



**2023 Annual Report  
Stormwater Management  
System**

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## Introduction

Under Environmental Compliance Approval (ECA) agreements issued by the Ministry of Environment, Conservation and Parks (MECP), Loyalist Township is required to report annually on the values and parameters indicated in the ECA for the Stormwater Management System.

This report covers the period of July 1<sup>st</sup> to December 31<sup>st</sup>, 2023 and is prepared and submitted to the MECP by April 30<sup>th</sup>, 2024. The report is to be made available to the public by June 1<sup>st</sup>, via the Township website.

A copy of the report can also be obtained, at no charge, from Loyalist Township office located at 263 Main Street, Odessa, ON, (613) 386-7351.

Loyalist Township strives to provide information in a format accessible to all people. Please contact the Clerk's Division at 613-386-7351 and press 7 or email [clerk@loyalist.ca](mailto:clerk@loyalist.ca) between 8:30 am to 4:30 pm or complete a request form, available at the Municipal Office, Odessa or online at [www.loyalist.ca](http://www.loyalist.ca) to request an alternative format.

The CLI-ECA 158-S701 lists in Schedule E Section 5.0 the reporting requirements for the Stormwater Management System. The following is to be included in the annual report:

- a. 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. a summary and interpretation of environmental trends based on all monitoring information and data for the previous five (5) years;
- c. a summary of any operating problems encountered and corrective actions taken;
- d. 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. a summary of the calibration and maintenance carried out on all monitoring equipment;
- f. a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints;
- g. 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. a summary of all spills or abnormal discharge events;
- i. a summary of actions taken, including timelines, to improve or correct performance of any aspect of the Authorized System; and
- j. a summary of the status of actions for the previous reporting year.

## Executive Summary

The SWM system serving Loyalist Township is a separated stormwater system. The system consists of storm sewers, culverts, ditches, Stormwater Management Facilities, and outlets. The Township's SWM system, primarily covers three separate subsystems located in Odessa, Bath, and Amherstview. The total stormwater collection system has a length of approximately 48.6 km. The system has one normal treatment stormwater pond, two enhanced treatment stormwater ponds, two basic treatment ponds and one basic level treatment dry pond. The system also includes one normal and five enhanced treatment Oil Grit Separators.

This annual report summarizes the monitoring and maintenance of the stormwater collection system required by the environmental compliance approvals and describes the system's overall operational performance.

During the reporting period the SWM system functioned as designed. No operational or condition issues were reported on any part of the authorized system. Routine inspections of the stormwater management facilities were performed. Storm pipe, catch basin, OGS cleanouts and flushing were completed as required by inspections and our maintenance schedule. Lakeside SWMF was dredged by a contractor to reestablish the holding capacity and function of the pond.

As part of Loyalist Townships CCTV and flushing program 3.2km of storm pipe was inspected and 2.3km was cleaned of debris and obstructions.

The Township received 22 complaints and requests for information associated with the stormwater collection system. Staff investigated promptly and addressed the reported concerns, as described in Section 2.6.

Alterations to the stormwater collection system occurred during two projects in the reporting period: Odessa West Drainage Improvements and Lakeside Village Phase 8. The requirements listed in Schedule D Section 4.0 of the ECA were completed.

Maintenance staff, supervisors, and management strive to ensure the authorized system is maintained, and managed properly and in accordance with the ECA, Acts and Regulations.

To the best of our knowledge, the authorized stormwater collection system is operated in compliance with the conditions set out in the respective environmental compliance approvals.

# 1. Background

The Odessa subsystem outlets either directly to Millhaven Creek, indirectly through tributary streams to Millhaven Creek or through The County of Lennox and Addington's SWM system. Millhaven Creek outlets to Lake Ontario.

The Bath subsystem outlets either directly to Lake Ontario, directly to Bath Creek, or indirectly to Bath Creek through the Bath Golf and Country Club's private SWM system - ECA 6027-8V6KZ9 and ECA 4655-76SNUM (See Table 9). Bath Creek outlets to Lake Ontario.

The Amherstview subsystem outlets either directly to Lake Ontario, indirectly through culvert and/or storm systems under the control of the Ministry of Transportation, associated with Highway 33 which runs along the Lake Ontario waterfront. The composition of the storm pipe network by length and diameter is shown in Table 1. A summary of the SWMF by type is shown in Table 2. Sections 1.1-1.3 below list the SWMF's included in each of three subsystems (See Table 3-9).

