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Township of Springwater Stormwater Management System

2023 Annual Performance Report



Township of Springwater Stormwater Management System 2023 Annual Performance Report

Table of Contents

1.0	Introduction	1
2.0	Description of Works	2
3.0	Summary of Monitoring Data and Interpretation.....	5
3.1	SWM Pond Bathymetric Survey and Cleanout Prioritization Report (AHYDTECH Geomorphic, March 2024)	5
4.0	Summary of Environmental Trends	6
5.0	Operational Issues and Corrective Actions.....	6
6.0	Inspections, Maintenance, and Repairs.....	6
7.0	Monitoring Equipment Calibration and Maintenance	7
8.0	Complaints.....	7
9.0	Alterations to the Authorized System	7
10.0	Spills and Abnormal Discharge Events	8
11.0	Authorized System Performance Improvements and Corrections	8
12.0	Action Items from Previous Reporting Year	8

Township of Springwater Stormwater Management System 2023 Annual Performance Report

1.0 Introduction

This report was prepared in accordance with the requirements of the Environmental Compliance Approval for Municipal Stormwater Management Systems, Schedule E, Section 5.2.

Municipal Stormwater Management System ECA #	128-S701 Issue 1
Sewage Works	Township of Springwater Storm Water Management System
System Owner	The Corporation of the Township of Springwater
Reporting Period	January 1, 2023 to December 31, 2023

Note: As per Schedule E, Section 5.2 of CLI-ECA #128-S701, the Owner shall prepare an annual performance report for the Authorized System that is submitted to the Director on or before April 30th of each year and covers the period of January 1st to December 31st of the preceding calendar year.

Is the Annual Report available to the public at no charge on a website on the Internet?

Yes

Note: As per Schedule E, Section 5.3.1 of CLI-ECA #128-S701, the annual performance report shall be made available, on request and without charge, to members of the public who are served by the Authorized System; and 5.3.2 shall be made available, by June 1st of the same reporting year, to members of the public without charge by publishing the report on the Internet, if the Owner maintains a website on the Internet.

Location where Annual Performance Report required under CLI-ECA #128-S701, Schedule E will be available for inspection. (CLI-ECA #128-S701, Schedule E, Section 5.3):

- Township of Springwater Municipal Office 2231 Nursery Road, Minesing
- www.springwater.ca

Pursuant To Schedule E, sections 5.2.2 to 5.2.11, this Annual Performance Report Shall:

- 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 (5) 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.

Township of Springwater Stormwater Management System 2023 Annual Performance Report

- 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 actions taken, including timelines, to improve or correct performance of any aspect of the Authorized System. and
- j) Includes a summary of the status of actions for the previous reporting year.

2.0 Description of Works

The municipal Stormwater Management System serving the Township of Springwater drainage area, is a separate system for stormwater (designed not to convey sanitary sewage or combined sewage) within Georgian Bay, Lake Simcoe, Willow Creek, Marl Creek-Nottawasaga River, and the Wye River Watersheds. The Municipal SWM System consists of storm sewers, culverts, ditches, Stormwater Management Facilities and outlets.

The authorized Springwater Stormwater Management System is a collection of several Stormwater Collection Systems, consisting of a total of 30 stormwater management (SWM) facilities, 80 low impact development (LID) facilities, 2 oil and grit separators (OGS) and a total of 890km of storm sewers.

The table below shows the Stormwater Collection Systems within the authorized system:

Table 1 : Stormwater Collection Systems

Collection System Names
2231 Nursery Road Storm Water System
Anten Mills Storm Water Sewer System
Apto Storm Water Sewer System
Bertram Industrial Parkway Storm Water System
Center Vespra Storm Water Sewer System
Elmvale Storm Water Sewer System
Fergusonvale Storm Water Sewer System
Hillsdale Storm Water Sewer System
Midhurst Storm Water System
Minesing Storm Water Sewer System
Paddy Dunn / Carson Ridge Storm Water System
Phelpston Storm Water Sewer System
Ravines of Matheson Creek Storm Water System
Snow Valley Lowlands Storm Water Sewer System
Vespra Downs Storm Water Pond

Township of Springwater Stormwater Management System 2023 Annual Performance Report

Table below provides a summary of the Township of Springwater SWM facilities:

Table 2 : Summary of Stormwater Management Facilities by Type

Facility Type	Quantity
Wet Ponds	10
Dry Ponds	18
Infiltration Ponds	2
Low Impact Development (LID) Facilities – (infiltration, evapotranspiration, harvest)	80
Sedimentation Oil and Grit Separators	2
Pumping Stations	0

Wet Ponds

Wet ponds are SWM facilities that provide quantity, quality, and erosion control from the upstream storm system. Wet ponds contain a permanent pool which allows for treatment of water through biological activities within the pond. Although wet ponds may look like natural bodies of water, they are designed for stormwater management purposes. These facilities differ from natural bodies in that water levels can rapidly change by several feet and sediment may accumulate quickly in the pond.

Currently, there are ten (10) wet ponds within the Township's CLI-ECA.

