Deep River Wastewater System

Waterworks # 120000612

Annual Report

Prepared For: Town of Deep River

Reporting Period of January 1st – December 31st, 2024

Issued: Feb 26, 2025

Revision: 0

Operating Authority:

OCWA

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

This report has been prepared to meet the requirements set out in:

Document	Document #	Issue Date	Issue Number
Facility ECA	9291-D4PNN9	August 1, 2024	1
ECA for Municipal Sewage Collection System	189-W601	May 16, 2023	1

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1 Revision History

Date	Rev #	Revisions	Revised By
26-Feb-2025	0	Template Issued	Brenda Royce, PCT

2 Operations and Compliance Reliability Indices

Compliance Event	Details
Ministry of Environment Inspections	• Last Inspection was Oct 28, 2015
Ministry of Labour Inspections	• None for this reporting period
Non-Compliance	• Four (4) events ➢ TSS Exceedance for month of May ➢ TAN Exceedance for month of July ➢ TSS Q2-WSER Exceedance ➢ TAN Exceedance for month of August
Community Complaints	• None for this reporting period
Spills	• None for this reporting period
Overflows	• None for this reporting period
Bypass	• None for this reporting period

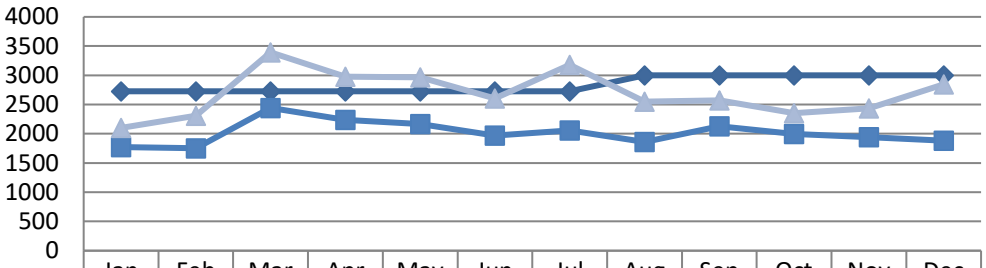
3 Process Description

Wastewater from the Town of Deep River flows directly to the Class 3 Wastewater Treatment Facility. Upon entering the facility, the incoming wastewater receives primary treatment consisting of screening and grit removal. Secondary treatment is achieved through the Sequential Batch Reactor (SBR) process with chemical addition for phosphorus removal. Disinfection is achieved by UV disinfection prior to being discharged back into the Ottawa River. Biosolids are aerobically digested, stored on site and land applied under the Nutrient Management Act.

4 Treatment Flows

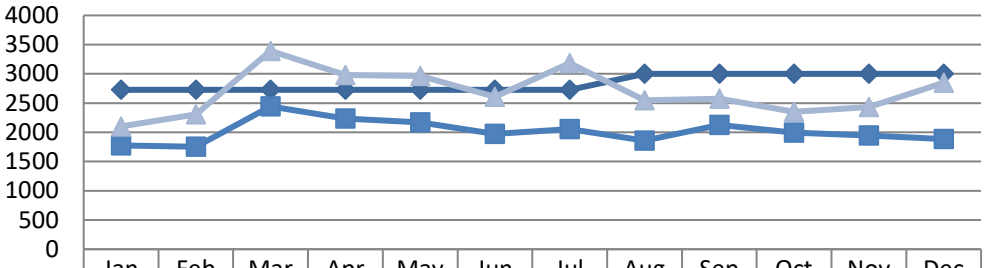
4.1 Raw Flows (m3/d)

In 2024, the average daily raw flow was approx. 67.3% of the current design capacity.