System Type	Pipe Diameter (mm)	Length (km)	System Totals (km)
Storm Sewers	Up to 250	3.722	--
Storm Sewers	> 250 - 500	25.502	--
Storm Sewers	> 500 - 1050	15.71	--
Storm Sewers	> 1050	3.509	--
Total Storm Sewers		--	48.493
Ditches / Swales	NA	--	0.089
Total System Length (km)		--	48.582

Facility Type	Basic Treatment for Suspended Solids*	Normal Treatment for Suspended Solids *	Enhanced Treatment for Suspended Solids *	Other Treatment Level for Suspended Solids**	Total Quality Control	Total Quantity Control	Total Number of Facilities
LID Facilities - Retention (infiltration, evapotranspiration, harvest)							
LID Facilities - Filtration							

Stormwater Management Ponds – Wet (includes wetlands, hybrids)	2	1	2		5		5
Stormwater Management Ponds - Dry	1				1		1
Super Pipe / Storage Facility							
Filtration MTD - Filter Unit							
Sedimentation MTD - OGS		1	5		6		6
Pumping Stations							
Other							
Total Number of Facilities	3	2	7		12		12

\* Basic, normal, and enhanced treatment correspond to 60%, 70% and 80% suspended solids removal on an annual average long-term basis, respectively.

\*\* Treatment levels below 60% suspended solids removal on an annual average long-term basis.

## 1.1 Odessa Stormwater Management System

**Table 3. Storm Water Management Facilities in Odessa**

Name/Location	Watershed	Reference ECA	Type of Facility	Type of Control	Catchment Area (ha)
County Road 6 – Public Works Garage, Stormwater Management Facility-748 County Road 6	CRCA / Lake Ontario direct	3-0925-99-006 4673-4KVKZQ (Air)	Wet Pond	Quality	0.8
County Road 6 – Public Works Garage, Oil Grit Separator-748 County Road 6	CRCA / Parrot's Creek	3-0925-99-006	OGS	Quality	Wash water from internal drains of Public Works Garage

**Table 4. Transitional- Facilities with Individual ECAs in Odessa**

Asset ID	Type of Facility	Location	ECA Number	Developer Name
30716	Normal Level Stormwater Quality Control (Wet) Pond	170 Bridge Street, Odessa, ON (44.26906*N76.72276*W)	9599-C2BGHW	Baycreek Development Inc (66%) Millcreek Development Inc (34%)

## 1.2 Amherstview Stormwater Management System

<b>Name/Location</b>	<b>Watershed</b>	<b>Reference ECA</b>	<b>Type of Facility</b>	<b>Type of Control</b>	<b>Drainage Area (ha)</b>
Parkside Stormwater Management Facility: GIS ID # 1-173 Amy Lynn Drive (44°13'29.3"N 76°37'53.8"W)	CRCA / Lake Ontario direct	6295-57HQEZ	Wet Pond	Quality	8.5
Loyalist East Business Park Stormwater Management Facility (South): GIS ID # 2-44°13'42.4"N 76°40'34.3"W	CRCA / Parrot's Creek	1881-72ZRTV	Wet Pond	Quality	10.5
Lakeside Stormwater Management Facility: GIS ID# 3-149 MacDougall Dr, Amherstview (44.22842N, 76.67617W)	CRCA / Lake Ontario direct	4179-6GWK9S	Wet Pond	Quality	56
Loyalist East Business Park Stormwater Management Facility (West)- 44.23016N, 76.68138W	CRCA / Parrot's Creek	6040-BVBQKW	Wet Pond	Quality	6.16
Loyalist East Business Park Stormwater Management Facility (North)- 44.23208N, 76.68256W	CRCA / Parrot's Creek	6040-BVBQKW	Dry Pond	Quality	1.47
Jordyn's Court, Amherstview, Oil Grit Separator: GIS ID# 8535-(X: -8532969.10585246, Y: 5499294.60588297)	CRCA / Lake Ontario direct	1336-83CR3G	OGS	Quality	0.92
Simurda Court, Amherstview, Oil Grit Separator: GIS ID# 8562- (X: -8532969.10585246, Y: 5499294.60588297)	CRCA / Lake Ontario direct	0054-89YPVR	OGS	Quality	1.45
Amy Lynn Drive, Amherstview, Oil Grit Separator, GIS ID# 8930- (X: -8530786.37696261, Y: 5500842.13107137)	CRCA / Lake Ontario direct	5711-84NJQ5	OGS	Quality	1.9
Amherstview Fire Hall, Oil Grit Separator, GIS ID#1695-(X: -8534010.68610581, Y: 5500419.93840711)	CRCA / Lake Ontario direct	N/A	OGS	Quality	0.28

