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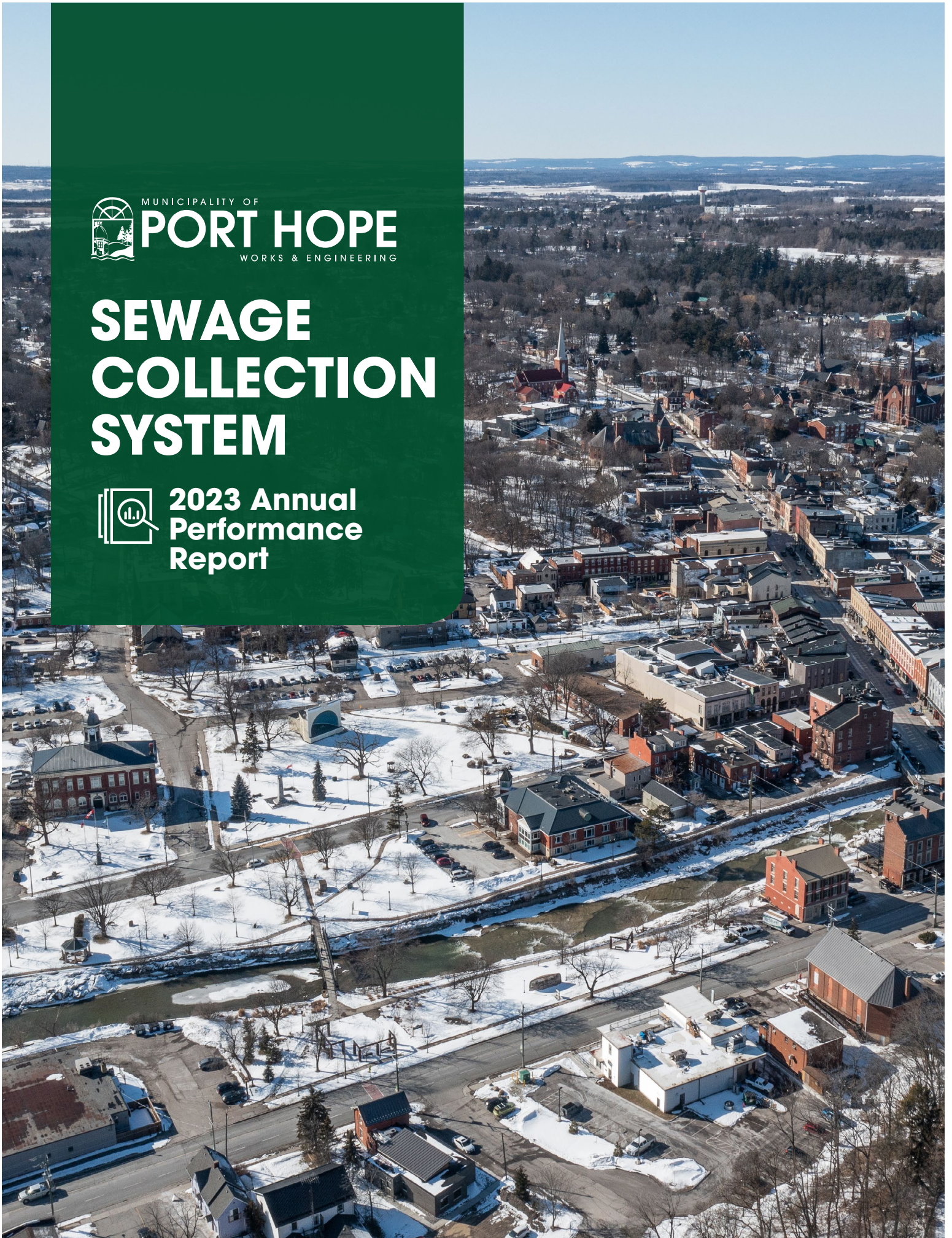
PORT HOPE

WORKS & ENGINEERING

SEWAGE COLLECTION SYSTEM



**2023 Annual
Performance
Report**





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January 30, 2024

Municipality of Port Hope
56 Queen Street
Port Hope, ON
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Re: 2023 Annual Performance Report - Port Hope Sewage Collection System

Dear Mrs. Candice White:

We are pleased to provide the 2023 Annual Performance Report for the Municipality of Port Hope's **Sewage Collection System**, located across the Municipality of Port Hope, servicing the Port Hope Wastewater Treatment Plant. This report has been completed in accordance with the Consolidated Linear Infrastructure Environmental Compliance Approval #146-W601, Section 4.6, dated September 5, 2023, and issued to The Corporation of The Municipality of Port Hope.