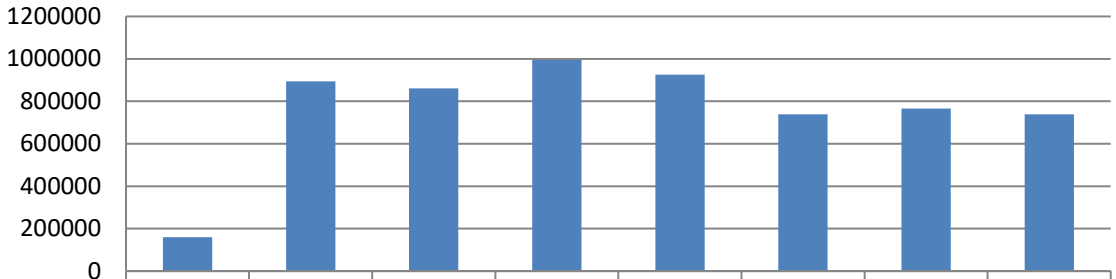
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	2727	2727	2727	2727	2727	2727	2727	3000	3000	3000	3000	3000
Average Daily Flow	1775	1753	2442	2237	2169	1972	2055	1860	2128	1995	1945	1883
Maximum Daily Flow	2101	2308	3393	2980	2964	2606	3182	2548	2573	2351	2433	2846

4.2 Effluent Flow (m3/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit	2727	2727	2727	2727	2727	2727	2727	3000	3000	3000	3000	3000
Average Daily Flow	1775	1753	2442	2237	2169	1972	2055	1860	2128	1995	1945	1883
Maximum Daily Flow	2101	2308	3393	2980	2964	2606	3182	2548	2573	2351	2433	2846

4.2.1 Annual Comparison (m3)



	2017	2018	2019	2020	2021	2022	2023	2024
Total Annual Flow (m3)	159739	893702	861242	995250	926170	738502	766063	738833

4.3 Imported Waste/Sewage

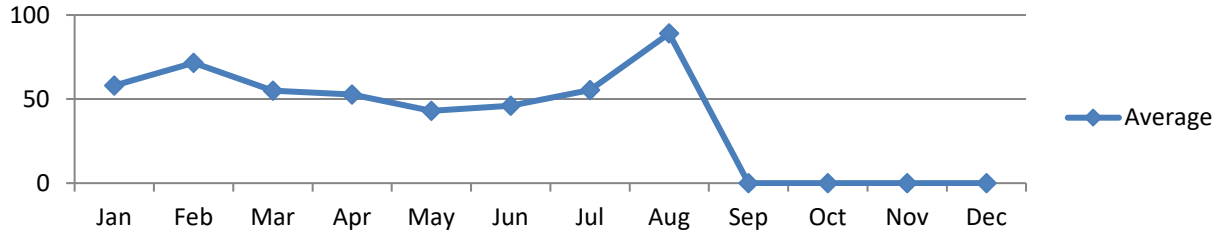
There was no imported wastes accepted at this facility.

5 Raw Sewage Quality

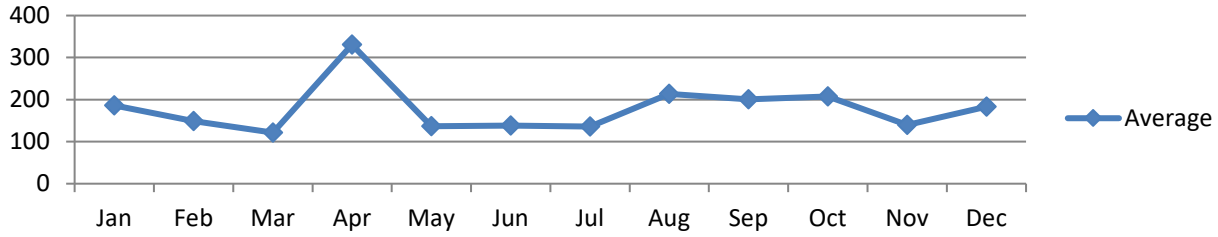
Current year minimum, maximum and averages are available in Appendix A – Performance Assessment Report.

