Ontario Clean Water Agency
Agence Ontarienne Des Eaux

March 30, 2026

Cathy Chisholm
District Manager
Ministry of the Environment, Conservation and Parks
Drinking Water and Environmental Compliance Division
Kingston Offices

Director
ECA.Submission@ontario.ca

Dear Cathy Chisholm;

Re: Madoc Wastewater Annual Reports for 2025

Attached, please find the annual performance report for the Madoc Sewage Lagoons and the Madoc Sewage Collection System for the 2025 operating year, prepared by the Ontario Clean Water Agency on behalf of the Corporation of the Municipality of Centre Hastings.

This report is submitted in accordance with Section 11 of Environmental Compliance Approval (ECA) No. 1652-BRKT58 (issued August 14, 2020) for the Madoc Sewage Lagoons and Schedule E Section 4.6 of Consolidated Linear Infrastructure (CLI) ECA No. 153-W601 (issued July 28th, 2023) for the Madoc Sewage Collection System.

The purpose of this report is to provide a performance record for future references and to provide a compliance record for all the terms and conditions outlined in the Environmental Compliance Approvals.

If you have any questions or comments regarding this report, please feel free to contact me.

Sincerely,

Sophia Madden

Sophia Madden
Process and Compliance Technician
Kawartha Trent Regional Hub
Ontario Clean Water Agency

cc: Amber Coupland, Sr. Operations Manager, Ontario Clean Water Agency
Shayna Maracle, Water Compliance Officer, MECP
Moira Lake Cottager's Association

Madoc Wastewater Lagoons
Madoc Sewage Collection System

Annual Performance Reports

Reporting period of January 1, 2025 – December 31, 2025

Prepared For: Corporation of the Municipality of Centre Hastings

Prepared By: Ontario Clean Water Agency
Agence Ontarienne Des Eaux

This report is submitted in accordance with Conditions 11(4)(a) through 11(4)(l) of Environmental Compliance Approval No. 1652-BRKT58 for the Madoc Sewage Lagoons and Schedule E Section 4.6 of Consolidated Linear Infrastructure Environmental Compliance Approval No. 153-W601 for the Madoc Sewage Collection System.

Condition 11(4) of ECA No. 1652-BRKT58 and Schedule E Section 4.6.1 of CLI ECA No. 153-W601 that *"The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon..."*

Facility Introduction

The Ontario Clean Water Agency (OCWA) operates and maintains the Madoc Wastewater Treatment Plant (Madoc Lagoons) and the Madoc Sewage Collection System on behalf of the Municipality of Centre Hastings.

The Madoc Wastewater Lagoons and Sewage Collection System complies with all requirements of the regulating authorities and operates under:

- Environmental Compliance Approval No. 1652-BRKT58 (issued August 14th, 2020) for the Madoc Sewage Lagoons
- Consolidated Linear Infrastructure Environmental Compliance Approval No. 153-W601 (issued July 28th, 2023) for the Madoc Hwy #7, McDonald's, and Rollins Pumping Stations

Discharge Requirements

The Madoc Lagoons operate on seasonal retention and seasonal discharge cycle with continuous alum feed for phosphorous removal, discharging in Spring and Fall.

Discharge periods are defined in ECA No. 1652-BRKT58 as follows:

- Spring Discharge commencing not earlier than April 1 and terminating not later than May 20
- Fall Discharge commencing not earlier than November 1 and terminating not later than December 15

Discharge shall normally take place over a minimum of 21 days.

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2025 Performance Report for the Madoc Sewage Lagoons

During the 2025 reporting period, the Ontario Clean Water Agency operated the Madoc Wastewater Treatment Plant (Madoc Lagoons) under the Environmental Compliance Approval (ECA) No. 1652-BRKT58, issued August 14th, 2020. The Madoc Lagoon facility is a Class 1 Wastewater Treatment Plant.

ECA No. 1652-BRKT58 Condition 11(4)(a)
A summary and interpretation of all Influent, Imported Sewage monitoring data, and a review of the historical trend of the sewage characteristics and flow rates.

ECA No. 1652-BRKT58 requires that everything practicable be undertaken to operate the Sewage Treatment Plant so that the annual average daily influent is within the Rated Capacity. The Rated Capacity of the Madoc Sewage Lagoons is 1,008 m^3/day and the 2025 annual average daily influent flow was 625.6 m^3/day, or 62.1% of the Rated Capacity. The total Influent flow in 2025 was 228,521 m^3.