Asset ID	Type of Facility	Location	ECA Number	Developer Name
30715	Normal Level Stormwater Quality Control (Wet) Pond	Lakeside Ridge Subdivision – Pt Lt 35&36 BF Con, Con 1, Loyalist Township (44.21592*N 76.66160*W)	3385-6HJRT9	Loyalist Farms Limited
30714	Enhanced Level Stormwater Quality Control (Hybrid) Pond	Lakeside Ponds Phase 2 Stage 1 – Pt Lt Lot 35,36,37 Con 1, Loyalist Township (44.22863*N – 76.67115*W)	0254-BJPKKX	2024162 Ontario Ltd
N/A	Dry Pond w/ OGS	Loyalist Shores Subdivision – 16 Manitou Crescent East, Township of Loyalist (44.22125*N76.64090*W)	7715-9MQRN3	S.S.B. Associates Inc.

### 1.3 Bath Stormwater Management System

Name/Location	Watershed	Reference ECA	Type of Facility	Type of Control	Drainage Area (ha)
Bayshore Drive, Bath, Oil Grit Separator and grassed swale: GIS ID # 8496-(X: -8545387.9213611, Y: 5493666.46742572,)	CRCA / Lake Ontario direct	8700-7WUHWG	OGS	Quality	5.57
Davy Street, Bath, Oil Grit Separator: GIS ID# 9055- (X: -8545387.9213611, Y: 5493666.46742572)	CRCA / Lake Ontario direct	0221-AB6LMK	OGS	Quality	4.4

Asset ID	Type of Facility	Location	ECA Number	Developer Name
N/A	Enhanced Level Stormwater Quality Control (Wet) Pond	Aura by the Lake Subdivision Phase 1 – Pt Lts 12-14 BF, Loyalist Township (44.18471*N76.76410*W)	1068-BYKKZM	Loyalist Meadows Ltd.



N/A	Extended Detention Wet Pond	Loyalist Estates IV – Lot 8 and 9 Con 1, Loyalist Township (44.18010*N – 76.78324*W)	8845-5RNP4F	Loyalist Residential Developments Ltd.
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Table 9. Sewage Works on Private Land that are part of the Municipal Stormwater Treatment Train in Bath		
Description	Location	ECA Number
Loyalist Estates - Pond 18: Extended detention pond	Lot 9/10, Concession 1, Village of Bath. (Lat: 44.18895° N Lon: 76.78544° W)	1403-9XCR6F
Loyalist Estates – Pond 12a: Extended Detention Pond	Lot 8 Concession 1, Bath, On Lat: 44.18376° N Lon: 76.78945° W	6027-8V6KZ9
Loyalist Estates Pond 12b – Extended Detention Pond	Lot 8 Concession 1, Bath, On Lat: 44.18647° N Lon: 76.79091° W	5271-C8PKVD
Loyalist Estates Pond 16/17 – Extended Detention Pond	Lot 8/9 Concession 1, Bath, On Lat: 44.18567° N Lon: 76.78744° W	6027-8V6KZ9

## 2. Overview of Condition and Operational Performance

Routine inspections and cleanout of stormwater management systems are completed regularly by Township staff. More information on the inspection and cleanout procedure can be found in Section 2.4. As per the inspections all stormwater ponds and OGS are in good condition and appear to be operating normally to the best of our knowledge. There have been no noted incidents of overflowing of the stormwater system. OGS inspections completed in August 2023 indicated that a sediment cleanout was not needed. Summary of Required Monitoring Data and Interpretation

### 2.1 Summary of Required Monitoring Data and Interpretation

There was no monitoring data required in the year 2023 since the MECP was still finalizing the monitoring plan requirements. Basic inspection was completed and recorded and is summarized in the Section 2.4.

### 2.2 Summary and Interpretation of Environmental Trends

There has been no requirement for monitoring data for stormwater management systems and therefore there are no environmental trends to report.

### 2.3 Summary of Operating Problems

Staff address problems during routine inspections using criteria from table 11 and table 12 listed in section 2.4. These tables assist staff in identifying operational issues with respect to storm ponds and OGS units.