The report covers the period from January 1, 2023, to December 31, 2023.

Sincerely,

Kevin Yule
Manager, Wastewater
Municipality of Port Hope

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Executive Summary

The Port Hope Sewage Collection System (SCS) is owned and operated by the Municipality of Port Hope in accordance with Consolidated Linear Infrastructure Environmental Compliance Approval #146-W601, Section 4.6, issued September 5, 2023. The wastewater sewage collection system consists of approximately 79 kilometers of sanitary sewers, 3.52 kilometers of sanitary forcemain, and three sewage pumping stations (SPS); Mill Street SPS, AON SPS, and Hope Street North SPS. The sewage collection system also includes all other controls, electrical equipment, instrumentation, piping, pumps, valves, and appurtenances that are essential for the operation of the Works. The Collection System is a Class I facility, and the Pumping Stations are a Class II facility.

Throughout the reporting period (January 1st – December 31st, 2023), two (2) environmental incidents occurred, and six (6) customer complaints were reported. Operations staff worked diligently completing several maintenance, rehabilitation, and renewal projects to ensure the adequacy of the Municipalities wastewater system infrastructure. In 2023, approximately 192 sanitary sewer services were closed-circuit television (CCTV) inspected and 11.5 kilometers of sanitary sewer mains were flushed, and CCTV inspected. Operations staff successfully repaired 1 sanitary sewer service and 1 sanitary sewer main. 8 sanitary sewer service property line clean-out inspection ports were installed, 8 sanitary sewer service cured-in-place pipe (CIPP) liners were installed, and 8 maintenance hole structure repairs were completed.

As part of our preventative maintenance program to be proactive and mitigate customer complaints, operational staff completed approximately 9 activated carbon odour reduction canister inspections and 24 sanitary sewer maintenance hole inspections.

No Ministry of the Environment, Conservation and Parks (MECP) inspection occurred during the reporting period.

2023 Annual Performance Report - Sewage Collection System

In accordance with the Consolidated Linear Infrastructure Environmental Compliance Approval #146-W601, Section 4.6, The Municipality of Port Hope, as the Owner of the Municipal Sewage Collection System, shall prepare and submit a performance report to the MECP on an annual basis, on or before March 31st of each year, covering a period from January 1st to December 31st of the proceeding calendar year.

Section 4.6 requires the Performance Report to contain the following:

- (a) a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or operations,

2023 Annual Performance Report – SCS

- (b) a summary of any operating problems encountered, and corrective actions taken,
- (c) a summary of all calibrations, maintenance, and repairs carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System,
- (d) a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints,
- (e) 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,
- (f) a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including, dates, volumes and durations, if applicable, loadings for suspended solids, BOD, total phosphorus, and total kjeldahl nitrogen, and sampling results for E. coli, disinfection and any adverse impact(s) and any corrective actions, if applicable, and
- (g) a summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses, including the following items, as applicable: a description of projects undertaken and completed in the Authorized System that result in overall overflow reduction or elimination including expenditures and proposed projects to eliminate overflows with estimated budget forecast for the year following that for which the report is submitted, details of the establishment and maintenance of a Pollution Prevention and Control Plan (PPCP), including a summary of project progresses compared to the PPCP's timelines, an assessment of the effectiveness of each action taken, an assessment of the ability to meet Procedure F-5-1 or Procedure F-5-5 objectives (as applicable) and if able to meet the objectives, an overview of next steps and estimated timelines to meet the objectives, and public reporting approach including proactive efforts.

The following report was generated from the records maintained by The Municipality of Port Hope for the Port Hope Sewage Collection System (SCS) for the calendar year 2023:

Summary and Interpretation of All Monitoring Data

Licensed operators observe and monitor the sewage pumping stations regularly, during station checks/inspections and while performing scheduled preventative maintenance activities. Operators exercise due diligence in ensuring the Works and the related equipment are properly operated and maintained and any observations are being recorded in the facility logbooks. All major equipment, including pumps, flow meters, gas detectors, etc., are inspected on a regular basis, as per manufacturers recommendations, by qualified contract service providers.

Monitoring and inspection of the sewage collection system includes annual programs consisting of; sanitary main flushing and camera work, manhole grouting/repair/replacement and inflow and infiltration analysis during storm events. All programs help to sustain an effective Capital Works program that coordinates with the

2023 Annual Performance Report – SCS

Municipalities Water and Wastewater Rate Study on all assets associated with the sewage collection system.