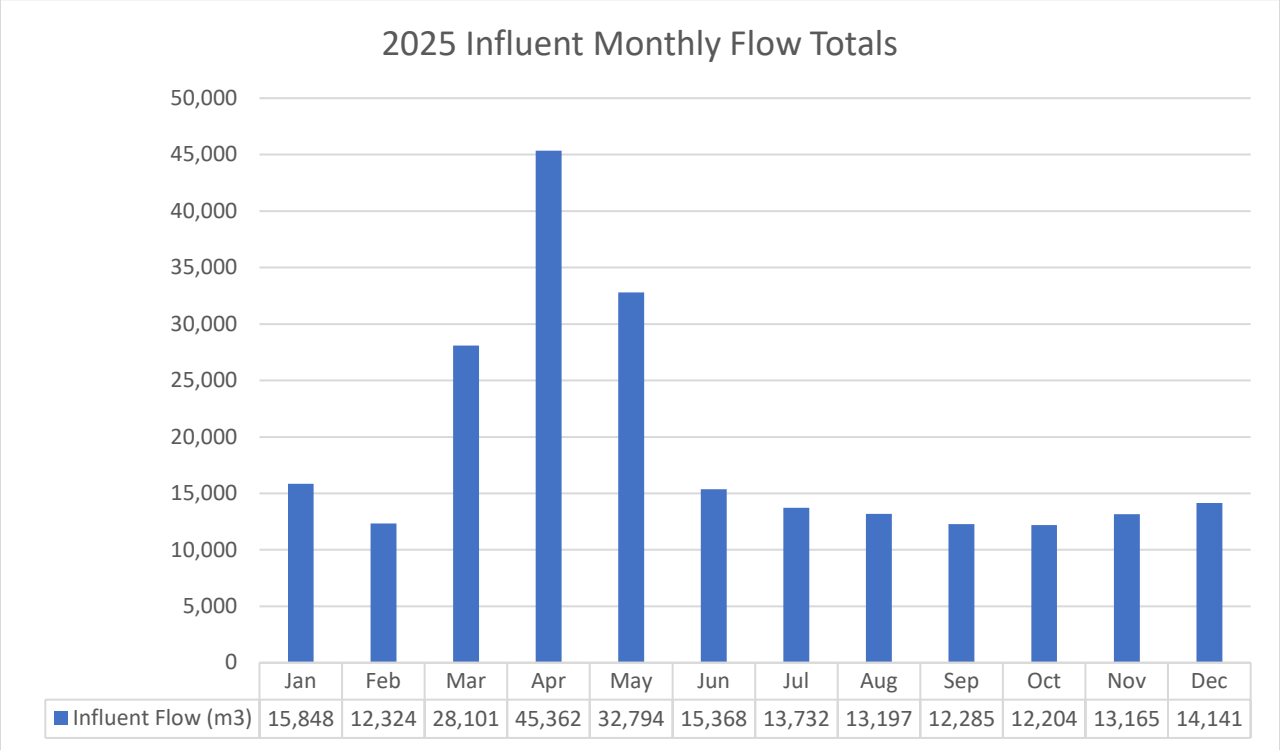
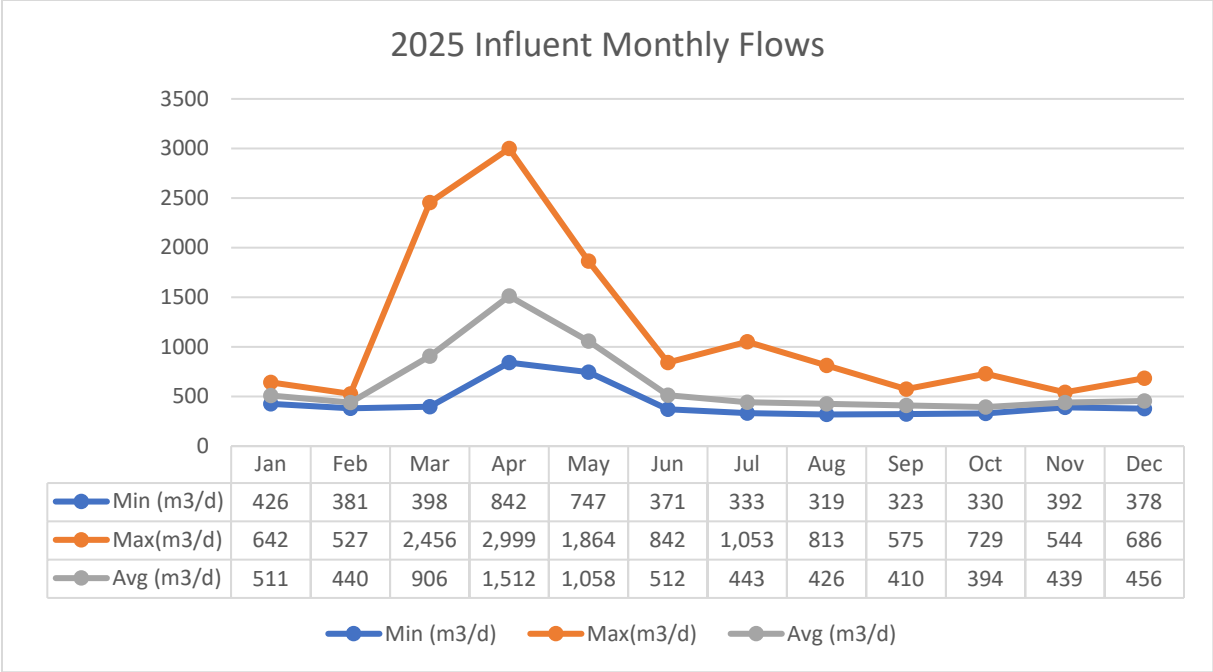


