

# West Lincoln

Your Future Naturally

## **West Lincoln Township Sanitary Collection System**

The Corporation of the Township of West Lincoln

### **2023 Annual Performance Report**

January 1 to December 31, 2023

Ministry of the Environment, Conservation and Parks

ECA # 077-W601

## **West Lincoln Township Sanitary Collection System – 2023 Performance Report**

This report summarizes the annual performance of the West Lincoln Township Sanitary Collection System (West Lincoln Sanitary System) in accordance with Environmental Compliance Approval #077-W601, Schedule E Condition 4.6 from January 1 to December 31, 2023.

### **Description of Sanitary Sewage System**

The West Lincoln Sanitary System is a stand-alone municipal sewage collection system which conveys one hundred percent (100%) of its wastewater to the Region of Niagara's (Region) Baker Road Wastewater Treatment Plant (Baker Road WWTP). The West Lincoln Sanitary Sewage System and the Baker Road WWTP are components of the larger Baker Road Wastewater System (Baker Road System).

The Baker Road System services the community of Smithville within the Township of West Lincoln, along with the Town of Grimsby and the Town of Lincoln. The Baker Road System services a population of 55,800 people. The Baker Road System is a two-tier wastewater treatment and collection system. The Niagara Region is responsible for the treatment and trunk conveyance of flow through the Region's network of pumping stations, forcemains, and major trunk sewers. The lower tier municipalities (West Lincoln, Lincoln and Grimsby) are responsible for the collection of wastewater flows from customers through the municipally owned and operated local collection system(s), with the West Lincoln Sanitary System being one of them.

The West Lincoln Sanitary System collects wastewater from approximately 7,000 customers within the Town of Smithville and consists of approximately 32km of Town-owned mainline sewers ranging in size from 150mm to 450mm in diameter.

### **Report Distribution**

As required under Schedule E – Condition 4.7 of ECA 077-W601, the annual report will be available to the public at no charge on the Town's website or through Public Request by June 1<sup>st</sup> of the reporting year.

### **Summary of Monitoring Data (if applicable)**

The West Lincoln Sanitary System is overseen by the Public Works Department, and are responsible for the day-to-day operation and maintenance (i.e. sewer flushing programs, maintenance hole inspections, sewer lateral inquiries, etc.) and the Engineering Division manages long term programs (i.e. asset condition assessments, capital projects, rehabilitation programs, etc.).

### **Annual Sewer Inspection Program**

The Town performs an annual flushing and inspection program for the West Lincoln Sanitary System, consisting of sanitary sewer mainline flushing and camera (CCTV) inspections. The purpose of these inspections is to identify infrastructure that have structural or other noted deficiencies. Information collected during the inspections is reviewed and analyzed by a CCTV contractor. An assessment condition rating report is provided to the Town to support future infrastructure repairs and replacement projects. Deficiencies found during the CCTV inspections are prioritized and addressed through the rehabilitation programs. The Town’s level of service for the inspection program is to have all mainline sewers inspected once every 5 years.

### **Sewer Flushing Program**

Semi-annual flushing is performed in areas of the system that have been identified as “problematic” through past incidents and inspections. Flushing is conducted using a hydrovac/water flushing truck. High-pressure, high-volume water and specially designed nozzles are used to clear the system of built-up debris that has the potential to reduce system efficiency. During the flushing program, operators inspect each maintenance hole that is being accessed for flushing. Any deficiencies that are identified are prioritized for future rehabilitation programs.

### **Summary of Monitoring Programs**

Table A details the monitoring activities performed by West Lincoln staff during the reporting period. Based on the data collected and reviewed, it has been determined that the system is performing effectively and as designed. At this time there are no major modifications required for the collection system.

**Table A – Summary of Monitoring Program**

Program Title	Program Description	Program Data from Reporting Period
Semi-annual Sewer Flushing	Flushing of mainline sewers in problematic areas (obstructions, sags, grease build-up, etc.).	Staff completed semi-annual flushing activities in problematic areas.
Maintenance Hole (MH) Inspections	MH inspections are completed throughout the year.	Staff inspected 85 maintenance holes during the reporting period.
CCTV Inspections	CCTV inspection program is completed so that all mainline sewers are inspected once every 5 years. Mainline sewer pipes are flushed as part of the inspection process.	Approximately 2,850 metres of mainline sewers were inspected in 2023 by the Town’s contractor and reports were provided to the Engineering Division.

Dry & Wet Weather Flow Assessment	Contracted Civica in 2023 to perform assessment.	Final reports were provided to the Engineering Division.
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## Operational Issues and Corrective Actions

All maintenance was performed on behalf of the Owner, by licensed Operators or qualified contracted service providers who exercise due diligence in ensuring the works, and the related equipment, are properly operated and maintained to achieve compliance with the Town’s license.

As noted in Table B, there were no operational issues identified during the reporting period.

**Table B – Summary of Operational Issues and Corrective Actions**

Date	Description	Corrective Actions
N/A	N/A	N/A

## Major Structure & Equipment Calibration, Maintenance and Repairs

Table C provides a summary of activities carried out on major structures and collection system works that were not covered under the operational issues section of this report.

