



Centre Wellington

Township Of Centre Wellington

**ANNUAL PERFORMANCE REPORT FOR  
2023**

**STORMWATER MANAGEMENT SYSTEM**

Environmental Compliance Approval  
(ECA) #098-S701

**Prepared:  
January 2024**

Township of Centre Wellington  
**STORMWATER MANAGEMENT SYSTEM**  
**ANNUAL PERFORMANCE REPORT**

ECA # 098-S701

January 1, 2023 – December 31, 2023

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## GLOSSARY OF TERMS AND ABBREVIATIONS

**Conveyance Channel:** Open channels that convey stormwater from one structure to another or directly to the water course

**Director:** A person appointed by the Minister, pursuant to section 5 of the EPA for the purpose of Part II.1 of EPA (Environmental Compliance Approvals)

**Impervious Surface Area:** Refers to surfaces that do not absorb water

**Maintenance Hole (M/H):** A structure that provides access to a sewer system for inspection, cleaning, maintenance, sampling, or flow monitoring

**Ministry:** The Ministry of the Minister and includes all employees or other persons acting on its behalf

**OGS:** Oil and Grit Separator

**SAC:** Spills Action Centre

**SDWT:** Significant Drinking Water Threat

**Spill:** An unplanned discharge of wastewater to the environment from any location that is not specifically designed for this purpose

**SPS:** Sewage Pumping Station

**Stormwater:** Rainwater runoff, water runoff from roofs, snowmelt, and surface runoff

**STP:** Sewage Treatment Plant, also known as Wastewater Treatment Plant ('WWTP')

**Third Pipe Collection System:** Sewage Works designed to collect and transmit foundation drainage and/or groundwater to a receiving watercourse

**Total Ammonia Nitrogen (TAN):** A measure of the amount of ammonia (nitrogen pollution) in wastewater

**Total Phosphorus (TP):** An essential nutrient used by microorganisms for growth. Excess amounts can lead to environmental issues like algae over-growth

**Total Suspended Solids (TSS):** Suspended particles (organic and inorganic material) present in the water sample

**Wastewater:** Water that has been used and discharged by homes, businesses, and industries. Everything we flush down a toilet or pour down a drain, collectively

## INTRODUCTION

The Stormwater Management System ('SWM') is an integral component of the linear infrastructure in the Township of Centre Wellington ('the Township'). Under the ownership of the Township of Centre Wellington and operational oversight by the Township's Wastewater Services Department, the SWM plays a pivotal role in urban drainage, flood control, and environmental protection.

Regulatory compliance, inspections, and reporting are completed through the Ministry of Environment, Conservation and Parks ('the Ministry') Guelph District Office. Consolidated Linear Infrastructure Environmental Compliance Approvals ('CLI ECAs') are issued under the Environmental Protection Act ('EPA') and Ontario Water Resources Act ('OWRA'). The Ministry issued SWM ECA # 098-S701 ('the ECA') to the Township on December 22, 2022. The ECA defines the terms and conditions of operation within the Township's SWM.

As per Schedule E, Section 5.2 of the ECA, the Township is required to submit an annual Performance Report to the Ministry Director on or before April 30<sup>th</sup> of each calendar year. This report covers the period from January 1<sup>st</sup> to December 31<sup>st</sup> of the preceding calendar year and includes monitoring data, environmental trends, operational problems and corrective actions taken, inspections, maintenance, alterations, public complaints, spills/abnormal discharges, and any other items that have affected the operations during the reporting period.

