Annual **Performance** Report
Stormwater

2025

MARCH 24, 2026

The Corporation of The Township of Stirling-Rawdon

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Introduction

On January 11, 2023, the Township of Stirling-Rawdon received its first municipal stormwater Consolidated Linear Infrastructure Compliance Approval (CLI ECA). The new CLI ECAs replaced the previous Environmental Compliance Approvals (ECAs) that the Ministry of the Environment, Conservation and Parks would issue for specific projects within the stormwater collection Systems. Consolidated Linear ECA's are issued under the Environmental Protection ACT (EPA) and the Ontario Water Resources Act (OWRA).

The CLI ECAs are a single approval for all stormwater management systems and include conditions to authorize municipalities and prescribed persons, such as developers, to make changes to the stormwater management system when the specific requirements of the CLI ECA are met. As part of the Township of Stirling-Rawdon's CLI ECA for stormwater management, the Municipality is required to provide an annual report. This report covers the reporting period from January 1, 2025 to December 31, 2025 and is required to be submitted to the Ministry on or before April 30th and posted on the Municipalities website.

The Township of Stirling-Rawdon's stormwater management system consists of approximately 13.17 km of underground piping ranging in diameter from 150mm to 1350mm within the village of Stirling. The Municipality is responsible for the following systems, with several more to be assumed in the future. Below is a table of the Municipality's SWMF, and type.

Stormwater Facility	Location	Description	Year of Construction or ECA Issuance
Ryell Homes Stormwater Management	Carrick St, Ryell Subdivision, Stirling, Ontario	Oil/Grit Separator with storage pond	July 9, 2012
Harvest Glenn Stormwater Management	Barley Trail, Harvest Glen Subdivision, Stirling, Ontario	Wet pond with sediment forebay	November 2, 2018

This annual report has been prepared in accordance with the requirements in Schedule E of the Township of Stirling-Rawdon Stormwater CLI ECA. The annual report should include the following:

- 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 Environment.
- Includes a summary and interpretation of environmental trends based on all monitoring information and data for the previous five (5) years;
- Includes a summary of any operating problems encountered and corrective actions taken;
- 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;
- Includes a summary of the calibration and maintenance carried out on all monitoring equipment;
- Includes a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints;