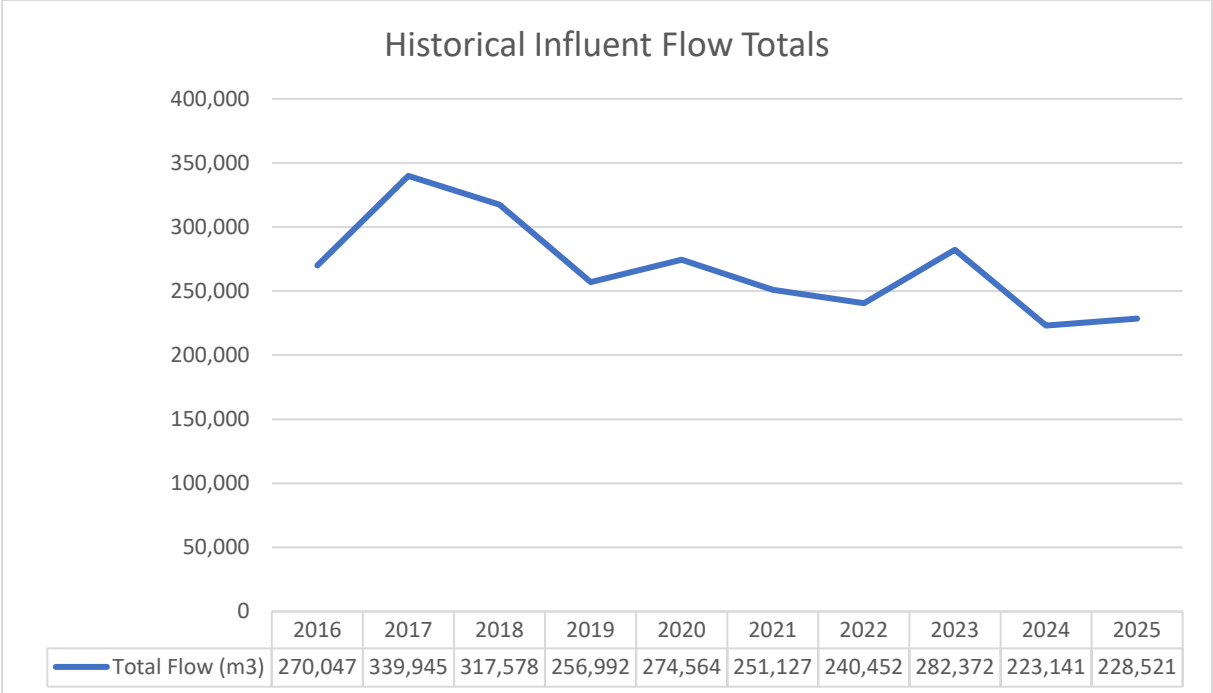
Figure 1 Influent Flow Totals



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min (m3/d)	426	381	398	842	747	371	333	319	323	330	392	378
Max(m3/d)	642	527	2,456	2,999	1,864	842	1,053	813	575	729	544	686
Avg (m3/d)	511	440	906	1,512	1,058	512	443	426	410	394	439	456

Figure 2 Influent Min, Max, Average Flows

The maximum daily flows for March, April, May, and July exceeded the Rated Capacity of 1,008 m^3/d, however the Annual Average Daily Flow remained below the Rated Capacity, and therefore remained in compliance with the ECA.



	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Flow (m3)	270,047	339,945	317,578	256,992	274,564	251,127	240,452	282,372	223,141	228,521

Figure 3 Historical Flows for the Madoc Sewage Lagoons

Based on the historical flows from 2016 to 2025, the total influent flow for the Madoc Sewage Lagoons has maintained a steady trend.

Table 1 reviews the historical trend of the influent sewage characteristics for the Madoc Sewage Lagoons, as required by Condition 11(4)(a) of ECA No. 1652-BRKT58.

Table 1 Historical Average Influent Sewage Characteristics for the Madoc Sewage Lagoons

Year	BOD5 (mg/L)	TSS (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2016	217.25	181.33	5.04	--
2017	159.41	165.91	3.48	--
2018	183.27	193.09	3.73	--
2019	209.75	204.17	4.30	38.50
2020	186.58	208.25	4.04	46.54
2021	222.42	264.75	5.06	51.78
2022	201.33	224.83	4.92	47.89
2023	166.17	201.58	4.53	45.2
2024	225.75	294.75	5.86	57.26
2025	216.17	276.08	6.31	60.33

Table 1 shows that the annual averages for Biochemical Oxygen Demand, Total Suspended Solids, and Total Phosphorus in the influent sewage have maintained a consistent trend from 2016 to 2025. Total Kjeldahl Nitrogen (TKN) was not a required sample parameter until after the issuance of the previous ECA No. 5744-BF4RBB in 2019. TKN annual average since 2019 has maintained a consistent trend, though there was an increase in TKN and TP seen in 2025.

Imported Sewage

Imported Sewage is sewage that is hauled to the sewage lagoons by licensed waste treatment system operators. The requirement to sample Imported Sewage monthly (when sewage is received at facility) was added as a condition of the previous ECA No. 5744-BF4RBB, issued in 2019 and remains a condition in the current ECA No. 1652-BRKT58.

Sample Results:
ECA No. 1652-BRKT58 requires a grab sample to be collected monthly and upon receiving Imported Sewage, and have it analyzed for BOD_5, Total Suspended Solids, Total Phosphorus and Total Kjeldahl Nitrogen.

Table 2 Historical Average Septage Characteristics for the Madoc Sewage Lagoons

Year	BOD_5 (mg/L)	TSS (mg/L)	Phosphorus (mg/L)	TKN (mg/L)
2016	--	--	--	--
2017	--	--	--	--
2018	--	--	--	--
2019	654.00	226.00	27.10	361.00
2020	494.00	95.00	17.10	162.65
2021	1407.80	4459.60	64.86	507.80
2022	1583.75	2101.25	36.00	304.75
2023	--	--	--	--

2024	--	--	--	--
2025	--	--	--	--

Table 2 shows the Biochemical Oxygen Demand, Total Suspended Solids, Phosphorus, and TKN annual averages for Imported Sewage from 2016 to 2025. Before the issuance of ECA No. 5744-BF4RBB in 2019, there were no sampling parameters for septage, thus there is little historical data available for comparison. The reporting year 2025, there was no septage received.

ECA No. 1652-BRKT58 Condition 11(4)(b)

A summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

2025 Spring Lagoon Discharge

The 2025 Spring Discharge commenced on April 14th and was terminated on May 15th. The Ministry of the Environment, Conservation and Parks was notified prior to commencement of the discharge and on the day the discharge ended. A total effluent volume of 126,937 m^3 was discharged during these dates. The Spring 2025 discharge remained in compliance with ECA No. 1652-BRKT58, issued in August 2020.