5.1 Influent Trending

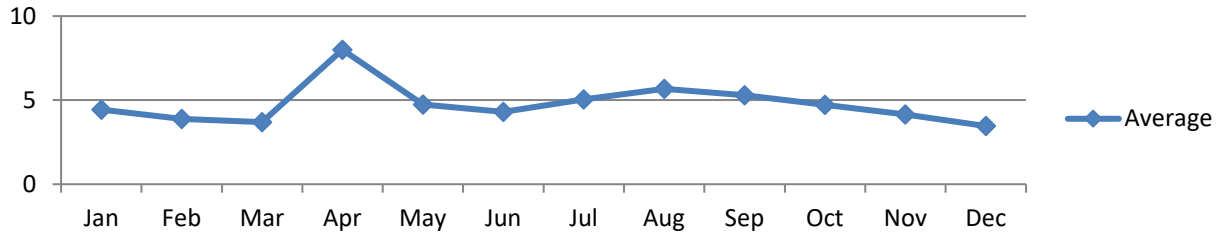
5.1.1 CBOD5 (mg/L)



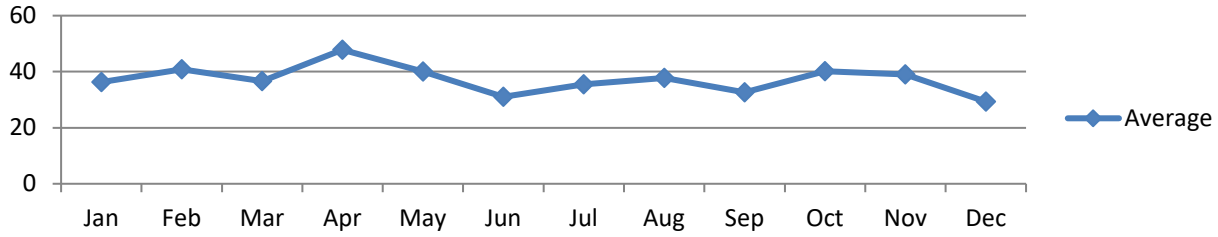
5.1.2 Total Suspended Solids (mg/L)



5.1.3 Total Phosphorus (mg/L)



5.1.4 Total Kjeldahl Nitrogen (mg/L)



5.2 Imported Waste Quality

None for this reporting year.

6 Effluent Quality

The Deep River STP received a new ECA #9291-D4PNN9 on August 1, 2024. The rated capacity of the plant was increased from 2,727 m3/d to 3,000 m3/d. The plant is now required to provide By-Pass Quarterly Reports to the MECP district office. Final Effluent objectives and limits were adjusted and can be found in the applicable tables below by parameter. The loading limits did not change from the previous ECA #1655-7P8SPE issued on Feb 26, 2009. Parameters that were added to the Monitoring Program in the new ECA included for the influent, BOD5, and for the effluent, Total Kjeldahl Nitrogen (TKN), and Nitrate and Nitrite as Nitrogen. You will see these parameters in the tables below.

The plant performed satisfactorily in 2024, with four (4) exceedances of the ECA Limits:

- Two (2) for Total Ammonia Nitrogen (TAN) for the months of Jul and Aug; and
- Two (2) for Total Suspended Solids (TSS) for the month of May, that caused the Q2 average to exceed the WSER regulation, which needed to be reported in ERRIS and to EC. (Noted in Table 7.1)

6.1 Effluent Quality Assurance and Control Measures Taken

This system is part of OCWA's Laurentian View Cluster. The cluster is supported by the Eastern Regional Hub, and corporate resources. Operational Services are delivered by OCWA staff that live and work in the community. The systems are operated to meet compliance with applicable regulations. The system has comprehensive manuals detailing operations, maintenance, instrumentation, and emergency procedures. All procedures are treated as active documents and are updated as required. These documents are also part of OCWA's Quality & Environmental Management System.

The process is reviewed and maintained by certified operators. These operator's complete in-house rounds and testing to monitor the process. All Sampling and analysis follow approved methods and protocols for sampling, analysis and recording as specified in the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works", the Ministry's publication, "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" and the publication, "Standard Methods for the Examination of Water and Wastewater".

All final effluent samples collected during the reporting period to meet legislated sampling requirements are submitted to Eurofins laboratory in Ottawa for analysis, with the exception of disinfection residuals and temperature. Eurofins laboratory in Ottawa 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. The disinfection residuals and temperature parameters are analyzed in the field at the time of sample collection by certified operators, to ensure accuracy and precision of the results obtained.

