Val Côté
Sewage Treatment Lagoon
Sewage Collection System

Annual Operating Report
January 1 to December 31, 2025

Prepared by Ontario Clean Water Agency, Northeastern Ontario Hub

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Name of Facility:	**Val Côté Lagoon**
Address:	**Lot 15, Concession VII, Mattice-Val Côté, Township District of Cochrane, Ontario**
Ministry Works #:	**120002460**
Environmental Compliance Approval (ECA):	**7473-92QSLZ, issued December 12, 2012**
Sewage Collection System (CLI-ECA):	**291-W601, issued September 5, 2023**
Report Period:	**From January 1 to December 31, 2025**

Facility Description:

Capacity of Works	57.7 m^3/day
Service Area	Community of Val Côté
Effluent Receiver	Six Mile River
Major Process	Dual celled, seasonal discharge waste stabilization lagoon

The Val Côté wastewater treatment lagoon is a Class 1 facility with a design average daily flow of 57.7 m^3/day.

The system is fed by individual low-pressure grinder pumps, which feed two cells, each having an effective volume of 6,054.5 m^3. The system is a seasonal discharge waste stabilization pond that discharges to the Six Mile River.

The spring discharge period commences no earlier than one week after the ice is off the lagoon and terminating no later than June 30th; the minimum duration is five days. The maximum allowed discharge rate is 28 L/s and an average daily flow of 2,419 m^3/d.

The fall discharge occurs from September 24th to December 15th with a minimum duration of fourteen days. The maximum allowed discharge rate is 10 L/s and an average daily flow of 864 m^3/d.

1.0 Monitoring Data

1.1 Monitoring Program as Outlined in the Environmental Compliance Approval

$cBOD_5$ - Five-day carbonaceous biochemical oxygen demand measured in an unfiltered sample
TP - Total Phosphorus
TSS - Total Suspended Solids

1.1.1 Final Effluent

Parameter	Type of Sample	Minimum Frequency
$cBOD_5$	*grab*	*Taken on the start, middle and end of each discharge period.*
pH	*grab*	
Temperature	*grab*	
Total Phosphorous	*grab*	
Total Suspended	*grab*	

1.2 Data

1.2.1 Effluent Flow

	Spring Discharge	Fall Discharge
Maximum flow rate (L/s)	4.8	0
Compliance flow rate (L/s)	*28*	*10*
Average Daily Volume (m^3/d)	278	0
Objective maximum volume (m^3/d)	*2,419*	*864*
Discharge Duration (days)	15	0
Specified Minimum Duration	*5*	*14*

Refer to Appendix A for Summary of Flow Data

Please note: There was no fall discharge during the 2025 reporting year.

1.2.2 Effluent (Spring Discharge)

The following data is from the spring discharge period of June 10th to June 24th, 2025. A non-compliance occurs when the mean of any three consecutive grab samples exceed the compliance limit.

Parameter (mg/L)	**Average**	**Maximum**	**Compliance**
$cBOD_5$	2.3	3.1	*15*
pH (units)	7.99	8.96	-
Temperature (°C)	20.3	22	-
Total Phosphorous	0.404	0.529	*1.0*
Total Suspended Solids	7.0	16	*20*

1.2.3 Effluent (Fall Discharge)

There was no fall discharge during the 2025 reporting year.

Refer to Appendix B for a Monthly Summary of Sampling and Monitoring Data

1.2.4 Effluent (Spring Discharge) – Seasonal Loadings

Parameter (kg/day)	Loadings	Compliance
$cBOD_5$	0.64	Average 36.29
Total Suspended Solids	1.95	Average 48.38
Total Phosphorous	0.11	Average 2.42

1.2.5 Effluent (Fall Discharge) –Seasonal Loadings

There was no fall discharge during the 2025 reporting year.

Refer to Appendix C for a Summary of Effluent Loading

1.3 Monitoring Program as Outlined in the Sewage Collection System (CLI-ECA)

BOD_5 - Five-day biochemical oxygen demand measured in an unfiltered sample
TSS - Total Suspended Solids
TP - Total Phosphorus
TKN - Total Kjeldahl Nitrogen
E.coli - Escherichia coli

1.4 CLI-ECA Additional Data

The collection system consists of individual low-pressure grinder pumps without any flow monitoring devices. There are no pumping stations or collection system overflow locations.

The owner is preparing for some major maintenance on the collection system in 2026. Although there are no immediate issues, the age of the infrastructure has prompted preventative maintenance. The complete scope of work is still being finalized, however, the are tentative plans for collection system cleaning, manhole rehabilitation, and valve replacements.

2.0 Interpretation of Monitoring and Analytical Data

The effluent quality is based on the carbonaceous biochemical oxygen demand, total suspended solids, and total phosphorus levels.

The Carbonaceous Biochemical Oxygen Demand ($cBOD_5$) is a 5-day test, which represents the oxygen demand from organic compounds and the oxidation of inorganic compounds such as ferrous iron and sulphide. High BOD_5 or $cBOD_5$ in effluent means a large quantity of oxygen was needed to break down the organic matter, and identifies a large amount of organic matter in the effluent indicating inadequate treatment. The average $cBOD_5$ concentration during the spring discharge was 2.3 mg/L, which complied with the limit of 15 mg/L. The cBOD5 loading was 0.64 kg/day during the spring discharge, which complies with the limit of 36.29 kg/day.

Total Suspended Solids (TSS) in effluent are composed of settleable solids and nonsettleable solids depending on the size, shape and weight of the solid particles. Settable solids are large sized particles that tend to settle more rapidly in a given period of time. The average TSS concentration during the spring discharge was 7.0 mg/L, which complied with the limit of 20 mg/L. The TSS loading was 1.95 kg/day during the spring discharge, which complies with the limit of 48.38 kg/day.