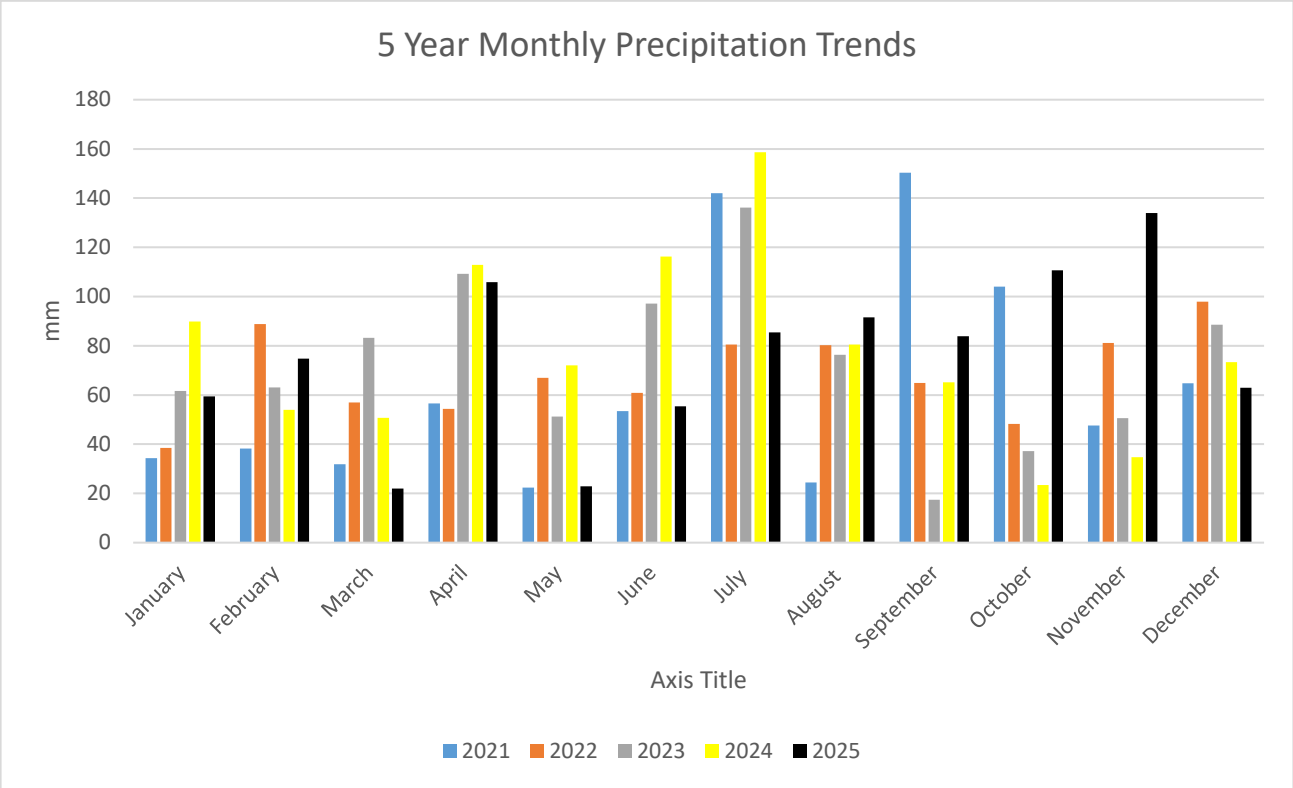
• Includes a summary of all Alterations to the Authorized System within the reporting period that are authorized by this Approval including a list of Alterations that pose a Significant Drinking Water Threat;
• Includes a summary of all spills or abnormal discharge events;
• Includes a summary of actions taken, including timelines, to improve or correct performance of any aspect of the Authorized System; and
• Includes a summary of the status of actions for the previous reporting year.

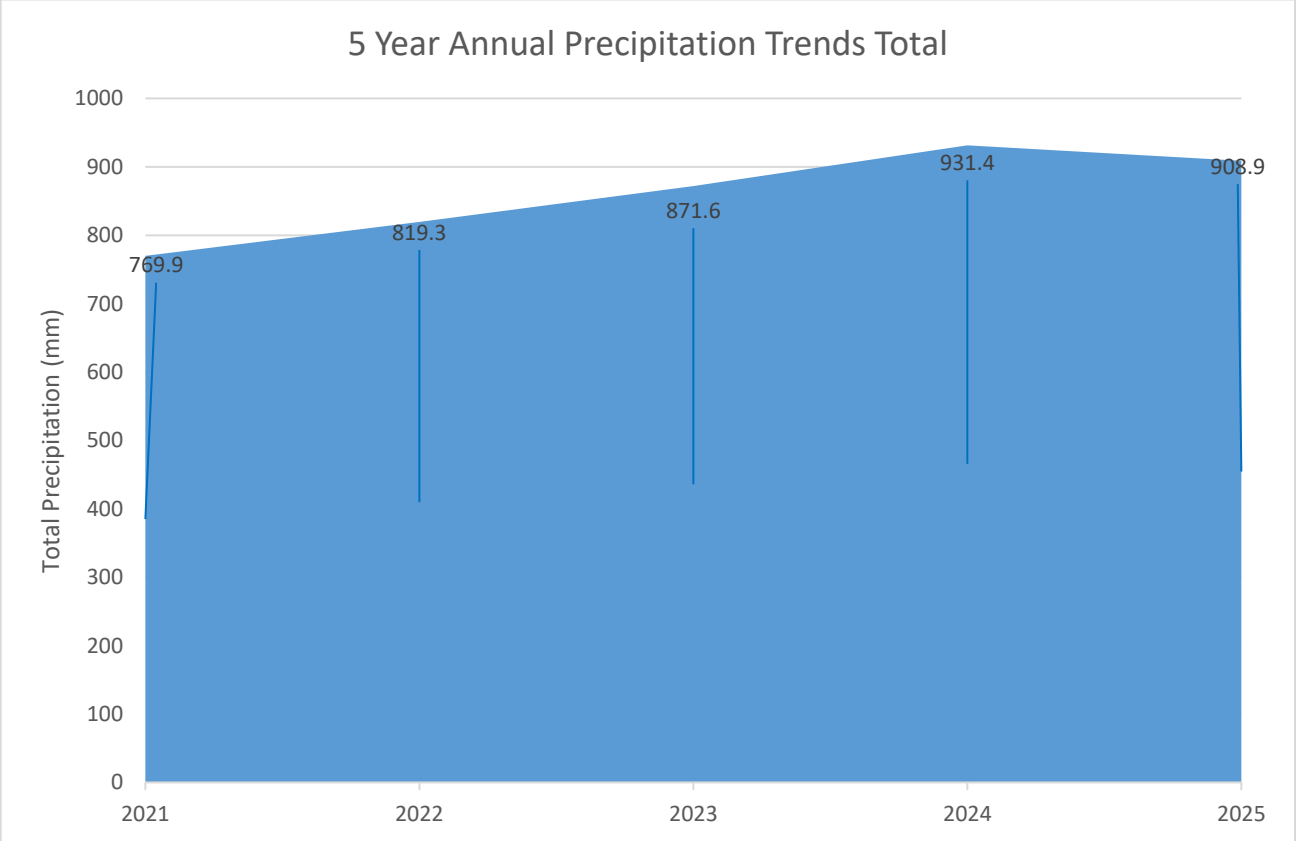
Summary and interpretation of Monitoring Data