Once issues have been identified corrective action can usually be taken onsite to resolve deficiency. All deficiencies that cannot be repaired by the inspector are reported to management. Management then schedules equipment and personnel to repair deficiencies.

There were no major operating problems encountered at the stormwater management facilities.

Minor deficiencies in storm ponds are addressed during inspections such as trash buildup, mainly in ponds with neighboring construction sites. Cattail blockages at outlet structures, mainly in the fall and spring when vegetation is dead and starts to float in and around the outlet structures. Cattails block the overflow grates which requires increased maintenance before and after rainfall events. Algae blooms have become a more prevalent problem as we get longer summers and warmer weather, this produces thicker algae that can become blocked in the outlets This is an issue that we are monitoring more frequently in the later summer months when the growth is at its peak. Table 10 depicts common minor deficiencies and the actions taken to correct them.

*Table 10: Typical Minor Deficiencies and Corrective Actions*

Location	Problem	Corrective Actions
Parkside SWMF	(Algae growth, Cattail blockages, trash buildup)	More frequent monitoring around significant rainfall events and in the spring and fall.
Lakeside SWMF	(Algae growth, Cattail blockages, blockages due to heavy sedimentation in outlet pipe)	These issues were addressed in the fall of 2023 when the storm pond was dredged out. Algae growth will still require monitoring.
LEBP (South) SWMF	(Algae growth, Cattail blockages, trash buildup)	More frequent monitoring around significant rainfall events and in the spring and fall.
LEBP (West) SWMF	Algae growth, Cattail blockages, trash buildup)	More frequent monitoring around significant rainfall events and in the spring and fall.
LEBP (North) SWMF	Algae growth, Cattail blockages, trash buildup)	More frequent monitoring around significant rainfall events and in the spring and fall.
Cr-6 SWMF	No Problems Addressed	No corrective actions
Cr-6 OGS	Sediment Buildup in sump and screen, Trash Buildup	Inspected bi-monthly, cleaned as required
Amherstview Fire Hall OGS	Sediment Buildup in sump and screen, Trash Buildup	Inspected Annually, cleaned as required

Bayshore Drive, Bath OGS & Grassed Swale	Sediment Buildup in sump and screen, Trash Buildup	Inspected Annually, cleaned as required
Jordyn's Court, Amherstview OGS	Sediment Buildup in sump and screen, Trash Buildup	Inspected Annually, cleaned as required
Simurda Court, Amherstview OGS	Sediment Buildup in sump and screen, Trash Buildup	Inspected Annually, cleaned as required
Davy Street, Bath OGS	Sediment Buildup in sump and screen, Trash Buildup	Inspected Annually, cleaned as required
Amy Lynn Drive, Amherstview OGS	Sediment Buildup in sump and screen, Trash Buildup	Inspected Annually, cleaned as required
Linear Works (Pipe Network)	Debris buildup, obstructions, aging system	Implemented CCTV and flushing program. Capitol works projects.
Linear Works (Ditching and Swales)	No Problems Addressed	No corrective actions

**2.4 Summary of Inspection, Maintenance, and Repairs**

The stormwater ponds and OGS units undergo routine inspection by qualified Township staff. Inspection frequency for SWMF's can be seen below in Table 14. Stormwater ponds are inspected bi-annually and after significant rainfall events (e.g. >25mm). Inspections for OGS units are completed annually and cleaned out as required. The County Rd 6 OGS is inspected monthly and cleaned out as required. Each facility is monitored in accordance with their own ECA. Table 11 and 12 shown below outline the inspection process and method. Catch basins in each subsystem are cleaned in a three-year cycle. Catch basins directly upstream of stormwater management ponds are cleaned annually to mitigate sediment accumulation.

In preparation for capitol projects the storm pipe networks in the proposed work areas are inspected with a CCTV camera. As part of the CCTV and storm sewer flushing program in 2023, 3.2km of the stormwater pipe network of Bath and Amherstview was inspected. Of the pipes inspected 2.3km were flushed to clear debris and obstructions. Wessuc Inc. provided an in-depth report on pipe and structure conditions. Township staff is in the process of reviewing this data and making an appropriate action plan to address concerns.

Lakeside SWMF was dredged back to design elevation to reestablish its holding capacity. The perimeter banks were restored and the inlet/outlet were flushed of debris. This was part of the development agreement in preparation for assumption by Loyalist Township. During inspection of Parkside SWMF a rodent grate was reported to be missing on one of the inlet pipes. The grate was reinstalled promptly after the inspection. Table 13 shows repairs made to the SWMF's during the reporting period.