Flow rates during the reporting period are consistent with previous year's data. No major development occurred in the reporting period that posed any concerns for the SCS. In 2024, sanitary sewer hydraulic modelling is expected to be completed which will assist with determining the need for future modifications as a result of flow data.

Operating Problems and Corrective Actions

Table A - Summary of Operating Problem Encountered and Corrective Actions Taken

Date	Operating Problem	Corrective Action Taken
January 11, 2023	Spill/Pollutant discharge from Maintenance Hole (MH)# 708A - Hope Street North Sewage Pumping Station to ground	Power restored to Hope Street SPS. Manually operated raw sewage pump to stop the upstream overflowing of raw sewage and to decrease the wet well level to normal operating range. Samples were collected. Regulatory agencies notified of the spill/pollutant discharge. Vactor truck contractor performed spill mitigation and environmental clean-up. Float control switch reset and SPS restored to normal operation.
April 18, 2023	Spill/Pollutant discharge from Maintenance Hole (MH)# 140 surcharging (1 Elias Street) to ground	Regulatory agencies were notified of the spill/pollutant discharge. Absorbent pads/spill socks were deployed to prevent additional sewage from entering the nearby stormwater catch basin. Vacuum truck called in for spill cleanup, sewer main flushing, and remediation. Septic disposal contractor called in to conduct spill mitigation until vacuum truck arrival. CCTV camera inspection completed. Sewer main break found. Flow still able to be maintained in sewer main until repairs can take place at a future date. MH# 140 inspected weekly until repair can be made. Sewer main expected to be repaired in 2024.
July 22, 2023	Diesel Fuel Spill (approx. 1 Litre) to sewage collection system	Approximately one (1) litre of diesel fuel spilled into sewage collection system on private property. Raw influent sample taken at WWTP by a wastewater operator.

Maintenance and Repair Activities

The Municipality maintains an active maintenance management program, for general maintenance and repair, to ensure that the facilities are maintained in a fit state of repair. In addition to this program, major works were upgraded or replaced as follows:

1. February 8, 2023 - Mill Street SPS raw sewage pump #3 major maintenance and repairs.
2. June 1, 2023 - Mill Street SPS raw sewage pump #2 major maintenance and repairs.
3. August 2, 2023 - Hope Street North SPS raw sewage pump #1 major maintenance and repairs.
4. September 18, 2023 – Mill Street SPS wet well ultrasonic level transmitter replacement.
5. Repaired 8 maintenance hole structures.
6. Repaired 1 sanitary sewer service.
7. Repaired 1 sanitary sewer main.
8. Installed 6 sanitary sewer service property line clean-out inspection ports.
9. Installed 8 sanitary sewer service CIPP liners.
10. CCTV inspected approximately 192 sanitary sewer services.
11. Flushed and CCTV inspected approximately 11.5 kilometers of sanitary sewer main during corrective and preventative maintenance activities.

All maintenance was performed on behalf of the Owner, by licenced Operators or qualified contracted services providers who exercise due diligence in ensuring the Works and the related equipment are properly operated and maintained to achieve compliance with the Approval. Sewage pumping station inspections and rounds are conducted by the Operators and any observations are being recorded.

Calibration and Maintenance on Monitoring Equipment

Calibration of the flow meters and gas detectors were conducted as per regular annual maintenance by a third-party qualified contractor.

Table B - Summary of Calibration and Maintenance of Monitoring Equipment

Analyzer	Location	Date Calibrated	Calibrated by Whom
Flow Meter	Mill Street SPS	August 10, 2023	Franklin Empire, Mitch Manley
Gas Detector	Mill Street SPS	August 10, 2023	Franklin Empire, Mitch Manley
Flow Meter	AON SPS	August 10, 2023	Franklin Empire, Mitch Manley
Gas Detector	AON SPS	August 10, 2023	Franklin Empire, Mitch Manley

Complaints

The number of complaints received during the reporting period, regarding the Sewage Collection System, was six (6). If applicable, complaints are itemized below with corresponding steps taken to address the complaints.

Table C - Summary of Complaints Received

Date of Complaint	Address	Complaint	Steps Taken to Address Complaint
January 3, 2023	117 Peacock Boulevard	Odour	Operator responded to site and checked maintenance holes upstream and downstream. No gases present during inspection. No issues found with Municipal infrastructure.
July 31, 2023	158-160 King Street	Odour	Operator responded to site and checked maintenance holes upstream and downstream. No gases present during inspection. No issues found with Municipal infrastructure. The property owner was advised of findings.
August 29, 2023	128 Hope Street	Odour	Operator responded to site and checked maintenance holes upstream and downstream. No gases present during inspection. No issues found with Municipal infrastructure. The resident was advised of findings.
October 9, 2023	69 Strachan Street	Odour	Operator responded to site and checked area where smell was believed to be coming from. Activated carbon insert and deodorizing pucks were added to maintenance hole #175.
October 9, 2023	77 Strachan Street	Odour	Operator responded to site and checked area where smell was believed to be coming from. Activated carbon insert and deodorizing pucks were added to maintenance hole #175.
December 11, 2023	28-32 Walton Street	Odour	Operators responded to site and checked maintenance holes upstream and downstream. No gases present during inspection. No issues found with Municipal infrastructure.