**Table C – Major Structure & Equipment Calibration, Maintenance and Repairs**

Major Structure or Equipment	Summary of Work performed in 2023
Maintenance Holes	Staff completed repairs on maintenance holes as required during the reporting period. Examples of repairs completed include lid replacement, parging repairs, and raising of manholes to grade.
Fall Arrest Equipment	All fall arrest and lifting devices were inspected during the reporting period.
Air Quality Monitoring Devices	All portable air quality monitoring devices were inspected and calibrated during the reporting period. Monthly testing along with an annual calibration were performed.
Trench Box	The trench box was inspected during the reporting period.
Property Laterals	Two (2) properties in the Town had a sewer lateral repaired/replaced during the reporting period.

## Inquiries and Complaints

The Town received Fifteen (15) complaints during the reporting period, related to the West Lincoln Sanitary System. The types of complaints and corresponding steps taken to address them, are described in Table D.

**Table D – Summary of Complaints**

Complaint Type	Location of Issue (Owner)		Resolution
	Public	Private	
Home Sewer – Backup	4	4	<p>Operations staff investigate complaints by using several methods, including CCTV.</p> <p>Where blockages are found on public portion of the lateral, methods such as augering/snaking and flushing are used to clear blockage. Excavation and repairs are completed where necessary.</p> <p>Where blockages are found on the private portion of the lateral, property owners are advised to contact a professional service provider.</p>
Home Sewer – Odour	-	3	Operations staff investigate complaints of sewer odours using several methods, including CCTV. Property owners are advised of the findings when the cause of the odour is identified on private property.
Main Sewer - Odour	3	1	Operations staff investigate complaints of sewer odour using several methods, including area inspections.
Main Sewer - Maintenance	-	-	Operations staff investigate complaints and complete repairs as necessary.

### Summary of Alterations to the Authorized System

Table E summarizes the projects that saw alterations to the collection system. There were no authorized alterations to the Sanitary System in 2023. Capital projects from the reporting period were related to water and road infrastructure.

**Table E – Summary of Alterations to the Authorized System**

Alterations to the Authorized System (Project Name)	Project Details	Does this Project Pose a Significant Drinking Water Threat (SDWT)?
N/A	N/A	N/A

**Summary of Collection System Overflows and Spills**

There were zero (0) environmental incidents such as overflows, by-passes, or abnormal discharges from the collection system to be reported for 2023. There were zero (0) spills related to the collection system.

**Table F – Summary of Collection System Overflows or Spills of Sewage**

Overflow or Spill Location	SAC Incident Number	Date mm-dd-yyyy	Volume (m3) and Duration (Estimate)	Loadings (TSS, BOD, TP, KJN, E. Coli)	Disinfection (if applicable)	Adverse impacts / Corrective Actions
N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Efforts to Reduce Overflows and Bypasses**

Table G below summarizes the efforts made to reduce overflows, spills, and bypasses in 2023.

**Table G – Summary of Efforts Made to Reduce Overflows, Spills and Bypasses**

Overflow/Spill/Bypass Reduction Project	Project Description	Does this Project Pose a Significant Drinking Water Threat (SDWT)?
N/A	N/A	N/A

**Baker Road Master Servicing Plan and Pollution Prevention Control Plan**

In 2021 the Region of Niagara, in cooperation with Grimsby, Lincoln and West Lincoln, completed the Baker Road PPCP. The PPCP was completed as part of the Region’s larger Master Servicing Plan (MSP) study, which was completed in 2023. The MSP is intended to support the community’s growth, while meeting the Ministry of Environment Conservation and Parks (MECP) goals of the F-5-5 Procedure, to reduce combined sewer overflow pollution to the environment. The PPCP and MSP assessed both the existing and future state system performance to determine the nature, cause, and extent of issues, reviewed alternative solutions, and recommended a capital plan for the Region and lower-tier municipalities.

**Infiltration and Inflow Reduction**

The PPCP and MSP included a remediation plan for Infiltration and Inflow (I&I). The remediation plan included recommendations for the lower-tier municipalities to carry out sewer flow monitoring and field investigations in an effort to identify areas of the system with high I&I, and subsequently develop a plan to help reduce I&I.

In 2022, the Township of West Lincoln began implementing an I&I program in order to move forward on the recommendations of the PPCP and MSP. The program started with the Town completing CCTV/Flushing work in 2021 followed by Fog and Dye Testing the same year. Using that data flow monitoring was completed in 2023 in the areas with high I&I. Mainline sewer relining and spot repairs were completed in 2023 as well. Table H outlines the various tasks which have been completed as part of the Town’s I&I program.

**Table H – Summary of Infiltration and Inflow Reduction Program Tasks**

Program Title	Program Description	Status
CCTV Inspections (2021)	Inspection of mainline sewers.	This project included the inspection of 28km of sewer mains. Completed.
Fog and Dye Testing (2021)	Fog and Dye pumped into sewer mains to check for cross connections / eaves trough connections.	This project included fog and dye testing of mainline sewers in areas with high I&I. Completed.
Flow Monitoring (2023)	Flow monitoring in areas with high I&I.	Based on the CCTV inspections, high I&I areas were identified. Ten (10) Flow monitors were installed in these areas for 3 months to capture data. Completed.
Sewer Main Relining and Spot Repairs (2022/2023)	Installation of full length Cured in Place Pipe (CIPP) and spot repairs in sewer mains with high I&I.	This project included the relining of mainline sanitary sewers measuring 1.15km of sewer, along with 20 spot repairs. Completed.

## Public Reporting

The Sanitary System Report will be communicated to the system owner (Council) and posted on the Town’s website and made available for public review (free of charge) at Town Hall.

**Report Date:** May 5, 2023

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Manager of Operations