This report serves as a consolidated overview, presenting monitoring and maintenance outcomes for the collection system as stipulated by the ECA and providing insights into the overall operational performance of the SWM, such as:

### Monitoring Data:

- Summary and interpretation of required monitoring data
- Environmental trends based on all monitoring information for the past five (5) years

### Operating Problems and Corrective Actions:

- Any encountered operating problems encountered, and the corresponding corrective actions taken

#### Inspection, Calibration, Maintenance, and Repairs:

- Summary of calibration, maintenance, and repairs on major structures, equipment, apparatus, mechanisms, or thing forming the SWM

#### Complaints and Resolutions:

- Summary of complaints related to the SWM during the reporting period
- Steps taken to address complaints

#### Alterations:

- Summary of all authorized Alterations within the reporting period
- List of Alterations posing Significant Drinking Water Threats

#### Spills and Abnormal Discharge Events:

- Summary of all Spills or Abnormal Discharge Events within the SWM
- Including dates, volumes, durations, pollutant loadings, disinfection (if any), adverse impacts, and corrective actions

#### Actions Taken to Improve or Correct Performance:

- Summary of actions take, including timelines, to improve or correct performance of any aspect of the Authorized System
- Status of actions from the previous reporting period

This report, available by June 1<sup>st</sup> at [centrewellington.ca](http://centrewellington.ca), reflects the Township's commitment to transparency and environmental sustainability.

## **EXECUTIVE SUMMARY**

During the reporting period, there was one (1) spill event within the collection system, as described in Section 4.6.

The Township received 24 complaints associated with the SWM, of which six (6) were associated with SWM ponds, and 18 complaints regarding maintenance holes and

catch basins. The Township has investigated and satisfactorily addressed the reported concerns, as described in Section 5.2.7.

## SYSTEM HISTORY AND DESCRIPTION

The Township’s SWM is a separate system for stormwater (designed not to convey sanitary sewage). Tables 1 and 2 present the assets and processes within the SWM at the time of ECA issuance, contrasting them with the status upon conclusion of the 2023 reporting period.

**Table 1: Stormwater Collection System**

Sewer Type	Assumed Length (as per 098-S701 Issue Number 1)	Assumed Length (as of Dec 31, 2023)	Unassumed Length (as of Dec 31,2023)
Storm Sewers	121 km	130 km	3.73 km
Culverts and Ditches	11.63 km	12.66 km	N/A
Storm Sewers Where Jurisdiction is Shared with Wellington County	13 km	14.49 km	0

**Table 2: Stormwater Management Facilities**

Component	Assumed Quantity (as per 098-S701 Issue Number 1)	Assumed Quantity (as of Dec 31, 2023)	Unassumed Quantity (as of Dec 31, 2023)
Retention Ponds (Wet and Dry)	32	38	1
Management Areas	25	26	1
OGS	14	21	0
Catch Basins	3853	3951	128
Catch Basins (Where Jurisdiction is Shared with Wellington County)	463	465	Unknown
Maintenance Holes	690	702	37
Maintenance Holes (Where Jurisdiction is Shared with Wellington County)	99	99	Unknown

Outfalls	59 <sup>(1)</sup>	89	0
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## MONITORING DATA SUMMARY AND INTERPRETATION

### Monitoring Data and Environmental Trends

Section 5.2.3 of the ECA necessitates a summary and interpretation of environmental trends based on monitoring data from the previous five (5) years. The Township is presently awaiting the release of the Ministry's monitoring guidance document to fulfill this obligation. The Township will develop and implement a monitoring plan in accordance with Schedule E, Section 4.0, ensuring adherence to the Provincial Standard Operating Policy for Sewage Works, encompassing both General and Stormwater Management Works.

To enhance our understanding of environmental dynamics, a 10-Year Wet / Dry Weather Assessment Study was conducted within the 2023 reporting period, aligning with the requirements outlined in the Municipal Sewage Collection System ECA #098-W601, Section 8.1. Although not obligatory under the SWM ECA, the study provided valuable insights into environmental trends. Figure 1: Weather Monitoring Data presents a graph derived from the comparison study data, revealing consistent periods of elevated rainfall values across the reporting period. This noteworthy trend is crucial to emphasize, given its direct impact on the strain experienced by the SWM.

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<sup>1</sup> Corrections to Schedule B Section 1 of the ECA were sent to the Ministry following Issue Number One (1). 30 outfalls were unaccounted for at that time, therefore there were no additional outfalls added to the SWM since December 22, 2022.