Alterations to the Authorized System

The number of Alterations to the Authorized System within the reporting period, including a list of Alterations that pose a Significant Drinking Water Threat (SDWT), totals one (1). If applicable, copies of the Notice(s) are attached, in Appendix A and Appendix B, with each Notice itemized below with a corresponding status report on the implementation of each alteration.

Table D - Summary of Record of Future Alteration Authorized for Separate Sewers/Nominally Separate Sewers/Forcemains Submitted

Notice Issuance Date	Description of Alteration(s)	Status	Date Completed /Expected Completed	Pose a SDWT?
August 1, 2023	Lake Street Trunk Sewer Replacement	In Progress	March 2024	No

Table E - Summary of Record of Future Alteration Authorized for Components of the Municipal Sewage Collection System Submitted

Notice Issuance Date	Description of Alteration(s)	Status	Date Completed /Expected Completed	Pose a SDWT?

Environmental Incidents

There were two (2) environmental incidents such as by-passes, spills, or abnormal discharges to be reported for 2023.

Table F - Summary of Environmental Incidents including Maximum Sampling Results During Event, if applicable

Date	Approx. Duration (minutes)	Type of Bypass/Overflow/Spill, Abnormal Discharge Event	Volume (L)	BOD ⁵	TSS	TP	E . coli (cfu/100 mL)	pH (no unit)
January 11, 2023	40	Spill/Pollutant Discharge of Sewage to Ground – Surcharging MH at Hope Street North Sewage Pumping Station	150	87	217	4.10	720000	7.64
April 18, 2023	46	Spill/Pollutant Discharge of Sewage to Ground – Surcharging MH	175	221	310	5.58	NDOGEC	8.93

Note: BOD⁵ is Biochemical Oxygen Demand for a 5-day period; TSS is Total Suspended Solids; TP is Total Phosphorus; NDOGEC is No data, Overgrown with E. coli. All values expressed in mg/L unless otherwise specified.

Summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses

During the 2023 reporting period, there were no incidents of an overflow in the Port Hope Sewage Collection System and therefore no new proposed projects, to eliminate overflows, are forecasted for the 2024 reporting period.

**APPENDIX A –
Copy of Form SS1 - Record of Future Alteration Authorized for Separate
Sewers/Nominally Separate Sewers/Forcemains or Copy of Notice of Modification
to Sewage Works**



Ministry of the
Environment,
Conservation and
Parks

Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA ON-SITE PRIOR TO THE SCHEDULED IMPLEMENTATION DATE.

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number 5819-AU3QVA	Issuance Date (mm/dd/yy) 05/19/2022	Notice number (if applicable) 2022-01
ECA Owner The Corporation of the Municipality of Port Hope		Municipality Port Hope

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)


The proposed sanitary sewer works include for removal and replacement of approximately 347m of existing, oversized 250mm – 300mm dia. concrete and clay sanitary sewer between Pine Street and 25m west of Church Street on Walton Street, with 200mm dia. PVC SDR-35 sanitary sewer via open-cut installation. Side street connections at Church Street and Hagerman Street will be replaced with 29.5m of 200mm PVC SDR-35 sanitary sewer. Existing house services will be replaced with 100-150mm PVC SDR-28 sanitary sewer all supplied with clean-outs. Replacement works include for localized deepening of sanitary sewer between Hagerman Street and Pine Street to simplify existing sewer network and servicing arrangement (approx. 1.4m). The proposed sanitary sewer will connect back into the existing sewer system on Walton Street at Pine Street. Proposed works do not change the discharge location or ultimate wastewater servicing route and will have negligible environmental effects.

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:

1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print) Ron Albright	PEO License Number 90420050
Signature 	Date (mm/dd/yy) 05/19/22
Name of Employer CIMA Canada Inc.	

Part 4 – Declaration by Owner

I hereby declare that:

1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print) Jeanette Davidson	Owner representative's title (Print) Director, Works and Engineering
Owner Representative's Signature 	Date (mm/dd/yy) 06/01/22