Table 3 : Stormwater Management Wet Ponds

Wet Pond
Bridal Trail Wet Pond
Burton Crescent Wet Pond
Davenport Drive Wet Pond
Gallo / Elmvale Village Wet Pond
Hall Street Wet Pond
Loftus Street Wet Pond
Marl Creek Wet Pond
Marni Lane Wet Pond
Plowright Road Wet Pond
Wendat Trail Wet Pond

Dry Ponds

Dry ponds are SWM facilities that mainly provide quantity and erosion control and erosion control from the upstream storm system. Since there is no permanent pool within the pond, quality control through the removal of sediments is entirely dependent on the stormwater detention time which generally lasts for the storm duration plus the time to deplete the pond to the downstream system.

Currently, there are eighteen (18) dry ponds within the Township's CLI-ECA.

Township of Springwater Stormwater Management System 2023 Annual Performance Report

Table 4 : Stormwater Management Dry Ponds

Dry Pond
Adams Ave Dry Pond
Alana Drive Dry Pond
Alpine Trail Dry Pond
Black Creek Dry Pond
Budd's Mill Dry Pond
Foyston Centre Dry Pond
Foyston Pond NW Dry Pond
Gallagher Crescent Dry Pond
Ghibb Dry Pond
Heron Dry Pond
Highway 93 (Forest of the Hillsdale Estates)
Huron Street Dry Pond
McFadden Drive Dry Pond
Moreau Way (Yorkwood) Dry Pond
O'Neil Circle Dry Pond
Orchardview Street Dry Pond
Paddy Dunn's Circle (Del Trend) Dry Pond
Parr Boulevard Dry Pond

Infiltration Ponds

Infiltration ponds are SWM facilities that differ from wet ponds (retention basins) and dry ponds (detention ponds) in that infiltration ponds are designed to infiltrate stormwater through permeable soils into the groundwater. Infiltration basins do not release water except by infiltration, evaporation or emergency overflow during flood conditions.

Currently, there are two (2) infiltration ponds (listed below) within the Township's CLI-ECA.

Table 5 : Stormwater Management Infiltration Ponds

Infiltration Pond
Admin Centre
Bertram Industrial Parkway

Stormwater Low Impact Developments (LID)

Low impact developments (LID) focus on maintaining and restoring the natural water balance by providing infiltration, groundwater recharge and lowering surface runoff volumes and flow rates. Various LIDs are put into practice such as bioretention, green roofs, swales, underground infiltration and permeable pavers.

Currently, there are eighty (80) LIDs within the Township's CLI-ECA.

Township of Springwater Stormwater Management System 2023 Annual Performance Report

Sedimentation Oil and Grit Separators (OGS)

Oil and Grit Separators (OGS) systems are designed to provide quality control through the means of gravity separation for the grit and phase separation for the oils. They are often found in industrial and commercial sites as a form of pre-treatment where spill control is required. Typically, these structures are underground and part of a multi-component system for water quality control.

Currently there are two (2) OGS (listed below) part of the Township's stormwater system.

Table 6 : Stormwater Management Oil Grit Separators

Oil Grit Separators (OGS)
Admin Centre (2231 Nursery Road)
Village of Hillsdale (at the Intersection of Albert Street East and Home Street)

Stormwater Pumping Station

It is understood by the Township that a single storm pumping station is within the Township's geographical extents, however, it is understood that the infrastructure is part of the adjoining Municipal Drain and is managed under the Drainage Act. There is no stormwater pumping station in the Township's stormwater management system.

3.0 Summary of Monitoring Data and Interpretation

An overview and interpretation of monitoring activities during the reporting period are summarized below:

3.1 SWM Pond Bathymetric Survey and Cleanout Prioritization Report (AHYDTECH Geomorphics, March 2024)

In 2023, the Township of Springwater retained AHYDTECH Geomorphics to assess sediment accumulation in eight (8) wet ponds. The objective was to evaluate sediment levels, recommend cleanout and repair actions, and prioritize remediation efforts. The assessment involved collecting and reviewing both digital and field survey data, calculating sediment volumes, updating pond drawings, and prioritizing ponds for cleanout. Sediment volumes were calculated by comparing the surveyed sediment surface with the original pond bottom, as documented in design or as-built drawings. Cross-sections of each pond were generated and reviewed to ensure accuracy. The report then assessed and ranked based on the current accumulation of sediment in the ponds and the estimated annual sediment loading rate. Recommendations to prioritize sediment cleanout of the ponds were prepared based on this ranking.

The Table below shows a summary of the wet pond assessments and prioritization of cleanout. Refer to the full report for more details and recommendations.

