10

- Appendix A: 2025 Capital Program
- Appendix B: Summary of Alterations
- Appendix C: 2025 Collection System Overflows

1. INTRODUCTION

We are pleased to present the 2025 Sewage Collection System Annual Report. The purpose of this report is to provide a summary on the sewage collection system for the period January 1st to December 31st, 2025, and is a legal requirement under Schedule E Section 4.6 of Environmental Compliance Approval (ECA) number 152-W601, made under section 20.3 of Part II.1 of the Environmental Protection Act R.S.O. 1990, c. E19 (Environmental Protection Act). This Annual Report must be forwarded to the Ontario Ministry of the Environment, Conservation and Parks (MECP) no later than March 31st, 2026.

2. SYSTEM DESCRIPTION

The City of Brockville Sewage Collection System consists of works for the collection and transmission of sewage, consisting of 113 kms of sewers including trunk sewers, separate sewers, forcemains and twelve (12) sewage pumping stations with discharge into the City of Brockville Water Pollution Control Centre.

3. APPROVALS AND CERTIFICATION

3.1 Environmental Compliance Approval

The City of Brockville's Sewage Collections System operates under Environmental Compliance Approval (ECA) Number 152-W601. The system is a Class III system in accordance with the Licensing of Sewage Works Operators Regulation (O. Reg. 129/04) made under the Ontario Water Resources Act.

3.2 Operator Certification

The Licensing of Sewage Works Operators Regulation (O. Reg. 129/04) requires owners to ensure that every operator employed in the facility holds a license applicable to that type of facility (s. 14 (1)). The City continues to ensure all operators employed at the WPCC hold a valid license for its facility.

O. Reg. 129/04 also requires the designation of an overall responsible operator (ORO) for the facility and that the ORO holds a license applicable to and of the same class as or higher than the class of the facility or one level below for no more than 150 days in a twelve month period. Brandon Goddard, Supervisor of Wastewater Systems, holds a Class 3 Wastewater Collection License and was ORO until vacating the position in May 2025. Barry Fox, holds a Class 3 Wastewater Collection License and was ORO from May to year's end.

4. REPORTING REQUIREMENTS

4.1 Reporting Requirements

As a requirement of Environmental Compliance Approval (ECA) Number 152-W601, Schedule E Section 4.6 an annual performance report shall be prepared for the authorized system. The report shall be submitted to the MECP Director and the MECP District Manager on or before March 31st of each year and covers the period from January 1st to December 31st of the preceding calendar year. The report shall contain, but shall not be limited to, the following information:

(a) ***A summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized system or system operations;***

N/A

(b) ***A summary of any operating problems encountered and corrective actions taken;***

The use of an operational logbook, as required under the Licensing of Sewage Works Operators Regulation (O. Reg. 129/04, s. 19 (1)), to record departures from normal operating procedures, unusual or abnormal conditions, and equipment that was taken out of service, ceased to operate, underwent maintenance or repair, is kept by the facility.

(c) ***A summary of all calibration, maintenance, and repairs carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System;***

Appendix A: 2025 Capital Program contains the 2025 Capital projects, as well as some previous Capital projects that were carried over to 2025 for the WPCC, pumping stations and collection system. In 2025 the City allocated $866,000 in Capital to replace various pieces of equipment at the WPCC and pumping stations that were nearing the end of their life cycle. These projects have been integral to refurbishing or replacing aging assets to maintain efficient operation and redundancy. This program utilizes risk analysis, maintenance costs and replacement analysis to give the best 10-year model possible. As always, not all risks are known, and sometimes unforeseen breakdowns do occur. Excellent coordination between staff and various contractors and suppliers allows the work to be assessed and performed while keeping on track from a budget standpoint.

- **Main Line Repairs** – 1 spot repairs to a sanitary sewer main was made
- **Lateral Repairs** – 8 sanitary lateral repairs made
- **Maintenance Hole Structure Repairs** – Conducted in house through the Public Works Division
- **CCTV Camera Inspections** – Contracted to outside companies through Engineering Division, 1210 metres were completed in 2025
- **Calibration of Flow Meters** - Conducted as per regular annual maintenance by a third-party qualified contractor and results are as follows:

Meter	Location	Calibration Date	Calibration Result	Comments
E & H Promag 400	Leachate Pumping Station High Lift	September 15 2025	Pass	None
E & H Promag 400	Leachate Pumping Station Overflow	September 15 2025	Pass	None

(d) ***A summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints;***

The number of complaints received during the Reporting Period, regarding the Wastewater Collection System, was one. If applicable, complaints are itemized below with corresponding steps taken to address the complaints.