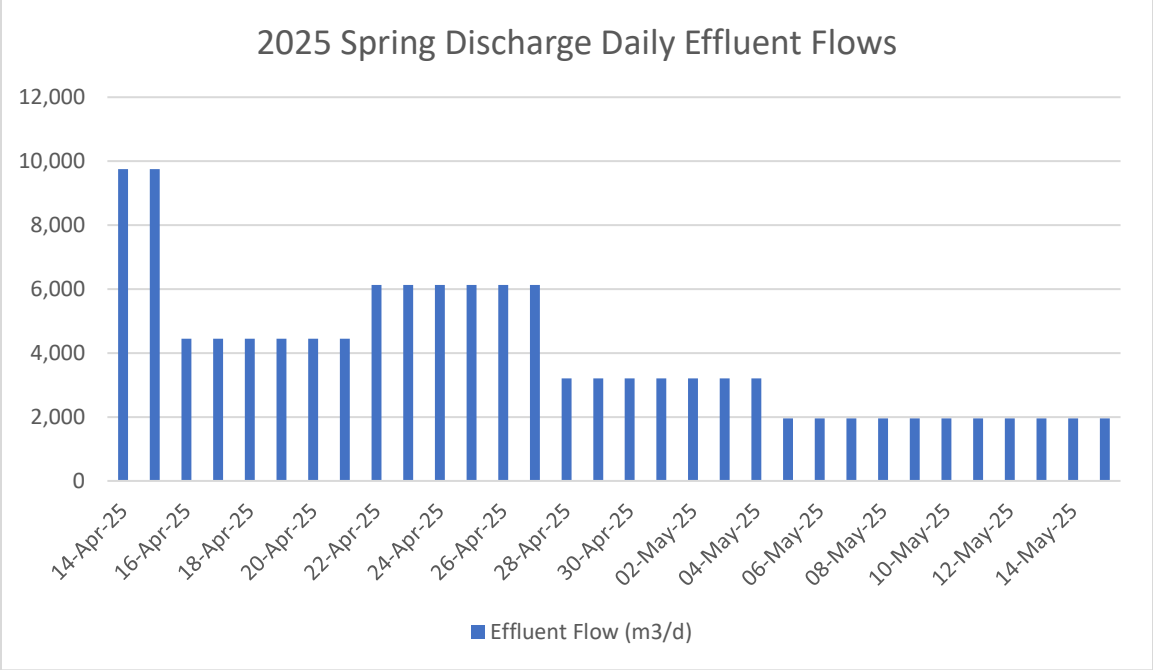


Figure 4 Spring Discharge Daily Effluent Flow Totals

All analytical effluent concentration results were below the maximum concentrations as specified in the facility ECA No. 1652-BRKT58, which remained in effect for the 2025 Spring discharge. A summary of the discharge data is provided in Table 3 below.

Table 3 2025 Spring Discharge Final Effluent Results

Effluent Parameters	Average Effluent Concentration Limit (mg/L)	Average Effluent Concentration Objective (mg/L)	Average Effluent Concentration (mg/L)	Average Effluent Loading Limit (kg/d)	Average Effluent Loading (kg/d)	Compliant (Y/N)
$CBOD_5$	**30.0**	**25.0**	7.3	**122**	29.0	Y
Total Suspended Solids	**30.0**	**25.0**	6.3	**122**	25.0	Y
Total Phosphorus	**0.50**	**0.30**	0.10	**4**	0.28	Y
pH	**6.0-9.5**	**6.5-8.5**	7.8	--	--	Y

The results in Table 3 show that the seasonal average concentrations of $cBOD_5$, Total Suspended Solids, Total Phosphorus, and the seasonal average effluent waste loadings were in compliance with ECA No. 1652-BRKT58 during the 2025 Spring Seasonal Discharge.

Table 4 below includes additional samples taken upstream and downstream during the discharge in an effort to monitor water quality further from the point of discharge. Based on the results in Table 4, the lagoon discharge has little impact to no impact on the receiving stream.

Table 4 2025 Spring Discharge Upstream & Downstream Results

Parameters	Average Spring Concentration Upstream (mg/L)	Average Spring Concentration Downstream (mg/L)
$CBOD_5$	4.0	4.0
Total Suspended Solids	3.0	3.4
Total Phosphorus	0.03	0.03

2025 Fall Lagoon Discharge

The 2025 Fall Discharge commenced on November 12th and was terminated on December 11th. The Ministry of the Environment, Conservation and Parks was notified prior to commencement of the discharge and on the day the discharge ended. A total effluent volume of 97,770 m^3 was discharged during these dates. The 2025 Fall discharge remained in compliance with the requirements of ECA No. 1652-BRKT58 which was issued August 14th, 2020.