At this time, the Municipality is waiting for the Ministry of the Environment, Conservation and Parks (MECP) Stormwater Guidance Document to develop a comprehensive sampling program for its stormwater management infrastructure.

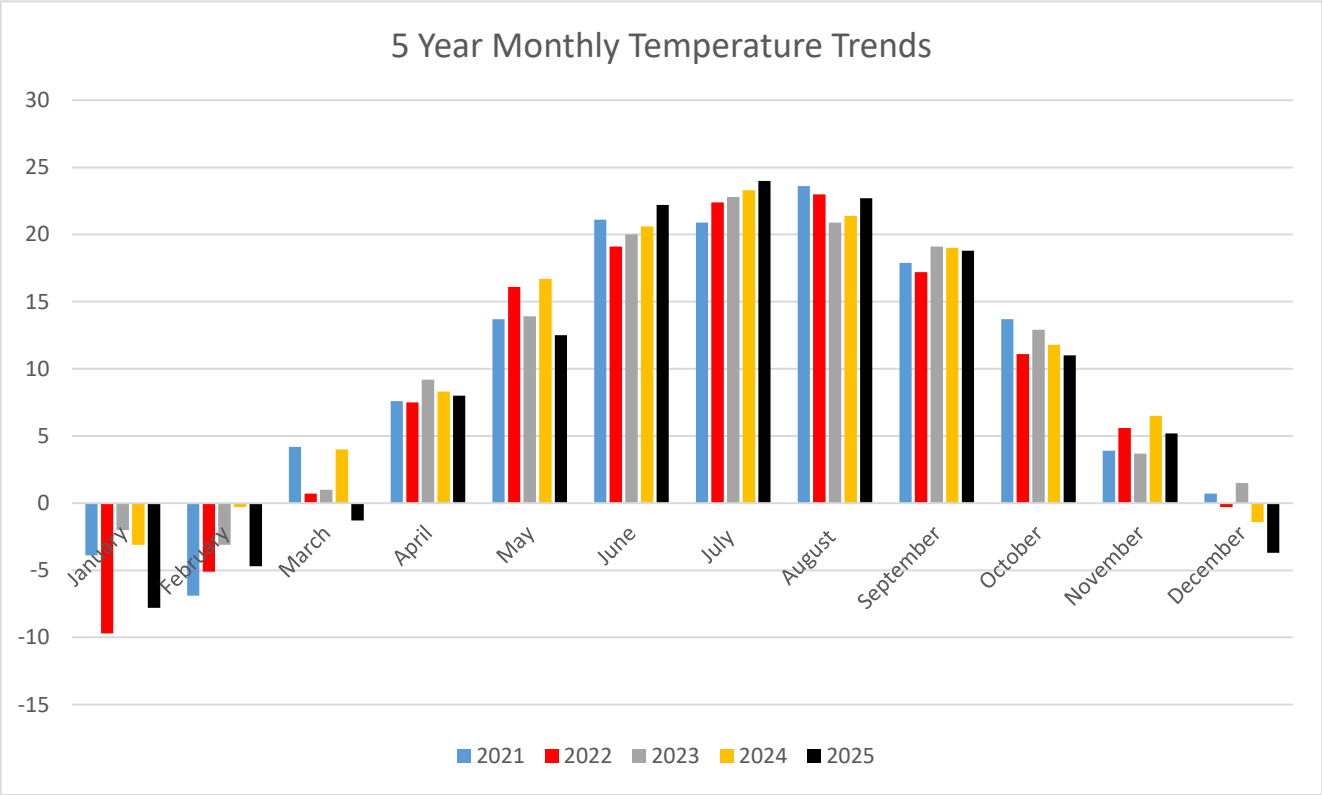
Summary of interpretation of Environmental Trends