Date of Complaint	Address	Complaint	Steps Taken to Address Complaint
December 9, 2025	1004 Kingswood St.	Odour	• Unable to check manholes due to frozen access • Checked basement cleanout, all clear • No odour noticed

(e) ***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;

Appendix B Summary of Alterations contains the 2025 Alterations to the Authorized System that are authorized by this Approval. There were no alterations in 2025.

(f) ***A summary of all Collection System Overflow(s) and Spills(s) of Sewage, including:***

a. Dates;
b. Volumes and durations;
c. If applicable, loadings for total suspended solids, BOD, total phophorus and total kjeldahl nitrogen and sampling results for E. coli;
d. Disinfection, if any; and
e. Any adverse impact(s) and any corrective actions, applicable

The Brockville Main Pumping Station, identified as SANPS01 – Main Pumping Station in ECA Number: 152-W601, experienced one overflow event between March 16-17, 2025. The event was due to heavy rain and snow melt resulting in flows above the capacity of the station.

Approximate Spill Volume: 5,527.1 m^3
Duration of Incident: 6.3 hours
Event Loading to the Natural Environment:

Parameter	Concentration (mg/l)	Loading (kg)
BOD	26	144
Total Suspended Solids	124	685
Total Phosphorus	0.79	4.4
Total Kjeldahl Nitrogen	6.6	36

Loading (kg) = bypass volume (m3) x parameter concentration (mg/l)/1000

Parameter	Initial	Final
E. coli (CFU/100ml)	144,000	91,000

A summary of collection system overflows can be found in **Appendix C: Collection System Overflows**

(g) ***A summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses, including the following items, as applicable;***

a. ***A description of projects undertaken and completed in the***

Authorized System that result in overall overflow reduction or elimination including expenditures and proposed projects to eliminate overflows with estimated budget forecast for the year following that for which the report is submitted.

- **Wet Well Cleanouts** - Through the City's Worktech Program, a biannual cleaning program is scheduled for the 12-pumping station wet wells of the Brockville collection system. Each wet well is cleaned out with the use of a Vacuum truck, with the purpose of removing sand, grit and other items that decrease the available wet well size.

- **Main Pumping Station Design** – Currently the City is proceeding with the design of a new Main Pumping Station which will, among other items, increase wet well capacity and pumping capacity.

- **Flow Monitoring** – Was the City's Engineering Division, a flow monitoring program will be undertaken to study the City's collection system and to identify possible Inflow and Infiltration (I&I) areas.

b. Details of the establishment and maintenance of a PPCP, including a summary of progresses compared to the PPCP's timeline.

N/A

c. An assessment of the effectiveness of each action taken.

N/A

d. An assessment of the ability to meet Procedure F-5-1 or Procedure F-5-5 objectives (as applicable) and if able to meet the objectives, an overview of next steps and estimated timelines to meet the objectives.

N/A

e. Public reporting approach including proactive efforts.

N/A

(h) ***Any other information the Director and/or District Manager requires from time to time.***

N/A

5. KEY CONTACTS AND REFERENCES

For further information on this report, enquiries on a related topic, or to arrange a plant tour of the wastewater treatment facilities, please contact:

Peter Raabe, P. Eng.
Director of Engineering & Infrastructure
613-342-8772 ext. 3257
E-mail: praabe@brockville.com

Jessica McLeod
Supervisor – Wastewater Systems
613-342-8772 ext. 8301
E-mail: jessica.mcleod@brockville.com

Ministry of the Environment, Conservation and Parks	www.ene.gov.on.ca
Ontario Water Wastewater Certification Office	www.owwco.ca

2025 CAPITAL PROGRAM

PROJECT NAME:		Water Pollution Control Centre Equipment Replacement Program	YEAR PROPOSED ITEM NO:	2024 6.2
LOCATION:		Sewage Treatment Plant, Pumping Stations & Collection System		
HISTORY:		LENGTH OF PROJECT: YEAR FIRST INTRODUCED:	Ongoing - through Sewer Rate Reserve 1997	
SCOPE:		Replacement of Capital Equipment for the Water Pollution Control Centre and associated structures and pumping stations. This is to be accomplished from the Sewer Rate Reserve Fund.		