An Operations and Maintenance Manual is required for sewage works within the authorized system on or before December 31<sup>st</sup>, 2024. Changes will be made to current

reporting, maintenance, and inspection procedures to reflect the requirements of the O&M manual.

*Table 21: Routine Pond inspection task list and descriptions*

<b>Inspection Activity</b>	<b>Description</b>
Outlet blockage	Visual inspection for debris, trash or vegetation blocking outflow of water. Inspect outlet pipes for condition and operational performance
Inlet blockage	Visual inspection for debris, trash or vegetation blocking inflow of water. Inspect inlet pipes for condition and operational performance
Shoreline vegetation	Visual inspection during permitter walk for overgrowth and invasive plant species
Upland vegetation	Visual inspection during permitter walk for overgrowth and invasive plant species- Maintained by parks staff
Oil build up	Visual inspection for sheen
Sediment depth	Currently not monitored
Trash build up	Remove or report trash build up in and around SWMF, inlets and outlets.
Berm stability	Visual inspection of structural integrity and function of berm
Inlet structure	Visual inspection of structure condition and operational performance. Removal and reporting of any obstructions
Outlet structure	Visual inspection of structure condition and operational performance. Removal and reporting of any obstructions
Maintenance access	Visual inspection of access routes. Insuring safe, easy access for maintenance staff. Ensure proper signage is in place.
Overflow	Visual inspection of overflow structures for condition and function.

*Table 12: Routine OGS inspection task list and descriptions*

<b>Inspection Activity</b>	<b>Description</b>
Condition of unit	Visual inspection of structure, Inlet flume, separation chamber, hydrocarbon baffle, screen and outlet/inlet pipes for condition and operational performance
Blockages or obstructions	Check for obstructions in any component of the OGS
Measure solid material build up	The difference between the internal structure height and the depth measured to the sediment. Multiplied by the sump area to give a volume per cubic meter. Compare to the design volume of the sump. If the sediment is >80% of the design volume schedule an OGS cleanout.
Measure fine sediment behind screen	Measure the depth of fine sediment accumulated behind the separation screen. Clean out as required
Measure floating trash and debris in separation chamber	Rough measurement of depth of floating trash. Clean out as required

*Table 13: Summary of repairs for all stormwater management facilities and collection*

<b>Location</b>	<b>Description</b>
Lakeside Pond	Dredged by contractor in 2023
Parkside Pond	Fixed inlet pipe rodent grate 2023
LEBP South Pond	None
LEBP North Pond	None
LEBP West Pond	None
County Rd 6 SWMF	None
County Rd 6 OGS	None
Bayshore Drive, Bath OGS and Grassed Swale	None
Jordyn's Court, Amherstview OGS	None
Davy Street, Bath OGS	None

Amy Lynn Drive, Amherstview OGS	None
Simurda Court, Amherstview OGS	None
Amherstview Firehall OGS	None
Linear works - ditching	None
Linear works – storm sewer	2.3km of flushing/debris removal

*Table 14: Summary of routine maintenance activities and frequency*

<b>Component</b>	<b>Type</b>	<b>Frequency</b>
All Oil Grit Separators	Sediment removal	As required by inspections
	Screen maintenance (power washing)	As required
	Inspection for damage to internal parts (separation chamber, separation screen, oil baffle)	Annually
	Cleanout unit	As required by inspections
All Ponds	Sediment removal	As required by O&M manual
	Weed control	as required
	Physical movement of parts	Annually
	Trash removal	As required by inspections
Catch Basins	Sediment/Debris Removal	Triennial for each subsystem

## 2.5 Calibration and Maintenance Summary on all Monitoring Equipment

As per the ECA requirements a Monitoring Plan will be developed and implemented for the authorized system before September 30, 2025. The monitoring plan will include procedures for routine physical inspection and calibration of monitoring equipment or components. Currently Loyalist Township has no monitoring equipment for the stormwater collection system that requires calibration.

## 2.6 Complaints Arising from Operation of the Works

The CLI-ECA requires that the Township log all complaints and inquiries, investigate, and resolve them. Township staff make every effort to respond to residents in a timely manner. Citywide is used to record details, action taken and the status of the workorder/service request. Service requests are logged and distributed by type.