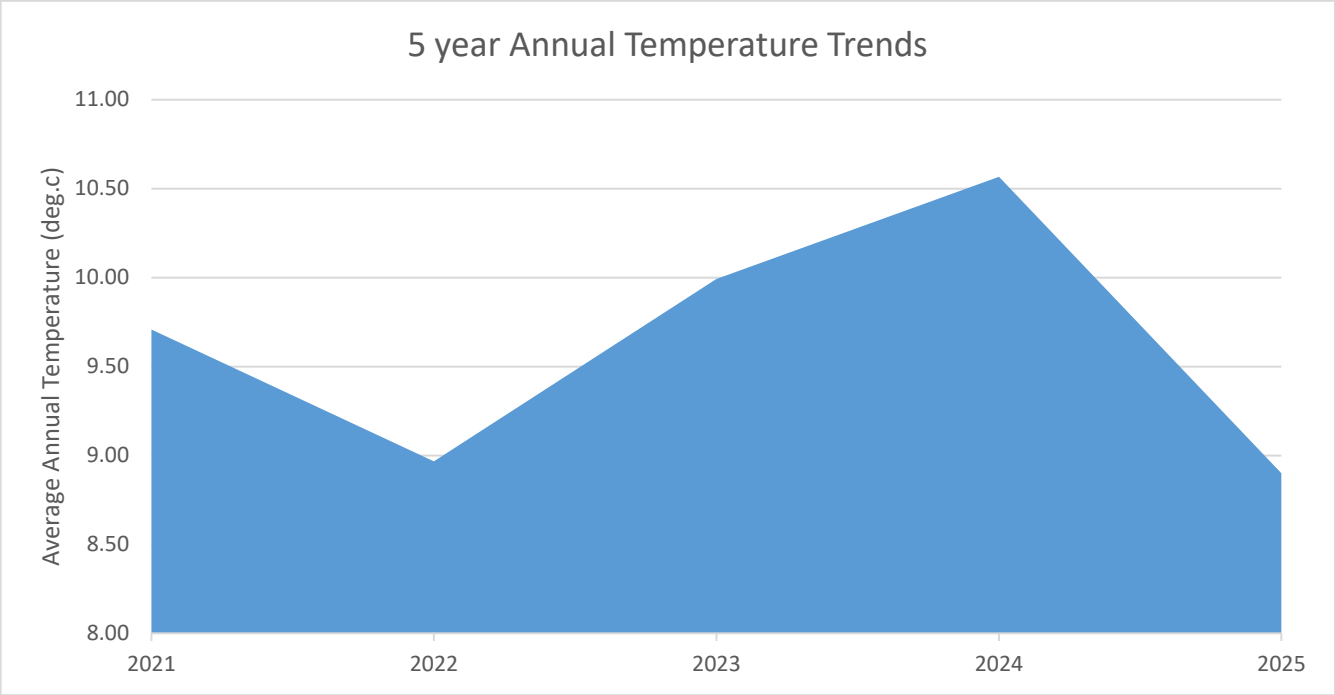
Below is a summary of weather data collected from the Belleville, Ontario Monitoring Station. As depicted below in the charts, there doesn't appear to be a consistent correlation between the month and the amount of precipitation received. Over the 5 year period the month of max precipitation varies, however each year did experience the month with the most amount of precipitation in the second half of the year (between July-December).