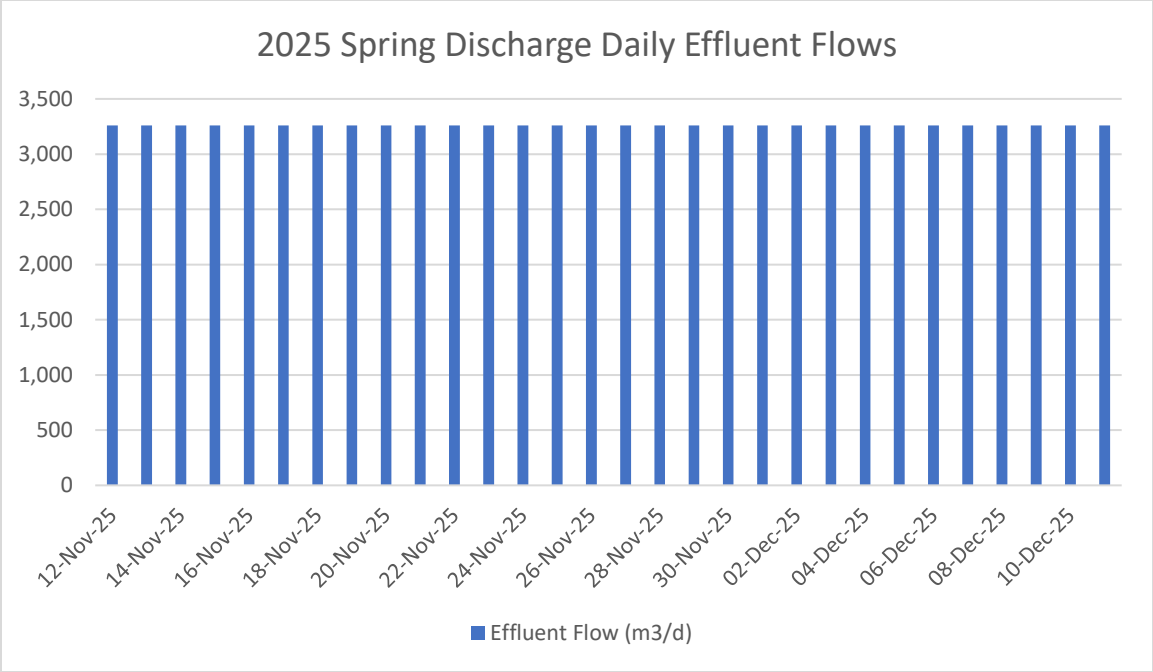


Figure 5 Fall Discharge Daily Effluent Flow Totals

All analytical effluent concentration results were below the maximum concentrations as specified in the facility ECA No. 1652-BRKT58. A summary of the discharge data is provided in a table below.

Table 5 2025 Fall Discharge Final Effluent Results

Effluent Parameters	Average Effluent Concentration Limit (mg/L)	Average Effluent Concentration Objective (mg/L)	Average Effluent Concentration (mg/L)	Average Effluent Loading Limit (kg/d)	Average Effluent Loading (kg/d)	Compliant (Y/N)
$CBOD_5$	**30.0**	**25.0**	5.67	**122**	18.5	Y
Total Suspended Solids	**30.0**	**25.0**	9.00	**122**	29.3	Y
Total Phosphorus	**0.50**	**0.30**	0.09	**4**	0.29	Y
pH	**6.0-9.5**	**6.5-8.5**	7.7	--	--	Y

The results in Table 5 show that the seasonal average concentrations of $cBOD_5$, Total Suspended Solids, Total Phosphorus, and the seasonal average effluent waste loadings were in compliance with the ECA No. 1652-BRKT58, issued August 14th, 2020, during the 2025 Fall Seasonal Discharge.

Table 6 includes additional samples taken downstream and upstream of the final effluent discharge in an effort to monitor water quality further from the point of discharge. Based on the results in Table 6, the lagoon discharge has little impact to no impact on the receiving stream.

Table 6 2025 Fall Discharge Upstream & Downstream Results

Parameters	Average Fall Concentration Upstream (mg/L)	Average Fall Concentration Downstream (mg/L)
$CBOD_5$	4.0	4.0
Total Suspended Solids	11.0	2.50
Total Phosphorus	0.04	0.03

Summary of Effluent Monitoring and Recording Results

A summary of the monitoring data collected at the Madoc Lagoons during the reporting period is attached in *Appendix I – Performance Assessment Report for the Madoc Sewage Lagoons*. This report provides flow data, raw sewage, and final effluent analytical results.

ECA No. 1652-BRKT58 requires a minimum collection of five (5) effluent samples during the discharge period, twice per week at the beginning of the seasonal discharge, at 25%, 50%, 75% drawdown, and at the end of the seasonal discharge. A total of ten effluent samples were collected during the Spring discharge period and nine were collected during the Fall discharge period.

Table 7 Influent - Minimum Sampling Schedule

Parameters	Sample Type	Minimum Frequency
BOD5	4-hour composite	Monthly
Total Suspended Solids	4-hour composite	Monthly
Total Phosphorus	4-hour composite	Monthly
Total Kjeldahl Nitrogen	4-hour composite	Monthly

Table 8 Imported Sewage (Septage) - Minimum Sampling Schedule

Parameters	Sample Type	Minimum Frequency
BOD5	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Phosphorus	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly

Table 9 Lagoon Content - Minimum Sampling Schedule

Parameters	Sample Type	Minimum Frequency
cBOD5	Grab*	Once
Total Suspended Solids	Grab*	Once
Total Phosphorus	Grab*	Once

Total Kjeldahl Nitrogen	Grab*	Once
pH	Grab*	Once

*ECA No. 1652-BRKT58 states that a minimum of three (3) grab samples from the surface, middle and bottom of the liquid portion at a location representative of the cell content, collected and composited as one sample.

Note: as per ECA No. 1652-BRKT58 each cell in which the content is scheduled for discharge in the seasonal discharge period should be sampled at least seven days prior to a scheduled discharge.

Table 10 Final Effluent - Minimum Sampling Schedule

Parameters	Sample Type	Minimum Frequency
cBOD5	Grab	Five per discharge season
Total Suspended Solids	Grab	Five per discharge season
Total Phosphorus	Grab	Five per discharge season
Total Ammonia Nitrogen	Grab	Five per discharge season
Total Kjeldahl Nitrogen	Grab	Five per discharge season
Nitrate as Nitrogen	Grab	Five per discharge season
Nitrite as Nitrogen	Grab	Five per discharge season
E. coli	Grab	Five per discharge season

The required number of raw sewage and final effluent samples were collected at the specified locations and frequencies during the reporting period as per ECA No. 1652-BRKT58 Condition 9 (Schedule D).

ECA No. 1652-BRKT58 Condition 11(4)(c)

A description of any operating problems encountered and corrective actions taken.