Account #	Cost Centre		Budget
		WPCC BUILDING AND PROPERTY:	
07-5-863111-2010/3010	25WW40	WPCC Roofs (3)	$275,000
07-5-879395-2010/3010	25WW50	VFD'S for WPCC (year 2)	$48,000
07-5-864395-2010/3010	25WW51	Neuros VFD & Processor	$57,000
07-5-879395-2010/3010	25WW44	Boardroom Refurbishment	$10,000
		Lab	
07-5-864395-2010/3010	25WW39	Lab Equipment	$37,000
		Screen & Degrit	
07-5-879395-2010/3010	25WW47	Screw Replacements	$32,000
		Primary Clarifiers	
07-5-879395-2010/3010	25WW41	Primary Clarifier Repairs	$45,000
		UV Building	
07-5-879395-2010/3010	25WW15	UV Hydraulic Ram	$39,000
07-5-864395-2010/3010	25WW37	Effluent Monitoring System	$32,000
		Pumping Stations	
07-5-879395-2010/3010	25WW42	LPS Pump Repairs	$32,000
07-5-864395-2010/3010	25WW53	MPS Pump #3 VFD	$43,000
		Digester Building	
07-5-879395-2010/3010	25WW46	Digester Mixer #2 Rebuild	$33,000
		Aeration Tanks	
07-5-879395-2010/3010	25WW52	Aeration Tank Mixers	$20,000
		Dewatering	
07-5-864395-2010/3010	25WW38	Alum Pump Replacement	$20,000
07-5-879395-2010/3010	25WW48	Odour Scrubber Media Replacement (2)	$18,000
07-5-879395-2010/3010	25WW43	Andritz 18,000 Hr Service	$45,000
		Collections	
07-5-879395-2010/3010	25WW54	North Augusta Maniline Repair	$80,000
			$866,000

Account #		Water Pollution Control Centre	Year Proposed	Budget (Remaining)	Budget (Original)
		WPCC BUILDING AND PROPERTY:			
07-5-898502-2010	21WW01	Concrete Structure @ Entry to River (Rebuild)	2016	$206,539	$120,000
07-5-879395-2010/3010	22WW13	HVAC Systems - Bldg's 100, 700, 800	2022	$5,099	$25,000
07-5-879395-2010/3010	24WW32	VFD'S for WPCC		$1,139	$23,500
		Digester Operations:			
07-5-864395-2010/3010	24WW26	Boiler 504		$320,000	
		PUMPING STATIONS:			
07-5-858576-2010	21WW06	Main Pump Station Design	2016	$78,708	$600,000
07-5-879395-2010/3010	23WW19	Thomas Street PS Forcemain		$75,000	$75,000
		OTHER PROJECT:			
07-5-858676-2010	21WW68	Engineering - Rated Capacity Study	2021	$15,134	$20,000

PREPARED BY (PROJECT MANAGER): Brandon Goddard
DATE: April 15, 2025

Y:\WTWWT\Shared Data\1 WASTEWATER SYSTEMS DIVISION CURRENT\01-Administration\02 - Financial\01 - Budgets\2025 Budget\WPCC

Ontario

Ministry of the Environment, Conservation and Parks

Form 551 - Record of Future Alteration Authorized for Separate Sewers/ Nominally Separate Sewers/Forcemains

Retain Completed Form - Do Not Send to the Ministry

Part 1 - Environmental Compliance Approval Number

(Insert the Environmental Compliance Approval number authorizing the alteration of Separate Sewers/Nominally Separate Sewers/Forcemains)

ECA # 152-W601

Part 2 - Description of separate sewer/nominally separate sewer/forcemain alteration

(Use attachments if required)

The description shall include:

1) A brief description above of the undertaking (e.g. street name(s); subdivision name; project name); and

2) An attachment including a plan view drawing identifying at a minimum:

   a) location(s) of the undertaking (e.g. showing street names, easements, discharge points, slope (sewer only) etc.);

   b) nominal diameter of the sewers/forcemain(s), associated with the alteration.

None

Part 3 - Verification by Licensed Engineering Practitioner

I hereby verify that I am a Licensed Engineering Practitioner who is licensed to practice in the Province of Ontario and the design of the separate sewer/nominally separate sewer/forcemain alteration:

1) Has been prepared by a Licensed Engineering Practitioner who is licensed to practice in the Province of Ontario;

2) Has been documented in a design report and any other applicable design forms;

3) Has been designed only to collect and transmit sewage and has not been designed to treat sewage;

4) Satisfies the design criteria set out in the Ministry of the Environment, Conservation and Parks publication "Design Criteria for Sanitary Sewers, Storm Sewers, and Forcemains for Alterations Authorized under Environmental Compliance Approval", as amended, and have documented the reasons for this opinion; and

ON00448E (2022/09) © King's Printer for Ontario, 2022 Disponible en fran[illegible]ais

5) Is consistent with, or otherwise addresses, the design objectives contained within the Ministry of the Environment, Conservation and Parks publication "Design Guidelines for Sewage Works", as amended.