5 Year Monthly Precipitation Trends
mm
180
160
140
120
100
80
60
40
20
0
January
February
March
April
May
June
July
August
September
October
November
December
Axis Title
2021
2022
2023
2024
2025


5 Year Annual Precipitation Trends Total
Total Precipitation (mm)
1000
900
800
700
600
500
400
300
200
100
0
769.9
819.3
871.6
931.4
908.9
2021
2022
2023
2024
2025

As displayed in the temperature data collected below, the correlation between temperature and month are consistent across the 5 year period. Trending follows seasonal temperature predictions for each month with the highest temperatures tending to occur during the summer, whereas cooler temperatures occur in the winter months. The average temperature during the 5 year average shows a gradual increase. This data is consistent with the ECCC's Climate Trends and Variations Bulletin.





Summary of Operating Problems During The Monitoring Period

The Stormwater Collection System operated as intended throughout the monitoring period.

Summary of Maintenance Performed Throughout The Reporting Period

The following is a summary of repair and maintenance activities completed during the reporting period:

- Flushing Various Storm Sewers
- Cleaned out all catch basins
- Frame, grate and curb replacement at various locations
- Stormceptor cleanout at Ryell Stormceptor
- Stormwater Management Facility Inspections
- Ditching at various locations

Flow Monitoring Equipment Calibration and Maintenance

The Township of Stirling-Rawdon does currently not have any monitoring equipment in place in the Stormwater Collection System. As the Ministry's Stormwater Guidance Document is released and the Municipality continues to develop its Stormwater Management program this is something that the Municipality will consider in the future.

Summary of Complaints Received Throughout The Reporting Period.

A total of 3 customer complaints were received in the reporting period. The complaints were minor in concern and typically dealt with a service request for a catch basin grate cleaning after a storm. Additional complaints were raised regarding the lack of grass in recently ditched areas that had not yet grown but had been seeded.

Summary of Spills or Abnormal Discharge Events throughout the Monitoring Period

There were no Spill(s) or Abnormal Discharge Events to report for the monitoring period.

Summary of Actions Taken to Improve the Authorized System

In addition to the Municipalities maintenance outlined in the section, Summary of Maintenance Performed Throughout the Reporting Period, the Municipality also plans capital replacement projects in conjunction with the Asset Management Plan. This plan includes replacement and revitalization of Municipal Assets.

2025 Expenditures

- Pipe and catch basin replacement John St- $16,500
- Pipe Install and erosion control Belleville Rd- $3,000
- Flushing Various Storm Sewers – Conducted in house
- Cleaned out catch basins – $7200
- Frame, grate and curb replacement at various locations - $3900
- Stormceptor cleanout at Ryell Stormceptor - $1,000
- Ditching at various locations - $ 2,300

2026 Expenditures

No major capital expenditures are budgeted for 2025; however a large infrastructure project is being planned for 2027 and 2028 with the replacement of stormwater infrastructure on Belleville Road and North St. The continuation of preventative maintenance and facility inspections will continue in 2026.

Proactive Efforts & Next Steps

In 2019 the Municipality contracted a third-party Engineering Firm to conduct an infrastructure study on the water, wastewater and stormwater systems. This report along with recent revisions in 2023 has provided a growth framework for infrastructure needs that will aid in development, infrastructure revitalization and information for grant applications.

