



Township of Oro-Medonte Communal Tile Fields Performance Report 2024

Horseshoe Valley Municipal Communal Tile Fields & Sewage Collection Systems Annual Report

(Prepared in accordance with Environmental Compliance Approvals, Section 6 and Consolidated Linear Infrastructure Environmental Compliance Approvals, Schedule E, Section 4.6)

Period Covering: January 1, 2024 to December 31, 2024

February 3, 2025

COMMUNAL TILE FIELDS PERFORMANCE REPORT 2024

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COMMUNAL TILE FIELDS PERFORMANCE REPORT 2024

1 Introduction

The Township of Oro-Medonte (Township) has prepared this report to satisfy the requirements of the Ministry of Environment, Conservation and Parks' Environmental Compliance Approvals (ECAs), Section 6 and Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA), Schedule E, Section 4, as outlined below.

This report covers the period of January 1 to December 31, 2024, and applies to the following municipally owned sewage works and collection systems:

- Horseshoe Communal Tile Field 1 – ECA# 8000-BD9SEA
- Horseshoe Communal Tile Field 2 – ECA# 8649-BVQJ2Q
- Horseshoe Communal Tile Field 3 – ECA# 9622-C6NMVN
- Horseshoe Communal Tile Field 4 – ECA# 7776-BRGLAP
- Horseshoe Communal Tile Field 5 – ECA# 9708-BDAHGS
- Horseshoe Communal Tile Field 6 – ECA# 3726-BCZLBB
- Horseshoe Communal Tile Field 7 – ECA# 2781-BD8KZG
- Communal Tile Sewage Collection System - CLI-ECA# 126-W601

The above ECAs and CLI-ECA were issued to the Township between the years of 2019 and 2023 under Sections 20.2 and 20.3 of Part II.1 of the Environmental Protection Act for the approval of municipal domestic sewage treatment and collection for select locations in the Horseshoe Valley area.

2 Reporting Requirements

2.1 ECA, Terms and Conditions, Section 6: Reporting Requirements

Section 6 of the referenced ECA's Terms and Conditions requires the Township to prepare performance reports on a calendar year basis and submit them, upon request by the Ministry, to the District Manager by March 31 of the calendar year following the reported period. The report shall contain, but is not limited to, the following information pertaining to the reporting period:

- A review and assessment of the performance of the Works, including general operational condition and any potential indicators of failure.
- A description of any operating problems encountered and corrective actions taken.
- A record of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of all Works located at the property including, but not limited to: records of maintenance inspections for the treatment system, records of septic tank effluent filters cleaning, records of septic tank pump-outs, records of sludge pump-outs accumulated from the treatment system, records of visual inspections of all disposal systems.

- A summary of any effluent quality assurance or control measures undertaken in the reporting period.
- A summary of any complaints received during the reporting period and any steps taken to address the complaints.
- A summary of all spill or abnormal discharge events.
- Any other information the District Manager requires from time to time.

2.2 CLI-ECA, Schedule E, Section 4: Reporting Requirements

Schedule E, Section 4 of the Township's CLI-ECA requires the preparation of performance reports on a calendar year basis and submit them to the Ministry District Manager by March 31 of the calendar year following the reported period. The report shall contain, but is not limited to, the following information pertaining to the reporting period:

- Includes a summary of any operating problems encountered and corrective actions taken.
- Includes a summary of all calibration, maintenance, and repairs carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.
- 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 the list of alterations that pose a Significant Drinking Water Threat.
- Includes a summary of all collection system overflows and spills of sewage including;
 - a) Dates;
 - b) Volumes and durations;
 - c) If applicable, loadings for total suspended solids, BOD, total phosphorous, and total Kjeldahl nitrogen, and sampling results for E.coli.
 - d) Disinfection, if any; and,
 - e) Any adverse impact(s) and any corrective actions, if applicable.
- Includes a summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and or STP Bypasses, including the following items, as applicable:
 - a) 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.
 - b) Details of the establishment and maintenance of a PPCP, including a summary of project progress compared to the PPCP's timelines.

- c) An assessment of the effectiveness of each action taken.
- d) 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.
- e) Public reporting approach including proactive efforts.

3 Compliance Reporting Requirement

3.1 Availability of the Annual Performance Report

In accordance with Section 4 of the referenced CLI-ECA's Schedule E, a copy of the report is available to the public who are served by the system, free of charge from the following outlets:

- Township of Oro-Medonte's website (www.oro-medonte.ca); and,
- Public request at the Municipal Office, located at 148 Line 7 South, Oro-Medonte.