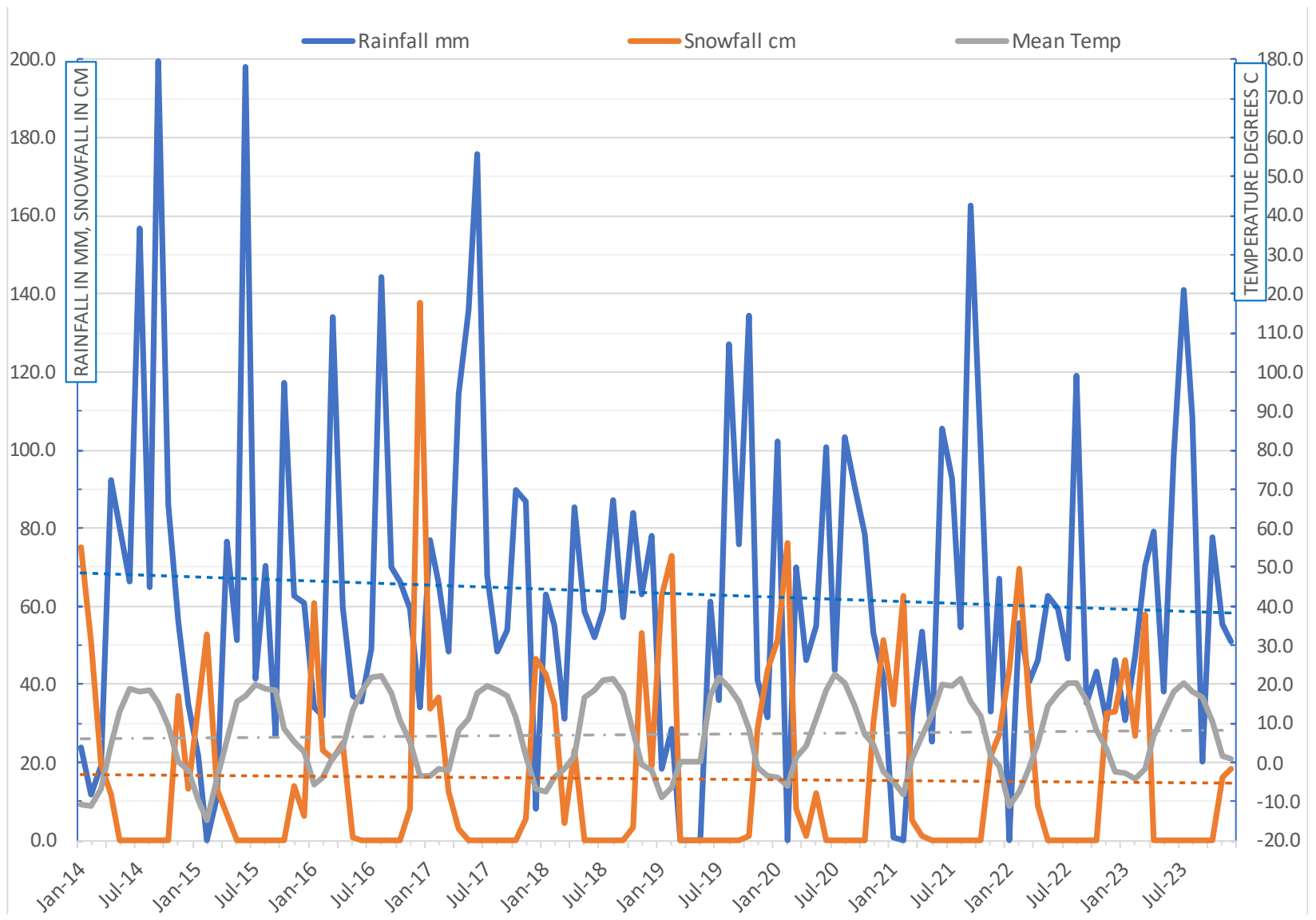


Figure 1: Weather Monitoring Data

## **CALIBRATION, INSPECTIONS, MAINTENANCE AND REPAIRS**

The SWM has been designed to operate independently and takes advantage of gravity flow for stormwater to reach the water courses. The Township completes inspections and maintenance at the required frequencies to ensure the continued operation of the system.