Township of Springwater Stormwater Management System 2023 Annual Performance Report

Table 7: Summary of Wet Pond Survey and Cleanout Prioritization

Wet Pond Name	Percentage of Sediment Accumulation Volume			Cleanout Prioritization Rank	Report Recommendations
	Permanent Pool (%)	Forebay (%)	Total Pond (%)		
Hall Street	69.71	84.79	75.99	1	Immediate cleaning of the whole pond recommended
Marl Creek	32.26	49.20	43.51	2	Cleaning of the whole pond will be required shortly based on rate of sediment accumulation.
Wendat Trail	33.48	9.89	25.23	3	Cleaning of Main Cell recommended
Marni Lane	13.24	19.85	14.16	4	Cleaning of Forebay Recommended
Burton Crescent	6.93	-	6.93	5	No cleaning recommended
Loftus Road	7.61	-	7.61	6	No cleaning recommended
Bridle Trail	N/A	N/A	N/A	7	No sediment found. No cleaning recommended
Davenport Drive	N/A	N/A	N/A	8	No sediment found. No cleaning recommended
Source: SWM Pond Bathymetric Survey and Cleanout Prioritization Report, Prepared by AHYDTECH Geomorphics, March 2024.					

4.0 Summary of Environmental Trends

No monitoring data is available for the five years preceding 2023; therefore, no environmental trends can be reported for this period. This document represents the first annual stormwater report following the issuance of CLI-ECA #128-S701.

5.0 Operational Issues and Corrective Actions

There were no significant operational issues or corrective actions identified in 2023.

6.0 Inspections, Maintenance, and Repairs

A visual inspection is completed annually on each stormwater management pond. Maintenance and repairs conducted on the Authorized System during this reporting period are outlined below in Table 8.

Township of Springwater Stormwater Management System 2023 Annual Performance Report

Table 8: Maintenance and Repair Summary Table

Date	Facility	Maintenance Details
JULY 2023	Burton Crescent Wet Pond	Brushed with mechanical equipment

In September 2024, Stormwater Management Facility Operation and Maintenance Manual was issued for the Township of Springwater recommending other monitoring and maintenance activities for the Stormwater Management Facilities in the Authorized System. The implementation of these recommendations are anticipated to commence in 2026.

Based on inspections performed in 2023, the following maintenance work is planned for the near future in the coming year(s) and outlined below in Table 9.

Table 9: Planned Maintenance Summary Table

Facility	Planned Maintenance Activity	Anticipated Timeline
Hall Street Wet Pond	Cleanout of whole pond	2026
Marl Creek Wet Pond	Cleanout of whole pond	2026
Wendat Trail Wet Pond	Cleanout of Main Cell	2026
Marni Lane Wet Pond	Cleanout of Forebay	TBD

7.0 Monitoring Equipment Calibration and Maintenance

There is currently no monitoring equipment installed in any Stormwater Management Systems within the Township of Springwater. Should monitoring equipment be added in the future, calibration and maintenance will be conducted in accordance with manufacturer specifications.

8.0 Complaints

There were no complaints reported from the public related to the sewage works or stormwater works during the reporting period in 2023.

9.0 Alterations to the Authorized System

There were no significant alternations to the Authorized System during the reporting period in 2023.

Township of Springwater Stormwater Management System 2023 Annual Performance Report

Table 10: Summary of Stormwater Management System Alterations

Description	CLI-ECA Notices of Modification Issued	Comment	Potential Significant Drinking Water Threat (SDWT)
None in 2023	N/A	None	N/A

10.0 Spills and Abnormal Discharge Events

No spills or abnormal discharge events were observed in 2023. Any spills or abnormal discharge events that occur will be recorded and addressed in accordance with the Canadian Environmental Protection Act (CEPA) and Township guidelines, including reporting to the MECP Spills Action Centre (SAC) and the Public Health Unit as applicable.

Table 11: Summary of Spills and Abnormal Discharge Events

Date	Event	Details
N/A	N/A	N/A

11.0 Authorized System Performance Improvements and Corrections

Below table summarize the actions taken in the reporting period to improve or correct performance of any aspect of the Authorized System.

Table 12: Summary of Authorized System Improvements and Corrections

Facility types and name	Description	Timeline	Status
Burton Crescent wet pond	The Burton Crescent wet pond brushed with mechanical equipment.	2023	completed

12.0 Action Items from Previous Reporting Year

This section is not applicable for the 2023 reporting year, as it marks the first annual report prepared under CLI-ECA 128-S701.

Action Item	Timeline	Status

Township of Springwater Stormwater Management System 2023 Annual Performance Report

Township of Springwater Stormwater Management System 2023 Annual Performance Report

This report has been prepared by J.L. Richards & Associates Limited for Township of Springwater's exclusive use. Its discussions and conclusions are summary in nature and cannot properly be used, interpreted or extended to other purposes without a detailed understanding and discussions with the client as to its mandated purpose, scope and limitations. This report is based on information, drawings, data, or reports provided by the named client, its agents, and certain other suppliers or third parties, as applicable, and relies upon the accuracy and completeness of such information. Any inaccuracy or omissions in information provided, or changes to applications, designs, or materials may have a significant impact on the accuracy, reliability, findings, or conclusions of this report.

This report was prepared for the sole benefit and use of the named client and may not be used or relied on by any other party without the express written consent of J.L. Richards & Associates Limited, and anyone intending to rely upon this report is advised to contact J.L. Richards & Associates Limited in order to obtain permission and to ensure that the report is suitable for their purpose.

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