The public is advised of the report's availability and how to obtain a copy, without charge, on the Township of Oro-Medonte's website through annual public reporting to Council and on the wastewater dedicated landing pages.

4 Communal Tile Field & Collection System Descriptions

The Township owns and operates seven (7) Municipal Communal Tile Fields (Tile Fields) and their associated collection systems within the Horseshoe Valley area, which services 97 homes as identified in Appendix A.

4.1 Communal Tile Field 1

Wastewater System Number: 120003799

Wastewater System Type & Classification: Wastewater Collection Class 1

Communal Tile Field 1 is located behind 23, 25, 27 & 29 Cathedral Pines Road. It services 5 properties (each equipped with an individual septic tank on their properties to serve as primary treatment). The effluent from the individual private septic tanks then flows through the municipal collection system to the communal tile field for subsurface disposal through a syphon/dosing chamber and leaching bed. The collection system consists of 237 m of gravity sanitary sewer main and two maintenance holes.

4.2 Communal Tile Field 2

Wastewater System Number: 120003806

Wastewater System Type & Classification: Wastewater Collection Class 1

Communal Tile Field 2 is located behind 12 Pine Point Road. It services 9 properties (each equipped with an individual septic tank on their properties to serve as primary treatment). The effluent from the individual private septic tanks then flows through the municipal collection system to the communal tile field for subsurface disposal through a syphon/dosing chamber and 2 separate leaching beds. The collection system consists of 285.5 m of gravity sanitary sewer main and 3 maintenance holes.

4.3 Communal Tile Field 3

Wastewater System Number: 120003815

Wastewater System Type & Classification: Wastewater Collection Class 1

Communal Tile Field 3 is located behind 2 & 4 Maplecrest Court. It services 3 properties (each equipped with an individual septic tank on their properties to serve as primary treatment). The effluent from the individual private septic tanks then flows through the municipal collection system to the communal tile field for subsurface disposal through a syphon/dosing chamber and leaching bed. The collection system consists of 257.6 m of gravity sanitary sewer main and 3 maintenance holes.

4.4 Communal Tile Field 4

Wastewater System Number: 120003824

Wastewater System Type & Classification: Wastewater Collection Class 1

Communal Tile Field 4 is located between 27 & 29 Pine Ridge Trail. It services 14 properties (each equipped with an individual septic tank on their properties to serve as primary treatment). The effluent from the individual private septic tanks then flows through the municipal collection system to the communal tile field for subsurface disposal through a syphon/dosing chamber and leaching bed. The collection system consists of 442.7m of gravity sanitary sewer main and 7 maintenance holes.

4.5 Communal Tile Field 5

Wastewater System Number: 120003833

Wastewater System Type & Classification: Wastewater Collection Class 1

Communal Tile Field 5 is located behind 1, 3, 5 & 7 Pine Ridge Trail. It services 22 properties (each equipped with an individual septic tank on their properties to serve as primary treatment). The effluent from the individual private septic tanks then flows through the municipal collection system to the communal tile field for subsurface

disposal through 4 syphon/dosing chambers and leaching bed. The collection system consists of 515.6m of gravity sanitary sewer main and 7 maintenance holes.

4.6 Communal Tile Field 6

Wastewater System Number: 120003842

Wastewater System Type & Classification: Wastewater Collection Class 1

Communal Tile Field 6 is located behind 15 & 17 Beechwood Road. It services 26 properties. The effluent from these properties flows directly through the municipal collection system to a communal septic tank, where the effluent then flows to a second septic tank for a two-staged treatment sequence. The effluent from the second septic tank then continues to the communal tile field for subsurface disposal through a leaching bed. The collection system consists of 559.6 m of gravity sanitary sewer main and 7 maintenance holes.

4.7 Communal Tile Field 7

Wastewater System Number: 120003851

Wastewater System Type & Classification: Wastewater Collection Class 1

Communal Tile Field 7 is located south of the service road between Country Club Lane and Valleycrest Drive. It services 18 properties (each equipped with an individual septic tank on their properties to serve as primary treatment). The effluent from the individual private septic tanks then flows through the municipal collection system to the communal tile field for subsurface disposal through a syphon/dosing chamber and leaching bed. The collection system consists of 535.7 m of gravity sanitary sewer main and 7 maintenance holes.