Status of Action Items From the Previous Reporting Year

None Noted.

Appendix A: Significant Drinking Water Threat (SDWT) Assessment Report for Proposed Alterations to the Sanitary Collection System and/or to the Stormwater Collection System

1. Introduction

This Assessment Report has been prepared in accordance with the Township of Stirling-Rawdon Stormwater Collection System Consolidated Linear Infrastructure Environmental Compliance Approval #167-S701, and the Sanitary Collection System CLI-ECA # 167-W601, Schedule E section 7.0 and section 8.0. Under the Stormwater Collection System and Sanitary Collection System CLI-ECA's the Municipality must ensure that any Alteration to the Authorized System(s) is designed, constructed and operated in such a way as to be proactive of sources of drinking water in Vulnerable Areas as identified in the Source Protection Plan (SPP). This report outlines the circumstances under which any proposed alterations could pose a significant drinking water threat and outline the criteria to determine how significant drinking water threats are assessed.

2.0 Circumstances Posing a Safe Drinking Water Threat and Related Policy

Activities prescribed to be drinking water threats under the Clean Water Act are those considered to be man-made. These activities, as listed in the Act, are provided below. Activities 1-18 and 21-22 are potential threats to water quality, and activities 19 and 20 are potential threats to water quality.

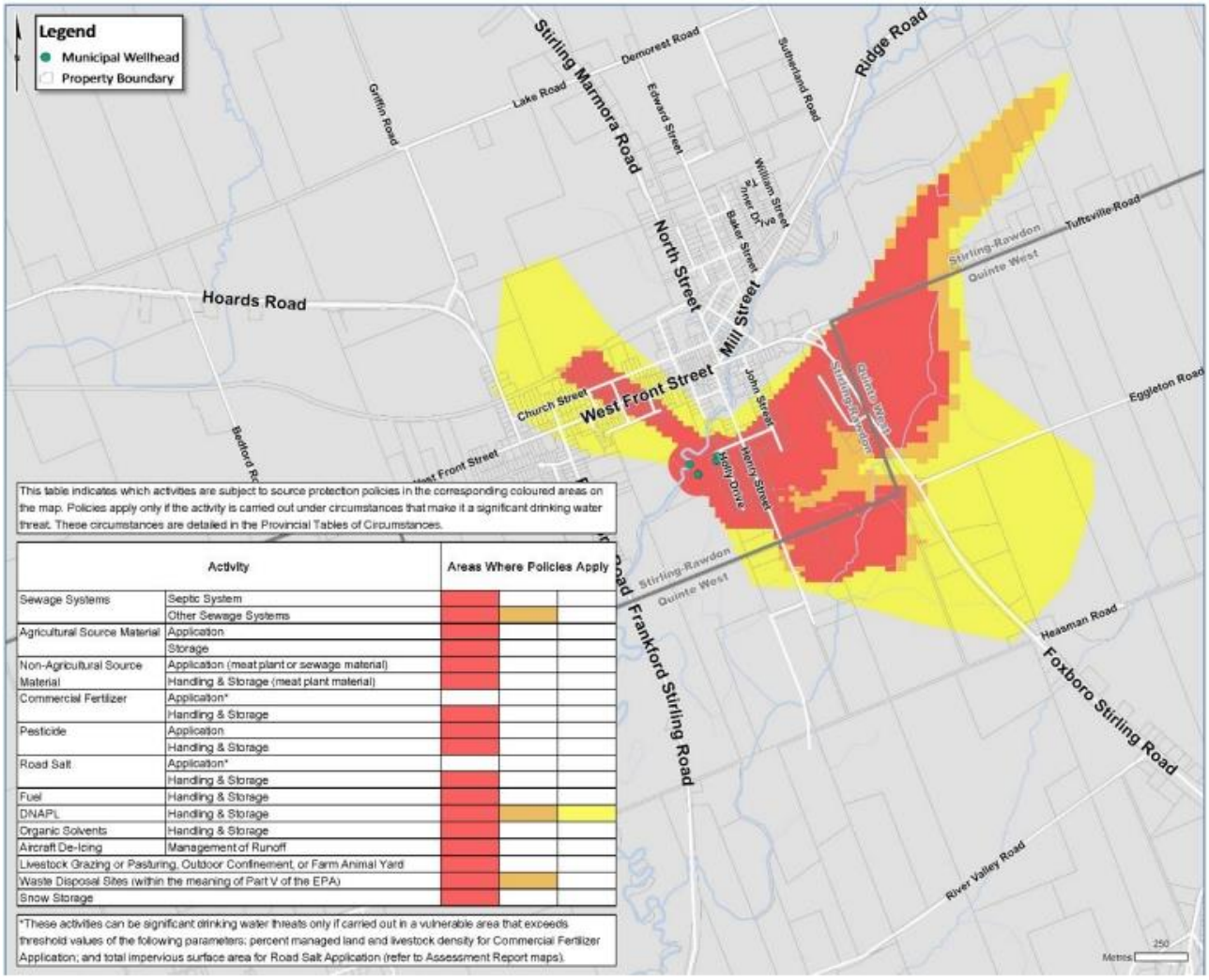
1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the EPA.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.