Name	PEO Licence Number
Signature	Date (yyyy/mm/dd)

Part 4 - Verification by Owner

I hereby verify that:

1) The maximum wastewater discharge by users who will be serviced by the addition, modification, replacement or extension of the separate sewer/nominally separate sewer/forcemain will not result in:
   a) An excedance of the municipal sewage collection system hydraulic capacity, sewage treatment plant uncommitted reserve hydraulic capacity, or the downstream pumping station capacity;
   b) Adverse effects;
   c) Any increase in collection system overflows that is not offset by measures, and have documented any offset measures used; or,
   d) Any increase in the frequency and/or volume of Sewage Treatment Plan (STP) bypasses or STP overflows that is not offset by measures, and have documented any offset measures used. (Alternatively, if the wastewater flows to a STP not owned by the Owner, then the wastewater volume or flow rate is as agreed to with the Owner of the STP.)
2) The separate sewer, nominally separate sewer or forcemain alteration will:
   a) Not cause overflows or backups, nor increase surcharging at any maintenance holes or privately owned infrastructure (e.g. basements) within the municipal sewage collection system or any municipal sewage collection system connected to it; and
   b) Provide smooth flow transition to existing gravity sewers.
3) An assessment of the proposed works has been completed to determine if the works pose a significant drinking water threat. The proposed works do not pose any threats to sources of drinking water or design includes features that mitigate the threat to sources of drinking water, such as those included in: Ministry's Standard Operating Policy for Sewage Works, as amended from time to time; and Source Protection Plan policies pertaining to the works;
4) The separate sewer/nominally separate sewer/forcemain alteration is wholly located within the municipal boundary over which the owner has jurisdiction except where there is an agreement existed between municipalities;
5) The owner consents to the separate sewer/nominally separate sewer/forcemain alteration; and
6) I am an authorized representative of the owner to complete this verification.

Name of Owner	Name of Owner Representative
Signature	Date (yyyy/mm/dd)

Part 5 - Post Construction Verification by Owner for Inspection and Testing

I hereby verify that:

1) The separate sewer, nominally separate sewer or forcemain alteration has complied with inspection and testing requirements set out in the Ministry of the Environment, Conservation and Parks publication "Design Criteria for Sanitary Sewers, Storm Sewers and Forcemains for Alterations Authorized under Environmental Compliance Approval", as amended, and have documentation of the inspection and testing results.

Name of Owner	Name of Owner Representative
Signature	Date (yyyy/mm/dd)

Note: Parts 1 to 4 above shall be completed before construction.
Part 5 is to be completed after the inspection and testing have been undertaken.

Collection System Overflows

CLI-ECA Number: 152-W601

Location Name: Main Pumping Station Report Year: 2025

Provide the following information for each Sanitary System Overflow (SSO) that occurred in the collection system.

Date (dd/mm/yyyy)	Location	Type See Below	Start Time	Duration hours	Volume 1,000 m^3	Disinfect Y/N/U	Reason Code	Sample Results Available YES or NO
16/03/2025	MPS	S	19:11	6.30	5.527	Y	112	YES

Types:
(A) Class 1 Approved Discharge - Planned Event
(S) Spill - Unplanned Event

Y=Yes
N=No
U=Unknown

Reason Codes
1 = Heavy Precipitation
2 = Snow Melt
3 = Equipment Failure
4 = Eq. Maintenance
5 = Sewer Problems
6 = Power Failure
7 = Exceed Design Capacity
8 = research/training
0 = Others

Class 1 Approved Discharge:
SSO's are only considered Class 1 approved discharges if they are scheduled for either repair/maintenance or research/training activities and the district has been informed at least 15 days in advance and be required to follow condition 4.2 of the CLI-ECA 152-W601.

Spill:
If an SSO occurs for any other unplanned reason (such as a wet weather event) it would be considered a spill and be required to follow conditions 4.3 of the CLI-ECA 152-W601.

Collection System Overflows

CLI-ECA Number: 152-W601

Location Name: Main Pumping Station Report Year: 2025

Sanitary System Overflow (SSO) Monthly Summary:

MONTH	Class 1 Approved Discharge - Planned Event(s)			Spill - Unplanned Event(s)		
	No. of Days (days)	Duration (hours)	Volume (1,000 m^3)	No. of Days (days)	Duration (hours)	Volume (1,000 m^3)
January						
February						
March				1	6.3	5.527
April						
May						
June						
July						
August						
September						
October						
November						
December						
TOTAL	0	0	0	1	6.3	5.527
Volume of Class 1 Approved Discharge as % of * Average Daily Flow (ADF)			**0.00%**	Volume of Spill as % of * Average Daily Flow (ADF)		**0.10%**

ADF = 14,810 (m^3/d) 14.81048 (1,000 m^3/d)

Note: % = Volume of Bypass divided by ADF divided by 365

Comments:

Class 1 Approved Discharge - Planned Event: SSO's are only considered Class 1 approved discharges if they are scheduled for either repair/maintenance or research/training activities and the district has been informed at least 15 days in advance and be required to follow condition 4.2 of the CLI-ECA 152-W601.

Spill - Unplanned Event: If an SSO occurs for any other unplanned reason (such as a wet weather event) it would be considered a spill and be required to follow conditions 4.3 of the CLI-ECA 152-W601.