The following details describe all operating problems encountered during the reporting period and the corrective actions taken:

Table 11 2025 Operational Challenges

Month	*Challenges & Corrective Actions*
March 2025	Lagoon Pumping – pulled pump and removed rags, station back in working order
April 2025	Power outage at alum shack. Operates using portable standby generator, looking into getting Generlink hooked up to building for long term solution.
November 2025	Lagoon pumps overloaded. Caused by tripped hydro line to station. Require brush to be cut back from hydro lines.

ECA No. 1652-BRKT58 Condition 11(4)(d)

A summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

OCWA uses a Work Maintenance System (WMS). WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis. The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out and assets are maintained to manufacturer's and/or industry standards. Emergency and capital repair maintenance is completed and added to the system.

Preventative Maintenance/Weekly Work Orders Completed	81
Operational Maintenance Work Orders Completed	15
Capital Maintenance Work Orders Completed	0

Capital projects are listed and provided to the Municipality of Centre Hastings in the form of a "Capital Forecast". This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement. Annual and Emergency repair/maintenance is listed below:

Annual Lifting Device Inspections
Annual Flow Meter Calibrations
Annual Wet Well Cleanout
Actizyme Chemical to Reduce Sludge Volume Generated
Hatch Repairs (2)
Lagoon Pump Troubleshooting

ECA No. 1652-BRKT58 Condition 11(4)(e)

A summary of any effluent quality assurance or control measures undertaken

Effluent quality assurance is maintained in several ways. All final effluent samples collected during the reporting period to meet ECA sampling requirements were submitted to SGS Lakefield Research Ltd. laboratory for analysis. SGS Lakefield Research has been deemed accredited by the Canadian Association for Laboratory Accreditation (CALA), meeting strict provincial guidelines including an extensive quality assurance/quality control program. By choosing this laboratory, the Ontario Clean Water Agency is ensuring appropriate control measures are undertaken during sample analysis. Sampling calendars issued to the operators denoting frequency of sampling. Raw and effluent samples are collected as per the Environmental Compliance Approval and the results are reviewed on a regular basis to ensure compliance with the site's objectives and limits.

ECA No. 1652-BRKT58 Condition 11(4)(f)

A summary of the calibration and maintenance carried out on all Influent, Imported Sewage and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer

As stated earlier, the Ontario Clean Water Agency's maintenance activities are based on a computerized Work Management System (WMS) using the Maximo application. The WMS is a proactive maintenance system, based on detailed risk assessment with respect to process.

The WMS database automatically populates work orders and schedules for the calibration and maintenance of a wide variety of equipment. The WMS also automatically tracks each individual maintenance event, calibration of all meters and certification of all devices.

Calibration and maintenance of the onsite flow measuring devices are calibrated by a certified third-party qualified technician and performed on annual basis:

Flow meter and Chart Recorder:

Calibration Date: May 5th and 6th, 2025
Work Performed By: Tower Electronics Inc.

ECA No. 1652-BRKT58 Condition 11(4)(g)

A summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:
i) when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality;
ii) when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity

Table 12 Efforts Made to Meet Effluent Objectives of Condition 6

Sampling effluent as per ECA
Visually inspecting effluent when performing rounds and during Spring and Fall Discharge
Ensuring that alum is being dosed
Ensuring proper operation of Pump Stations
Perform inspection of lagoon quality during operation
Collected lagoon pH, temp, D.O, and conductivity during discharges
Calibrating pH/DO probes during spring/fall discharge
Annual calibration of influent/effluent flow meters

ECA No. 1652-BRKT58 Condition 11(4)(h)

A tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed; a tabulation of the measured volume of sludge accumulated in the lagoon cells in five-year intervals and the estimated volume in the interim years and when sludge was disposed of during the reporting period, a summary of disposal locations and volumes of sludge disposed at each location;

During the 2025 reporting period, no sludge was disposed of from the Madoc Sewage Lagoons. The volume for the next reporting period is anticipated to be similar to the 2025 reporting period.

Table 13 Estimated Volume of Sludge in the Madoc Sewage Lagoons

Madoc Lagoons		
Year	**Measured Volume of Sludge Accumulated (5-year intervals) (m^3)**	**Estimated Volume** (=Total influent flow*0.3% + previous estimated sludge volume)
2018 – Third party contractor removed approximately 6,400 m^3 of sludge from the North Cell, estimating 1,760 m^3 of sludge remaining. No Sludge was removed from the South Cell during that time.		
2020	N/A	3,069 m^3
2021	N/A	3,549 m^3
2022	N/A	4,270 m^3
2023	N/A	5,117 m^3
2024	N/A	5,786 m^3
2025	N/A	6,472 m^3

***Note that the average wastewater facility produces 0.2%-0.4% sludge annually*

ECA No. 1652-BRKT58 Condition 11(4)(i)

A summary of any complaints received and any steps taken to address the complaints

During the 2025 reporting period, there were no community complaints received for the Madoc Sewage Lagoons.

ECA No. 1652-BRKT58 Condition 11(4)(j)

A summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events

During the 2025 reporting period, there were no bypasses, spills, other situations outside normal operating conditions, or abnormal discharge events for the Madoc Sewage Lagoons.

ECA No. 1652-BRKT58 Condition 11(4)(k)

A summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modification

In the reporting year 2025, there were no Pre-Authorized Modifications to Municipal Sewage Works per the Limited Operational Flexibility Protocol as per ECA No. 1652-BRKT58 Condition 11(4)(j).

Table 14 Summary of Modification to Sewage Works

Equipment	Emergency Operational Modification
Not Applicable for 2025.	

ECA No. 1652-BRKT58 Condition 11(4)(l)

A summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted and a summary of efforts made to achieve conformance with Procedure F-5-5 and establish /maintain a Pollution Prevention and Control Plan (PPCP).

During the 2025 reporting period, there were no incidents of a bypass or overflow within the sanitary sewer system and therefore no proposed projects to eliminate bypasses or overflows are forecasted for the 2026 reporting period for the Madoc Sewage Lagoons.