5 Performance & Maintenance Objectives

Environmental Services is available to respond twenty-four (24) hours a day, seven (7) days a week, three hundred and sixty-five (365) days a year for service calls or emergencies related to the Municipal Communal Tile Fields System. All Environmental Services Technicians are licenced under Ontario Regulation 129/04 (Regulation Licensing of Sewage Works Operators). No emergency maintenance and/or investigation was required during this reporting period.

Draft versions of an updated Operations Manual and Quality Management System for the Tile Fields have been created and are currently under review and revision. The program is being designed on a Quality Management System platform to mirror the Municipal Drinking Water Licensing Program.

5.1 Maintenance & Visual Inspections

Environmental Services completes visual inspections of the Tile Fields and their associated tanks/distribution boxes, collection system and maintenance holes; while an outside contractor completes filter cleaning, sewage pump-outs, cleaning, and CCTV inspections in the collection system. In this regard, actions completed in 2024 included the following:

- Flushing(cleaning) and CCTV inspections for all collections systems (TF 1-7) between April 30 & May 5, 2024.
- Replacement of the syphon tank at TF6 in December 2024.
- Grass and vegetative cover were maintained at the Tile Fields as needed, between May and October.
- Monthly visual inspections of the Tile Fields were completed between May and October with the following noted:
 - No visual evidence of bed breakout, erosion or tank surcharging;
 - No visual evidence of failure across piping, blockages across beds or clogged inlets;
 - No abnormal conditions were noted or specific follow-up maintenance recommended based on visual inspections.

Where private lot level septic tanks are used (Tile Fields 1 through 5 and 7), property owners are encouraged to inspect, service and pump-out septic tanks at minimum every three (3) years and provide the record to Environmental Services. In 2024, Environmental Services contacted 15 property owners connected to the municipal tile fields with private lot level septic tanks because there were no records of pump outs or inspections completed since 2020. Collecting this information supports best management practices related to the continual operational performance and maintenance of the municipal communal tile fields.

5.2 Effluent Flow Monitoring

The referenced ECAs include requirements for the daily measurement of effluent being discharged to the subsurface disposal systems (i.e. Tile Fields) to ensure daily design sewage flow is not exceeded. The measurement of flows may also assist the Township in determining the capability of the system to support existing community demands and future planning.

Taking into consideration the age of the Tile Fields and their extremely good operating condition, there is no evidence to suggest that these systems have been historically overloaded. As outlined in the AECOM Horseshoe Communal Septic System Assessment (September 2018) it appears that the Tile Fields were designed to treat and collect a larger daily flow capacity than the current daily demands of the existing service connections.

The use of manual event counters and the principle of averaging monthly data for daily flow estimates was discussed on July 31, 2019, with the MECP Approvals Branch and through follow-up telephone calls with the MECP Barrie District Office. Furthermore, in March 2020 and on behalf of the Township, AECOM submitted a letter to the MECP Barrie District Office advising of the following:

“The Township of Oro-Medonte is currently seeking proposals for mechanical siphon dosing counters from suppliers. Previously, the Township had pursued electronic flow metering, however, the challenges and costs associated with the method of flow measurement were prohibitive. These challenges included long lead time for installation, partial pipe flow, no power supply at the siphon chambers, and cost of the electronic flow meters.

During discussions with MECP staff during the ECA process for Tile Field 4, it was proposed that dosing counters would be read monthly to determine the average daily flow. There was no objection to this proposal. “ - Craig West, P.Eng

As such, the Township has elected to use manual event counters to collect monthly data and estimate daily average flow.

In 2024, six of the seven (7) Municipal Tile Field locations (TF 1 to 4, 6 & 7) were equipped with dose counters in the respective syphon chambers to monitor flow. These devices are currently being calibrated and evaluated.