Between July 1<sup>st</sup> December 31<sup>st</sup> 2023, Loyalist Township received a total of 22 customer requests under the “Drainage, Flooding, Culverts and Stormwater” service request type. All resident complaints were promptly and fully investigated to their satisfaction by Loyalist Township staff.

The majority of requests were concerning rural culverts, private property drainage issues and The County of Lennox and Addington property. These requests are outside of the scope of the CLI-ECA, no further reporting is required.

Two requests were concerns regarding blocked catch basin lids. These were promptly addressed and cleared in a timely manner.

One request was made during the cleanout of Lakeside stormwater management facility. A resident had noticed “a hump in the overflow ditch was holding water” and later a large amount of silt formed in the roadside ditch. Due to a heavy rainfall event, the erosion control measures that were put in place became overwhelmed. The contractor was instructed to repair the straw bale check dams to fix the problem. After the pond cleanout was completed, the contractor used a vac truck to remove the excess silt deposits from the ditch and restore it to its original condition.

### 3. Alterations to the Current Authorized System

The Township undertakes construction projects to upgrade or enhance the Stormwater collection system to meet demands related to growth. Repair and maintenance activities are exempt from the documentation as per CLI-ECA approval Schedule D Section 4.5 requirements and may be performed as needed to maintain the authorized system in good working order.

In 2023, the following alterations were made to the Authorized Stormwater Management System:

- Odessa West Drainage Improvements

Sewage works consisting of storm sewer and associated appurtenances, ditching, oil-grit separator unit and culverts within southwestern portion of the community of Odessa, per the 'Odessa West Drainage Improvements' engineering drawings (Rev. 8 & 9). Project limits generally include Bridge Street, Battery Street, Cross Street, Emma Street, and South Street. This project meets the transition requirements set out in Condition 9 of Schedule D of CLI-ECA 158-S701 and its forthcoming amendment regarding the exemption from Appendix A requirements. Design of the Alteration was completed before the issued date of the approval and effort to undertake its construction began before December 1, 2023.

- Lakeside Village Phase 8

Storm sewers and appurtenances on McDonough Crescent and Jack Kippen Place, in accordance with plans and specifications by Josselyn Engineering Inc for Lakeside Gardens Phase 8. Work Includes storm sewer from Jack Kippen cul-de-sac to McDonough Crescent and storm sewer on McDonough from 42m north of Jack Kippen to 45m east of Jack Kippen.

- Loyalist Estates Phase 11

Storm sewers and appurtenances on Royal Oak Crescent, in accordance with the plans and specifications by Josselyn Engineering Inc. for Loyalist Estates Phase 11, from north intersection with Country Club Drive, to the south intersection of Country Club Drive (crescent street).

Under the new CLI-ECA approval 158-S701, minor modifications to the collection system are pre-authorized and need only be recorded on the appropriate form and retained. All alterations mentioned have the mandatory SW1 forms completed and filed for the authorized system. No alteration posed a significant drinking water threat.

#### 4. Spill(s) and Abnormal Discharge Event(s)

No spills or abnormal discharge events occurred during the reporting period.

#### 5. Summary of Corrective Actions to Improve or Correct Performance

As mentioned in the Section 2.4, 2.3km of stormwater pipe was flushed of debris and obstructions. An action plan for storm water pipe replacement and repair is being compiled as per the CCTV report from Wessuc Inc. All OGS have been cleaned and had sediment removed in the past two years. In the year of 2023 OGS inspections indicated no need for sediment removal or cleaning. Lakeside SWMF was dredged to improve performance see Section 2.4 for more detail.

There is no summary of corrective actions of the previous reporting year since this is the initial report required by the MECP.

#### 6. Conclusion

The Township maintains an effective stormwater management system. To the best of our knowledge, the authorized stormwater systems are operated in compliance with the conditions set out in the respective environmental compliance approvals. As the Monitoring Plan and O&M Manual get developed Loyalist Township will adapt the current inspection, monitoring and reporting procedures to comply with the requirements of each document. This report has been compiled in accordance with the reporting requirements of Schedule E Condition 5 of ECA 158-S701.

#### 7. Definitions and Terms

**“Authorized System”** means the Sewage Works comprising the Municipal Stormwater Management System authorized under the CLI-ECA 158-S701.