5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of dense non-aqueous liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm- animal yard.
22. The establishment and operation of a liquid hydrocarbon pipeline. O.Reg. 385/08, s. 3; O.Reg.206/18, s.1.

Each drinking water threat has a set of circumstances that determine whether a particular instance of the activity is a significant, moderate, or low drinking water threat in each type of vulnerable area. These circumstances reflect various aspects of the activity. For some activities, there are separate sets of circumstances that determine if the activity is a chemical threat or a pathogen threat. Chemical threats are the aspects of an activity that can result in chemical contamination of a drinking water source and include a wide variety of substances. A pathogen threat is a micro-organism that causes disease and often comes from

human or animal waste. Some activities are both chemical and pathogen threats. The details and definitions of each prescribed threat are contained in the 2021 Technical Rules under the Clean Water Act.

The Township of Stirling-Rawdon's Source Water Protection Area is in the jurisdiction of the Lower Trent Conservation Area which is part of the Trent Source Protection Plan. The vulnerable areas delineated around surface water intakes are called intake protection zones (IPZ), and those delineated around groundwater wells are called wellhead protection areas (WHPA).



This table indicates which activities are subject to source protection policies in the corresponding coloured areas on the map. Policies apply only if the activity is carried out under circumstances that make it a significant drinking water threat. These circumstances are detailed in the Provincial Tables of Circumstances.

Activity		Areas Where Policies Apply		
Sewage Systems	Septic System			
	Other Sewage Systems			
Agricultural Source Material	Application			
	Storage			
Non-Agricultural Source Material	Application (meat plant or sewage material)			
	Handling & Storage (meat plant material)			
Commercial Fertilizer	Application*			
	Handling & Storage			
Pesticide	Application			
	Handling & Storage			
Road Salt	Application*			
	Handling & Storage			
Fuel	Handling & Storage			
DNAPL	Handling & Storage			
Organic Solvents	Handling & Storage			
Aircraft De-Icing	Management of Runoff			
Livestock Grazing or Pasturing, Outdoor Confinement, or Farm Animal Yard				
Waste Disposal Sites (within the meaning of Part V of the EPA)				
Snow Storage				

*These activities can be significant drinking water threats only if carried out in a vulnerable area that exceeds threshold values of the following parameters: percent managed land and livestock density for Commercial Fertilizer Application; and total impervious surface area for Road Salt Application (refer to Assessment Report maps).

Under the Clean Water Act, 2006, "The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage is an activity prescribed to be a drinking water threat". Given the variety of activities associated with the sewage systems, this drinking water threat is divided into several subcategories. Table 1 below is taken from Chapter 4: Policies in the Trent Source Protection Plan and outlines the Threat Subcategory along with applicable policies.