OCWA uses several computer systems which include:

- Process Data Management (PDM)

- This database program consolidates all operational data from a variety of sources including field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis.

- Maximo – OCWA's Work Management System (WMS)
  - This program is used to track and schedule maintenance activities for all equipment in the system. It is also used to assign tasks for specific operational tasks.
- SCADA
  - Wide-area SCADA system allows for process optimization and data logging, process trending, remote alarming.

The operations team also has access to a network of operational compliance and process specialists to assist for emerging process issues. This aids in establishing additional control measures to ensure a quality effluent product.

Detailed individual sample results for both raw sewage and final effluent can be requested from the operating authority.

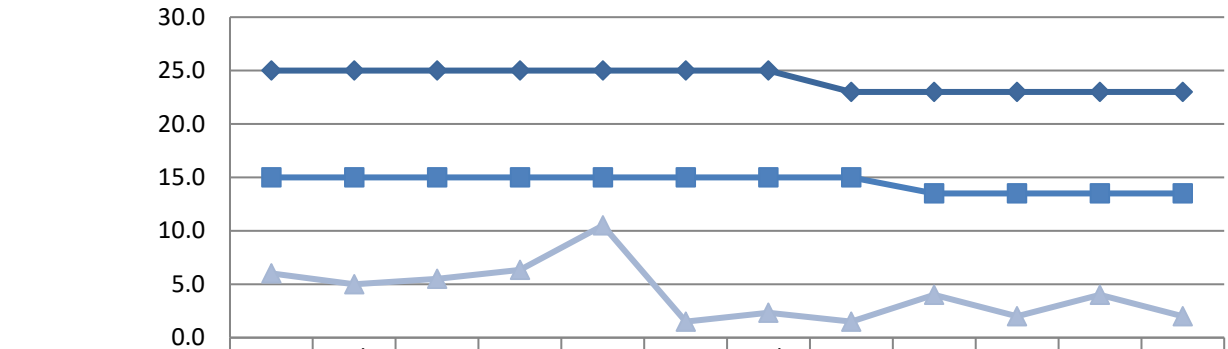
6.2 CBOD5

Compliance concentration limit for this parameter is based on the annual average being below 23.0 mg/L. The annual average for 2024 was 4.23 mg/L indicating compliance with the limit MET.

Compliance loading limit for this parameter is based on the annual average being below 68.2 kg/d. The annual average for 2024 was 8.54 kg/d indicating compliance with the limit MET.

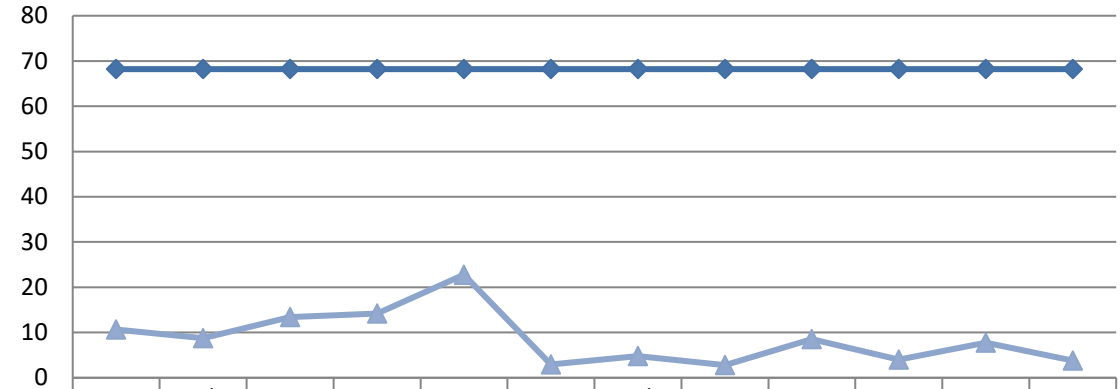
Compliance Objective (13.5 mg/L) for this parameter MET.