**“Alteration(s)”** includes the following, in respect of the Authorized System, but does not include repairs to the system:

- a) An extension of the system,
- b) A replacement or retirement of part of the system, or
- c) A modification of, addition to, or enlargement of the system.

**“Appurtenance(s)”** has the same meaning as defined in O. Reg. 525/98 (Approval Exemptions) made under the OWRA

**“CCTV”** means a closed-circuit television video, in relation to the process of using a camera to see inside of stormwater pipes.

**“CLI-ECA”** means Consolidated Linear Infrastructure Environmental Compliance Approval.

**“CWA”** means the *Clean Water Act*, R.S.O. 2006, c.22.

**“EAA”** means the *Environmental Assessment Act*, R.S.O. 1990, c. E.18.

**“ECA”** means Environmental Compliance Approval.

**“EPA”** means the *Environmental Protection Act*, R.S.O. 1990, c.E.19.

**“Form SW1”** means the most recent version of the Ministry form titled Record of Future Alteration Authorized for Storm Sewers/Ditches/Culverts as obtained directly from the Ministry or from the Ministry’s website.

**“Licensed Engineering Practitioner or LEP”** means a person who holds a licence, limited licence, or temporary licence under the *Ontario Professional Engineers Act* R.S.O. 1990, c. P.28.

**“LID”** means “low impact development” a Stormwater management strategy that seeks to mitigate the impacts of increased runoff and Stormwater pollution by managing runoff as close to its source as possible. LID comprises a set of site design strategies that minimize runoff and distributed, small scale structural practices that mimic natural or predevelopment hydrology through the processes of infiltration, evapotranspiration, harvesting, filtration, and detention of Stormwater.

**“MECP”** means the Ministry of Environment, Climate, and Parks.

**“Monitoring Plan”** means the monitoring plan prepared and maintained by the Owner under condition 4.1 in Schedule E of this Approval.

**“MTD”** means manufactured treatment device.

**“Municipal Stormwater Management System”** means all Sewage Works, located in the geographical area of a municipality, that collect, transmit, or treat Stormwater and are owned, or may be owned pursuant to an agreement entered into under the *Planning Act* or *Development Charges Act*, 1997, by:



- a) A municipality, a municipal service board established under the *Municipal Act, 2001* or a city board established under the *City of Toronto Act, 2006*; or
- b) A corporation established under sections 9, 10, and 11 of the *Municipal Act, 2001* in accordance with section 203 of that Act or under sections 7 and 8 of the *City of Toronto Act, 2006* in accordance with sections 148 and 154 of that Act.

**“O&M Manual”** means the operation and maintenance manual prepared and maintained by the Owner under condition 3.2 in Schedule E of this Approval.

**“OGS”** means Oil and Grit Separator(s).

**“OWRA”** means the *Ontario Water Resources Act, R.S.O. 1990, c. O.40*.

**“Privately Owned Stormwater Works”** means Stormwater Sewage Works on private land that are privately owned and, while not part of the Authorized System, are considered part of a Stormwater Treatment Train.

**“Significant Drinking Water Threat”** has the same meaning as defined in section 2 of the CWA.

**“Spill(s)”** has the same meaning as defined in subsection 91(1) of the EPA.

**“Storm Sewer”** means Sewers that collect and transmit, but not exfiltrate or lose by design, Stormwater resulting from precipitation and snowmelt.

**“Stormwater”** means rainwater runoff, water runoff from roofs, snowmelt, and surface runoff.

**“Stormwater Management Facility(ies)”** means a Facility for the treatment, retention, infiltration, or control of Stormwater.

**“Stormwater Treatment Train”** means a series of Stormwater Management Facilities designed to meet Stormwater management objectives (e.g., Appendix A) for a given area, and can consist of a combination of MTDs, LIDs and end-of-pipe controls.

**“SWM”** means Stormwater Management.

**“SWMF”** means Stormwater Management Facility.

## 8. Regulations, References, and Key Contacts

In addition to meeting permits and license requirements issued for the Stormwater Management System, all acts and regulations made with regards to operating, licensing of facilities, licensing of operators, and quality standards must be met. A summary of pertinent legislation is as follows:

- *Ontario Water Resources Act (OWRA)*
- *Clean Water Act (CWA)*
- MECP ([www.ontario.ca](http://www.ontario.ca))
- Canadian Water and Wastewater Association
- *Drainage Act*
- *Environmental Protection Act (EPA)*

For further information on this report or a related topic or if there are any questions regarding the information contained in this report, please contact:

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