Wastewater System Effluent Regulations (WSER)

The Wastewater Systems Effluent Regulations (WSER) is a federal wastewater regulation under the Fisheries Act that was released in July 2012 but not in effect until January 1, 2013.

These regulations apply to a wastewater system that:

- Is designed to collect an average daily volume (ADV) of 100 m^3 or more of influent, or
- Collects an average daily volume (ADV) of 100 m^3 or more of influent during any calendar year.

An owner or operator must calculate, for each calendar year, the Average Daily Volume of effluent deposited via the system's final discharge point according to the following formula:

Sum of daily effluent volumes deposited (m^3) ÷ number of days in that calendar year (365 days)

Note: The formula uses the number of days in the calendar year not the number of days discharging.

Sampling and reporting requirements are dependent on the system type and its annual average daily volume of effluent. In 2025, the Madoc Sewage Lagoons deposited approximately 224,707 m^3 of seasonal effluent volumes.

The Monthly Monitoring Reports (due 45 days after the end of each quarter) were submitted to Environment Canada as required. The Madoc Sewage Lagoons met all of the quality standards in 2025. A summary of the annual monitoring report can be found on the following page.

Monitoring Report

Effluent Monitoring Data: *Madoc Wastewater Treatment Lagoon*

System Type: Intermittent **Reporting Period**: Annually **Avg Daily Effluent**: 697.3

Averaging Period: Annually **Reporting Period**: January - December **Reporting Year**: 2025

Was effluent deposited in this reporting period? Yes

For each month indicated, was effluent deposited?

January:	No	February:	No	March:	No
April:	Yes	May:	Yes	June:	No
July:	No	August:	No	September:	No
October:	No	November:	Yes	December:	Yes

# Of days effluent was deposited? (days)	Total Volume of Effluent deposited? (m^3)	Average CBOD (mg/L)	Average SS (mg/L)
		Limits	
		25	25
62	224,707	6.5	7.6

Figure 6 2025 WSER Monitoring Report for the Madoc Sewage Lagoons

2025 Performance Report for the Madoc Sewage Collection System

In the 2025 reporting year, the Ontario Clean Water Agency operated the Madoc Sewage Collection System on behalf of the Corporation of the Municipality of Centre Hastings, under the Consolidated Linear Infrastructure Environmental Compliance Approval (CLI ECA) No. 153-W601, issued July 28th, 2023.

CLI ECA No. 153-W601 Schedule E 4.6.3

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.

The Madoc Sewage Collection System is composed of the Highway 7 Sewage Pumping Station, McDonald's Sewage Pumping Station, and Rollins St Sewage Pumping Station. The influent flows for the Madoc Sewage Collection System are captured in *Figure 1* and *Figure 2* of the *2025 Performance Report for the Madoc Sewage Lagoons*.

CLI ECA No. 153-W601 Schedule E 4.6.4

Includes a summary of any operating problems encountered and corrective actions taken.

Table 15 Operational Challenges for the Madoc Sewage Collection System

Month	*Challenges & Corrective Actions*
March 2025	Buildup of rags at McDonald's Sewage Pumping Station. Cleaned pumps and station back in working order.
December 2025	Rebuilt pump panel at Rollins St Sewage Pumping Station due to aging infrastructure.

CLI ECA No. 153-W601 Schedule E 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.

Table 16 Annual Flow Meter Calibration Results

Flow Meter Description and Location		**Date of Calibration Report**	**Tag ID**	**Passed Calibration Y/N**
Wet Well Level Milltronics	Madoc OPP	May 6, 2025	01-19-97411-0X	Y
Wet Well Level Milltronics	McDonalds SPS	May 6, 2025	193080	Y

OCWA uses a Work Maintenance System (WMS). WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual

basis. The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out and assets are maintained to manufacturer's and/or industry standards. Emergency and capital repair maintenance is completed and added to the system. Capital projects are listed and provided to the Municipality of Centre Hastings in the form of a "Capital Forecast". This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement. Annual and Emergency repair/maintenance is listed below:

Annual Wet Well Cleanout
Annual Flow Meter Calibrations
Panel Upgrades at Rollins St Sewage Pumping Station due to aging infrastructure.

CLI ECA No. 153-W601 Schedule E 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.

During the 2025 reporting period, there were no community complaints received for the Madoc Sewage Collection System.

CLI ECA No. 153-W601 Schedule E 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.

In the 2025 reporting year, there were no Alterations to the Madoc Sewage Collection System under Schedule D of CLI ECA No. 153-W601.

Table 17 Summary of Modification to Sewage Works

Equipment	Emergency Operational Modification
Not Applicable for 2025	

CLI ECA No. 153-W601 Schedule E 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.

During the 2025 reporting period, there were no Collection System Overflows or Spills of Sewage in the Madoc Sewage Collection System.

Table 18 Summary of Collection System Overflows and Spills of Sewage

Location of Event:	*N/A*		
Waterworks #	*110001051*		
Date Started:	*N/A*	Time Started:	*N/A*

Samples Collected* (yes/no):	*N/A*	Date Collected:	*N/A*
Date Ended:	*N/A*	Time Ended:	*N/A*
Estimated Volume By-passed (m^3):	*N/A*		
Total time of event (hrs):	*N/A*		
Reference or Incident #	*N/A*		

CLI ECA No. 153-W601 Schedule E 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.

There were no changes in the efforts made to reduce Collection System Overflows or Spills during the 2025 reporting period.