Total Phosphorus (TP) refers to the amount of phosphorus in a sample. Excess TP stimulates algae and weed growth that may cause fluctuations in dissolved oxygen in the receiving waters. The average TP concentration during the spring discharge was 0.404 mg/L, which complied with the limit of 1.0 mg/L. The average TP loading was 0.11 kg/day during the spring discharge, which complied with the limit of 2.42 kg/day.

The monitoring parameters of $cBOD_5$, TSS, and TP at the Val Côté Sewage Treatment Lagoon, were well within the compliance limits specified in the facility's ECA during the spring discharge period.

3.0 Calibration and Maintenance Procedures Performed on the Works

Lagoon maintenance, including non-scheduled maintenance, is monitored using OCWA's preventative maintenance software programs. All routine and preventative maintenance measures were conducted as scheduled.

- No major structural, equipment, apparatus or mechanical maintenance was required or carried out for 2025
- Alum treatment was conducted on both cells prior to the spring discharge period

The owner is preparing for some significant maintenance on the lagoon in 2026. Although there are no immediate issues, the age of the infrastructure has prompted preventative maintenance. The complete scope of work is still being finalized, however, there are tentative plans for lagoon cleaning, sludge removal, and effluent valve replacements.

4.0 Bypasses, Overflows, or Emergency Events

There were no abnormal discharge events during the reporting period.

5.0 Complaints

There were no complaints during the reporting period.

6.0 Instances of Non-Compliance

There were no instances of non-compliance during the reporting period.

APPENDIX A: Summary of Flow Data

	01/2025	02/2025	03/2025	04/2025	05/2025	06/2025	07/2025	08/2025	09/2025	10/2025	11/2025	12/2025
Effluent Discharge / Flow - m^3/d												
Count	0	0	0	0	0	15	0	0	0	0	0	0
Max						418						
Mean						278						
Min						126						
Total						4170						
Effluent Discharge / Flow Rate - l/s												
Count	0	0	0	0	0	15	0	0	0	0	0	0
Max						4.8						
Mean						3.2						
Min						1.4						

APPENDIX B: Monthly Summary of Sampling and Monitoring Data

Val Cote Spring Discharge Period - one week after ice out to June 30

	10-Jun	17-Jun	24-Jun
Carbonaceous BOD	2	3.1	1.8
Field pH	7.24	7.78	8.96
Field Temperature	20	19	22
Total Phosphorus (as P)	0.427	0.529	0.255
Total Suspended Solids	16	4	1

APPENDIX C: Summary of Effluent Loading

Loading Calculations

$$\text{Seasonal average result}\ \frac{\text{mg}}{\text{L}} \times \frac{1000\ \text{L}}{1\ \text{m}^3} \times \frac{1\ \text{g}}{1000\ \text{mg}} \times \frac{1\ \text{kg}}{1000\ \text{g}} \times \text{seasonal average flow}\ \frac{\text{m}^3}{\text{day}} = \text{Loading}\ \frac{\text{kg}}{\text{day}}$$

convert from mg/L to kg/m^3

Spring Calculation

$cBOD_5$ Loading Calculation

$$\frac{2.3\ \text{mg}}{1\ \text{L}} \times \frac{1000\ \text{L}}{1\ \text{m}^3} \times \frac{1\ \text{g}}{1000\ \text{mg}} \times \frac{1\ \text{kg}}{1000\ \text{g}} \times \frac{278\ \text{m}^3}{\text{d}} = \frac{0.64\ \text{kg}}{\text{d}}$$

Total Suspended Solids (TSS) Loading Calculation

$$\frac{7.0\ \text{mg}}{1\ \text{L}} \times \frac{1000\ \text{L}}{1\ \text{m}^3} \times \frac{1\ \text{g}}{1000\ \text{mg}} \times \frac{1\ \text{kg}}{1000\ \text{g}} \times \frac{278\ \text{m}^3}{\text{d}} = \frac{1.95\ \text{kg}}{\text{d}}$$

Total Phosphorous Loading Calculation

$$\frac{0.404\ \text{mg}}{1\ \text{L}} \times \frac{1000\ \text{L}}{1\ \text{m}^3} \times \frac{1\ \text{g}}{1000\ \text{mg}} \times \frac{1\ \text{kg}}{1000\ \text{g}} \times \frac{278\ \text{m}^3}{\text{d}} = \frac{0.11\ \text{kg}}{\text{d}}$$

APPENDIX D: CLI-ECA Reporting Sections

Collection ECA # 291-W601 Schedule E	Section in Report
4.6.3 If applicable, includes 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 system operations.	1.3 Monitoring Program as Outlined in the Sewage Collection System (CLI-ECA) 1.4 CLI-ECA Additional Data 4.0 Bypasses, Overflows, or Emergency Events
4.6.4 Includes a summary of any operating problems encountered and corrective actions taken.	4.0 Bypasses, Overflows, or Emergency Events
4.6.5 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.	3.0 Calibration and Maintenance Procedures Performed on the Works
4.6.6 Includes a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.	5.0 Complaints
4.6.7 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.	3.0 Calibration and Maintenance Procedures Performed on the Works
4.6.8 Includes a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including: a) Dates; b) Volumes and durations; c) If applicable, loadings for total suspended solids, BOD, total phosphorus, 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.	4.0 Bypasses, Overflows, or Emergency Events
4.6.9 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 progresses 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.	1.4 CLI-ECA Additional Data