Threat Subcategory Sewage System or Sewage Works:	Applicable Policies[1]	Applicable Area[2]				
		IPZ & WHPA-E			WHPA A-D	
Septic System	S-1 to S-5, S-9, S-10	10	-	-	10	-
Septic System Holding Tank	S-1 to S-5, S-9, S-10	10	-	-	10	-
Sanitary Sewers and Related Pipes	S-6, S-7, S-9, S-10	10	-	-	10	-
Combined Sewer Discharge from a Stormwater Outlet to Surface Water	S-2, S-3, S-9, S-10	10	9	8	-	-
Industrial Effluent Discharge	S-2, S-3, S-9, S-10	10	9	8	-	-
Storage of Sewage	S-2, S-3, S-9, S-10	10	9	-	10	8
Sewage Treatment Plant Bypass Discharge to Surface Water	S-2, S-3, S-9, S-10	10	9	8	-	-
Sewage Treatment Plant Effluent Discharges (Includes Lagoons)	S-2, S-3, S-9, S-10	10	9	8	-	-
Discharge of Untreated Stormwater from a Stormwater Retention Pond	S-3, S-8, S-9, S-10	10	9	8	10	-

Examining each threat and applicable policy is described in further detail in the Trent Source Protection Plan. To determine whether a specific activity and/ or set of circumstances would be considered as a Safe Drinking Water Threat the Policy Applicability Maps in

conjunction with the 2021 Technical Rules, and Policy text would be utilized.

[1] General Policies may also apply for these activities
[2] Indicates the minimum vulnerability score that would result in a significant threat in at least one threat circumstance

3.0 Assessing Proposed Alterations

As a requirement of Schedule E of the CLI ECA this section describes the steps to any proposed alterations being made to the sanitary or stormwater systems that would identify threats to the drinking water defined by the Clean Water Act.

1. Any proposed development requests are directed to the Hastings County Planning Department for review.

2. If the development is proposed to be located within a vulnerable area of the Source Water Protection Area, the Planning Department will correspond to Lower Trent Conservation Risk Management Official for review.

3. The Risk Management Official will evaluate if the activity poses a threat to drinking water using the MECP Technical Rules and the Trent Source Protection Plan.

4. As Required the Risk Management Official Consults with the developer.

5. The Municipality will review the potential development and provide comment back to the developer, Hastings County and Lower Trent Conservation.

4.0 List of Proposed Alterations

This section outlines the proposed alterations received during the reporting period that were assessed for a safe drinking water threat. Any components, equipment, or sewage works identified as a SDWT will remain in the below listed sections for the operational life of the sewage works.

4.1 Proposed Sanitary Alterations

Submission Date	Description of Project	Location	Developer-Lead/ Municipal Lead	Identified as a SDWT	Approval Issue Date
There were no SDWT identified during this reporting period					

4.2 Proposed Stormwater Alterations

Submission Date	Description of Project	Location	Developer-Lead/ Municipal Lead	Identified as a SDWT	Approval Issue Date
There were no SDWT identified during this reporting period					

5.0 Design Considerations to Mitigate Risk

This section is intended to provide a summary of design considerations and other measures that have been put in place to mitigate risks resulting from the construction or operation of the components, equipment or sewage works identified as a SDWT in Section 4.0. There were no SDWT identified during the reporting period, therefore no mitigation activities or measures were required.

6.0 Conclusion

This annual report has been prepared as per the conditions of the Stormwater Collection System and the Sanitary Collection System Consolidated Linear ECA. The Township of Stirling-Rawdon ensures that any alterations to the system are designed, constructed and operated in such a way as to be protective of sources of drinking water in Vulnerable Areas as identified in the Source Protection Plan. During the reporting period The Township of Stirling-Rawdon has not identified any drinking water threats from proposed alterations submitted in accordance to the CLI ECA's.

7.0 References

- 2021 technical rules under the Clean Water Act, http://www.ontario.ca/page/2021-technical-rules-under-clean-water-act
- Trent Source Protection Plan https://trentsourceprotection.on.ca/
- Source Water Protection Information Plan, http://swpip.ca/
- Source Water Mapping https://trentsourceprotection.on.ca/wp-content/uploads/2025/06/5-28abde_Stirling2025.pdf