Appendix I
Performance Assessment Report for the Madoc Sewage Lagoons 2025

Performance Assessment Report

From 1/1/2025 to 12/31/2025 11:59:59 PM

5829 MADOC WASTEWATER TREATMENT LAGOON 110001051

	1 / 2025	2/ 2025	3/ 2025	4/ 2025	5/ 2025	6/ 2025	7/ 2025	8/ 2025	9/ 2025	10/ 2025	11/ 2025	12/ 2025	<--Total-->	<--Avg-->	<--Max-->	<-Criteria->
Flows																
Raw Flow: Total - Raw m³/d	15,848.00	12,324.00	28,101.00	45,362.00	32,794.00	15,368.00	13,732.00	13,197.00	12,285.00	12,204.00	13,165.00	14,141.00	228,521.00			0.00
Raw Flow: Avg - Raw m³/d	511.23	440.14	906.48	1,512.07	1,057.87	512.27	442.97	425.71	409.50	393.68	438.83	456.16		625.6		1,008.00
Raw Flow: Max - Raw m³/d	642.00	527.00	2,456.00	2,999.00	1,864.00	842.00	1,053.00	813.00	575.00	729.00	544.00	686.00			2,999.00	0.00
Raw Flow: Count - Raw m³/d	31.00	28.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	365.00			0.00
Eff. Flow: Total - Eff m³/d	0.00	0.00	0.00	92,570.00	34,367.00	0.00	0.00	0.00	0.00	0.00	61,921.00	35,849.00	224,707.00			0.00
Eff. Flow: Avg - Eff m³/d	0.00	0.00	0.00	5,445.29	2,291.13	0.00	0.00	0.00	0.00	0.00	3,259.00	3,259.00		3,624.31		
Eff. Flow: Max - Eff m³/d	0.00	0.00	0.00	9,754.00	3,210.00	0.00	0.00	0.00	0.00	0.00	3,259.00	3,259.00			9,754.00	0.00
Eff Flow: Count - Eff m³/d	0.00	0.00	0.00	17.00	15.00	0.00	0.00	0.00	0.00	0.00	19.00	11.00	62.00			0.00
Carbonaceous Biochemical Oxygen Demand: CBOD																
Eff: Avg cBOD5 - Eff mg/L	0.00	0.00	0.00	9.00 <	5.60	0.00	0.00	0.00	0.00	0.00 <	4.20	7.50		6.53	9.00	30.00
Eff: # of samples of cBOD5 - Eff	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	4.00	19.00			0.00
Loading: cBOD5 - Eff kg/d	0.000	0.000	0.000	49.008 <	12.830	0.000	0.000	0.000	0.000	0.000 <	13.688	24.443		23.65	49.01	122.000
Biochemical Oxygen Demand: BOD5																
Raw: Avg BOD5 - Raw mg/L	185.00	278.00	84.00	54.00	37.00	141.00	209.00	319.00	409.00	285.00	286.00	307.00		216.17	409.00	0.00
Raw: # of samples of BOD5 - Raw	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Total Suspended Solids: TSS																
Raw: Avg TSS - Raw mg/L	363.00	313.00	208.00	60.00	126.00	282.00	165.00	406.00	431.00	319.00	249.00	391.00		276.08	431.00	0.00
Raw: # of samples of TSS - Raw	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg TSS - Eff mg/L	0.00	0.00	0.00	8.00	4.60	0.00	0.00	0.00	0.00	0.00	9.80	8.00		7.58	9.80	30.00
Eff: # of samples of TSS - Eff	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	4.00	19.00			0.00
Loading: TSS - Eff kg/d	0.000	0.000	0.000	43.562	10.539	0.000	0.000	0.000	0.000	0.000	31.938	26.072		27.47	43.56	122.000
Total Phosphorus: TP																
Raw: Avg TP - Raw mg/L	4.47	7.72	5.64	1.17	1.32	5.06	5.20	9.00	14.20	8.22	5.89	7.79		6.31	14.20	0.00
Raw: # of samples of TP - Raw	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg TP - Eff mg/L	0.00	0.00	0.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00 <	0.05	0.13		0.08	0.13	0.50
Eff: # of samples of TP - Eff	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	4.00	19.00			0.00
Loading: TP - Eff kg/d	0.000	0.000	0.000	0.436	0.137	0.000	0.000	0.000	0.000	0.000 <	0.156	0.432		0.28	0.44	4.000
Nitrogen Series																
Raw: Avg TKN - Raw mg/L	43.20	75.80	57.10	12.50	12.70	41.60	47.50	89.00	101.00	108.00	57.60	78.00		60.33	108.00	0.00
Raw: # of samples of TKN - Raw	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg TAN - Eff mg/L	0.00	0.00	0.00	15.56	9.04	0.00	0.00	0.00	0.00	0.00	8.02	28.30		14.54	28.30	
Eff: # of samples of TAN - Eff	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	4.00	19.00			0.00
Loading: TAN - Eff kg/d	0.000	0.000	0.000	84.729	20.712	0.000	0.000	0.000	0.000	0.000	26.137	92.230		52.71	92.23	
Eff: Avg NO3-N - Eff mg/L	0.00	0.00	0.00 <	0.07 <	0.24	0.00	0.00	0.00	0.00	0.00	0.37 <	0.06		0.19 <	0.37 <	0.00
Eff: # of samples of NO3-N - Eff	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	4.00	19.00			0.00
Eff: Avg NO2-N - Eff mg/L	0.00	0.00	0.00 <	0.03 <	0.08	0.00	0.00	0.00	0.00	0.00 <	0.08 <	0.23		0.11 <	0.23 <	0.00
Eff: # of samples of NO2-N - Eff	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	4.00	19.00			0.00
Disinfection																
Eff: GMD E. Coli MPN - Eff MPN	0.00	0.00	0.00	6.79	12.23	0.00	0.00	0.00	0.00	0.00	26.55	558.54				
Eff: # of samples of E. Coli MPN - Eff	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	4.00	19.00			0.00