5.3 Filter Cleaning & Pump Out Records

Tank filter cleaning and replacement as well as solid removals were completed by Espey D. Robert Excavating & Septic Services Ltd. as outlined in Table 1:

Table 2: Filter Cleaning & Pump Out Records

Date	Location	Filter Cleaning / Replacements	Solids Removal
2024/01/20	Tile Field 7	x	
2024/02/21	Tile Field 7	x	
2024/03/21	Tile Field 7	x	
2024/04/08	Tile Field 6		x
2024/04/26	Tile Field 7	x	
2024/06/21	Tile Field 7	x	
2024/07/20	Tile Field 7	x	
2024/08/22	Tile Field 7	x	
2024/09/23	Tile Field 7	x	
2024/11/09	Tile Field 7	x	x
2024/11/22	Tile Field 6	x	x

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2024/11/22	Tile Field 4	x	
2024/11/22	Tile Field 5	x	
2024/12/20	Tile Field 7	x	

5.4 Sampling & Testing

The referenced ECAs outline sampling requirements for quarterly grab samples to be collected from syphon/dosing chambers and analyzed for Five-Day Biological Oxygen Demand (BOD5) and Total Suspended Solids (TSS). These parameters are commonly used as an indicator of operational efficiency and general examination of wastewater quality.

In 2024, due to an administrative error, Quarter 2 samples were collected after the calendar quarter had concluded and 112 days after the Quarter 1 samples were taken. The Ministry of Environment, Conservation and Parks (MECP) was notified of this non-compliance, and steps have been taken to prevent this issue from happening again in the future.

Summarized in the tables below are the 2024 BOD5 and TSS results for reference.

Table 3: BOD5 Results Summary

Sample Date	TF1	TF2	TF3	TF4	TF5	TF6	TF7
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
2024/03/20	48	107	125	64	114	166	12
2024/07/10	34	28	126	61	73	205	7
2024/09/18	<12	38	176	71	94	138	<12
2024/11/20	18	90	57	33	57	163	12

*Note: 'TF' indicates 'Tile Field'

Table 4: TSS Results Summary

Sample Date	TF1	TF2	TF3	TF4	TF5	TF6	TF7
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
2024/03/20	17	129	82	2200	32	30	6
2024/07/10	24	16	36	52	116	32	4
2024/09/18	10	250	36	48	34	40	9
2024/11/20	10	31	20	35	27	62	5

*Note: 'TF' indicates 'Tile Field'

6 Consumer Complaints

There was one (1) consumer complaint received during this reporting period and details are summarized below in Table 4:

Table 5: Compliant Details & Resolution Summary

Date	Complaint Details & Resolution
2024/09/04	CT2024-104 Tile Field 7 Owner had private tank pumped and the contractor’s inspection report suggested a possible blockage on the Township side. Township staff attended, visually inspected, reviewed CCTV from May 2024 and determined flow was not impeded in the municipal system and advised homeowner.

Education and outreach postcards were also distributed to customers in the Q2 billing during this reporting period, mailed July 15, 2024.

7 Spills or Abnormal Discharge Events

No spills, bypasses or abnormal discharge events were observed during this reporting period. (Any spills or discharge events would be recorded and addressed in accordance with Part X of the Environmental Protection Act, Ontario Regulation 675 (as amended) and reported to MECP, both by telephone and in writing, in accordance with ECAs and the CLI-ECA requirements.

8 Summary of Alterations to the Authorized System

No alterations were made to the Tile Fields or their associated sewage collection systems within the reporting period that required authorization by ECA and CLI-ECA approvals.

In September 2024, Council endorsed Municipal Sewer Use By-law No. 2024-091 which assists in the protection of public safety, municipal infrastructure, and the natural environment, while providing transparent guidance and a uniform understanding of sewage terminology and definitions, acceptable sewage discharges, provisions, spill notifications, inspections, approvals, orders and offenses while supporting operational management of these systems.

9 Financial Planning

The communal tile systems are solely supported through a user fee delivery model, meaning only those receiving the service, pay for the service. Although Sewage System Financial Plans are not currently legislated in the same fashion as Drinking Water Financial Plans, Township Staff is developing this program to mirror provincial drinking water system practices in the delivery of sewage services to customers. Environmental

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Services believes that a financial plan is imperative to assist in the prioritization of future projects, achieve operational targets and goals, and provide customers with a long-term vision of costs associated with communal tile field services.

On November 22, 2023, a 10-Year Communal Tile Field Financial Plan (Financial Plan) with the inclusion of multi-year user rates was received and endorsed by Council (Motion No. SC231122-3). This process increases financial confidence in the delivery of sustainable operational programs while continuing to build a capital financial reserve fund supporting long-term asset management. The 2023 Financial Plan is available to the public on the Township website.

10 Conclusion

It is the belief of the Township of Oro-Medonte that this report satisfies the requirements of ECAs, Section 6, and the CLI-ECA, Schedule E, Section 4.

Any questions regarding this report should be directed to Environmental Services.

Appendix A – Communal Tile System Maps