During the warmer weather, the routine maintenance activities include grass cutting and garbage removal, as necessary, in and around the SWM areas. The Township completes street sweeping and cleaning catch basin grates as required to limit the grit and sediment entering the storm system.

### **Inspections of the Stormwater Management System**

Inspections are crucial in order to ensure the SWM is functioning properly. Regular inspections serve as a proactive measure to identify potential issues before they escalate, contributing to the overall effectiveness and longevity of the system. By conducting thorough and routine inspections, operators can promptly detect any signs of wear, damage, or malfunction in key components of the Stormwater Management infrastructure. This proactive approach not only minimizes the risk of system failures but also allows for timely maintenance and repairs, ensuring that the system continues to meet its performance standards and regulatory compliance.

Additionally, inspections provide valuable data for continuous improvement efforts, allowing us to optimize the system's design and operations based on real-time observations and feedback. In essence, inspections are a cornerstone of our commitment to environmental stewardship and the sustainable management of stormwater resources.

Table 3 presents an overview of the inspections that took place within the reporting period, along with the required inspection frequency and an action plan for the following year.

**Table 3: Inspection Frequency and Actions**

Type of Assets	Inspection Frequency	# Completed in 2023	2023 Comments	2024 Action Plan
Catch Basin	10 Year	0	New SOP – program to start in 2024.	Inspections to be conducted by operations
OGS	Annual	19	Inspection to verify OGS specs and measure sediment.	Complete annual inspection including new OGS.
Storm Manholes	10 Year	0	New SOP – program to start in 2024.	To be completed concurrent with Biennial CCTV Program
Storm Outfalls	3 Year	0	New SOP – program to start in 2024.	Inspections to be conducted by operations
Storm Collection CCTV Inspection	As Required	0	To be completed in conjunction with Biennial CCTV Program	8,000 m slated for 2024
Storm Conveyance Channels	3 Year	0	New SOP – program to start in 2024.	Inspections to be conducted by operations
SWM Areas - Routine Inspection	Annual	22	Annual inspections completed	Annual inspections to be completed.
SWM Areas - Verification Inspection	5 Year	- - -	Not required	Determine the 5-year verification schedule.
SWM Area - Performance with Sediment Survey	10 Year	5	Sediment survey including sediment	Determine the 10-year performance schedule.

Type of Assets	Inspection Frequency	# Completed in 2023	2023 Comments	2024 Action Plan
			quality completed	

**Calibration**

Schedule E, Section 5.2.6 mandates the inclusion of a summary detailing all calibrations performed on monitoring equipment in the Annual Performance Report. It is pertinent to note that, as of the current reporting period, the Township does not possess any SWM monitoring equipment.

**Maintenance Summary**

The Township uses a preventative maintenance software to manage service requests and work orders for all scheduled and unscheduled maintenance activities. Scheduled maintenance work orders are derived from manufacturer operation and maintenance manuals, supplemented by staff expertise. Moreover, the work order system efficiently records non-routine and unplanned maintenance activities. Staff document the actions taken, and any subsequent follow-up work is planned and executed to ensure comprehensive maintenance coverage.

Table 4 demonstrates actions taken to improve the SWM during the reporting period. The Township has established a maintenance program to ensure all components of the collection system are sufficiently maintained.

**Table 4: Maintenance on the Stormwater System**

Type of Maintenance	Maintenance Frequency	# Completed in 2023	2023 Comments	2024 Action Plan
OGS Cleanout and Repairs	As Required	0	Inspection only, to verify OGS specs and measure sediment	Complete required OGS cleanouts based off 2023 inspection
Storm Sewer Re-Lining	As Required	0	No re-lining completed in 2023	Sewers to be inspected for re-lining in 2025

Type of Maintenance	Maintenance Frequency	# Completed in 2023	2023 Comments	2024 Action Plan
Storm Manhole Repairs	As Required	0	No repairs in 2023	To be completed as required
Catch Basin Cleanout and Repairs	10 Years (In-line with Inspections)	0	New SOP – program to start in 2024.	Complete the required number of inspections
Catch Basin Rehabilitation	As Required	14	Completed 2023 Catch Basin Rehab Program	10-20 Catch basin re-builds slated for 2024
Storm Outfall Repairs	As Required	0	No repairs in 2023	To be completed as required
Storm Conveyance Channels	As Required	0	New SOP – program to start in 2024.	To be completed as required
SWM Area – Cleanout and Repairs	As Required	0	No cleanouts or repairs in 2023	To be completed as required
Storm Sewer Flushing	As Required	0	No in-house sewer flushing in 2023	To be completed as required

**Past Actions**

Table 5 illustrates the historical progress of initiatives aimed at enhancing the SWM. As this marks the initial reporting period, there are no prior actions to report.

**Table 5: Status of Past Actions Taken to Improve the System**

Location	Issue	Past Actions Taken	Status of Past Actions
N/A	N/A	N/A	N/A

**Major Operation and Maintenance**

No notable operational and maintenance events were encountered or addressed within the SWM over the course of the reporting period.

## PUBLIC COMPLAINTS

Section 5.2.7 of the ECA requires a summary of any complaints related to the SWM, along with steps taken to address the concern. There were 24 complaints reported in 2023 regarding the SWM. Of the 24, six (6) were associated with SWM ponds, and 18 were regarding maintenance holes and catch basins.

Service Requests (SR) are created by Infrastructure Services staff when a complaint is received relating to the SWM. The SRs are sent to either the Supervisor of Wastewater Services / designate, or if related to catch basin issues that are resulting in road flooding, to a Roads Supervisor. Additionally, the Public can also create a Citizen Issue/Request through the Township’s website. Infrastructure Services staff review these requests to ensure the correct Supervisor is notified.

Table 6 summarizes all SWM complaints received during the reporting period. The Township has investigated all reported concerns and satisfactorily addressed each issue.

**Table 6: Public Complaints**

Complaint Type	Quantity of Complaints	Description	Actions Taken
Catch Basin and M/H Condition	18	Condition of M/H	Operations visited and assessed each complaint to determine appropriate measures. All complaints were satisfactorily addressed.
Third Pipe Collection System	1	Blocked Feeder Lateral	Operations visited and assessed. Determined complaint was a private concern
Improper use	1	People fishing in the McQueen SWM Pond	Arrived to find no one fishing in SWM pond. No further actions required
Aesthetics	3	Length of grass / weeds	Directed complaint to Public Works Department. All complaints were satisfactorily

Complaint Type	Quantity of Complaints	Description	Actions Taken
			addressed.
Safety	1	Hole in the fence at Gzowski SWM Area	Operations visited and assessed the complaint. Complaint was addressed satisfactorily
Animal Control	1	Beaver in the Gibbons Dr. SWM Pond	Operations visited and assessed the complaint. Complaint was addressed satisfactorily

## ALTERATIONS TO THE AUTHORIZED SYSTEM

There were no Notice of Modifications submitted to the Ministry within this reporting year. Alterations to the Authorized System are shown below in Table 7, including the project status and if a Significant Drinking Water Threat (‘SDWT’) was identified.

Table 7: Alterations to the Authorized System

Project	Project Stage	Sewage Works	Significant Drinking Water Threat?
Dickson Dr. Land Servicing	Constructed	Linear Storm Sewer and Facility Infrastructure	No
Beatty Line @ Garafraxa St. & Colborne St.	Constructed	Linear Storm Sewer Infrastructure	No
East Mill St. – Metcalfe St. to Melville St.	Constructed	Linear Storm Sewer Infrastructure	No
Moir St. Reconstruction	Constructed	Linear Storm Sewer Infrastructure	No

### Significant Drinking Water Threats

As mandated by Schedule E Section 8.2.3 of the CLI-ECA, this section presents the roster of Proposed Alterations to the Authorized System within the SWM categorized

as SDWT for the current reporting period. This encompasses the components, equipment, or Sewage Works undergoing alteration.

Table 8 below encapsulates the aggregate count of Capital Projects earmarked as proposed alterations to the SWM, flagged as SDWT for the period of 2023-2026.

**Table 8: Capital Projects Identified as Significant Drinking Water Threats**

Total Number of SWM Projects Classified as SDWT in 2023	0
Total Number of SWM Projects Classified as SDWT in 2024	0
Total Number of SWM Projects Classified as SDWT in 2025	0
Total Number of SWM Projects Classified as SDWT in 2026	0

The Moir St. Reconstruction Project, initially flagged as a significant drinking water threat in 2023, underwent further scrutiny of its impervious surface area. Upon review, it was determined that the project did not meet the criteria outlined in Director Technical Rule circumstance 2 for C 2.3.6 <sup>(2)</sup>, consequently excluding it from the classification of a Significant Drinking Water Threat ('SDWT').

To proactively prevent potential risks from evolving into SDWT, the Township has instituted specific requirements for the establishment of sewage works identified as SDWT. These proactive measures are designed to ensure that any proposed alterations to the Authorized System for sewage works and SWM adhere to protocols that minimize the risk of SDWT.

The implemented actions are strategically focused on guaranteeing that alterations to the Authorized System are meticulously designed and operated to mitigate the risk of SDWT. By adhering to these measures, the Township underscores its commitment to safeguarding drinking water quality and preventing potential risks from reaching SDWT status.

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<sup>2</sup> A stormwater management facility outfall or a stormwater drainage system outfall that serves land where the predominant land use is residential or institutional or community use.



First, the design must incorporate a comprehensive Source Protection Supplementary Report, demonstrating the effective implementation of mitigation measures dedicated to safeguarding drinking water sources. Additionally, the design is required to meet the stringent requirements set forth by both the Clean Water Act and the specific design and operational standards established by the Township. Moreover, the design must thoroughly evaluate potential risks, drawing on the Ministry's Risk Management Measures Catalogue for guidance. To ensure comprehensive oversight, designs must be accompanied by a robust monitoring and reporting plan. Furthermore, a Spill Prevention and Contingency Plan is an integral component, designed to prevent, eliminate, or mitigate any adverse effects on drinking water resulting from pollutant spills. The ongoing relevance and efficacy of Spill Prevention and Contingency Plans are emphasized through the requirement for regular updates.

## SPILLS AND ABNORMAL DISCHARGE EVENTS

### Spills During Reporting Period

Table 9 demonstrates spills and/or abnormal discharges to the SWM that occurred during the reporting period.

**Table 9: Spills / Abnormal Discharges Occurring During the Reporting Period**

Location	Volume	Loading <sup>(3)</sup>				E. Coli	Description of Event
		BOD	TSS	TP	TKN		
Metcalfe St. Elora	7.09 m <sup>3</sup>	1.67 kg	0.98 kg	0.06 kg	0.53 kg	800,000 CFU /100mL	<p>Critical failure of the sewer main on Metcalfe St. occurred, causing the discharge of sewage from a manhole at the intersection of Church St. and Metcalfe St. into the storm sewer.</p> <p>The activities associated with the emergency repairs included bypass pumping, excavation contractor (excavation, sewer installation, backfill, and compaction), supply and installation of various materials (pipe, fittings, granular A/B, asphalt), line markings, and condition assessment of nearby upstream and</p>

<sup>3</sup> No samples were obtained; however, loading was calculated using surrogate sample results as per Schedule E, Section 3.4.b.ii of ECA # 098-W601.

							<p>downstream sewers.</p> <p>Final volume of 7.09 m<sup>3</sup> was discharged into the storm sewer over a duration of 4 hours and 20 minutes.</p> <p>All SAC and Ministry paperwork and reporting has been completed in the required timeframe.</p>
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## REFERENCES:

- ECA # 098-S701 (SWM)
- 10-Year Wet/Dry Weather Assessment Study
- CityWide Work Orders and Service Requests
- Sediment Survey Reports
- OGS Inspection Reports
- Spill Report
- Reference # 1-4FFP7F
- Significant Drinking Water Threat Report, written by the Source Water Protection department within the Township.
- “2024 02 29 Significant DW Threat Report – Stormwater”

Detailed summary reports that present information regarding maintenance, inspection, monitoring data, etc. are available upon request.