6.2.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0
ECA Objective	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	13.5	13.5	13.5	13.5
Average	6.0	5.0	5.5	6.3	10.5	1.5	2.3	1.5	4.0	2.0	4.0	2.0

6.2.2 Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2
Average	10.6	8.8	13.4	14.2	22.8	3.0	4.8	2.8	8.5	4.0	7.8	3.8

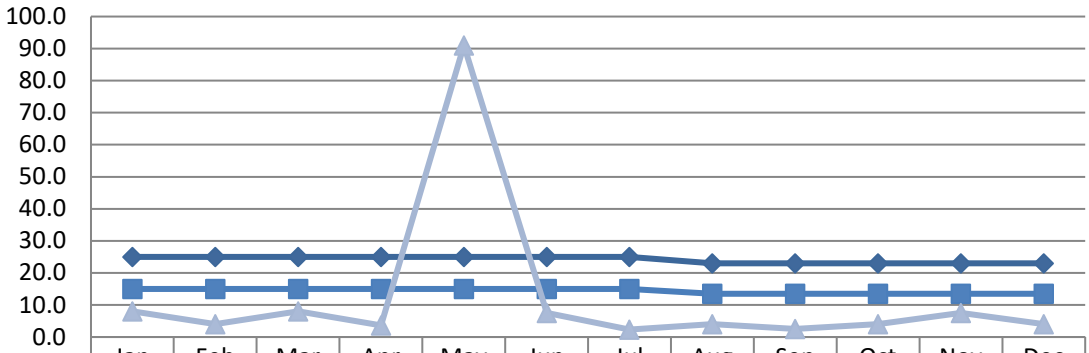
6.3 Total Suspended Solids

Compliance concentration limit for this parameter is based on the annual average being below 23.0 mg/L. The annual average for 2024 was 11.5 mg/L. Compliance Limit (25.0 mg/L) for this parameter NOT MET - See Table 7.1 for details.

Compliance loading limit for this parameter is based on the annual average being below 68.2 kg/d. The annual average for 2024 was 23.21 kg/d indicating compliance with the limit MET.

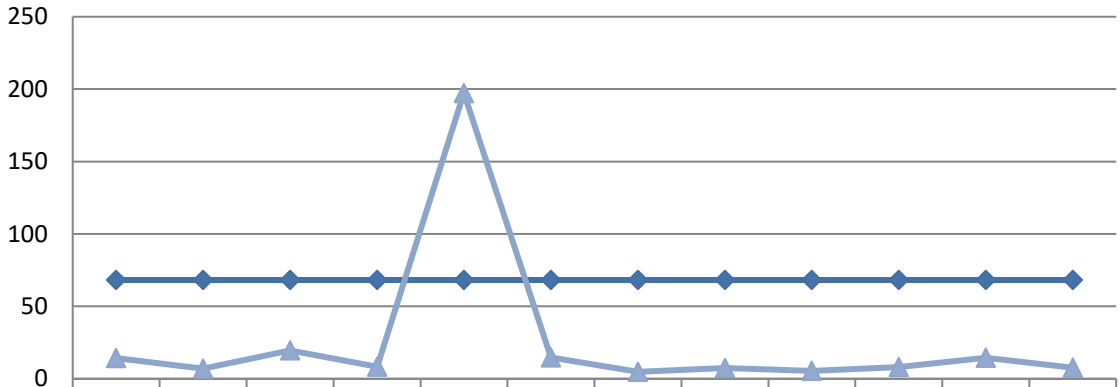
Compliance Objective (15.0 mg/L) for this parameter NOT MET (for May 2024) - See Table 7.1 for details.

6.3.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	25.0	25.0	25.0	25.0	25.0	25.0	25.0	23.0	23.0	23.0	23.0	23.0
ECA Objective	15.0	15.0	15.0	15.0	15.0	15.0	15.0	13.5	13.5	13.5	13.5	13.5
Average	8.0	4.0	8.0	3.7	91.0	7.5	2.3	4.0	2.5	4.0	7.5	4.0

6.3.2 Loading (kg/d)



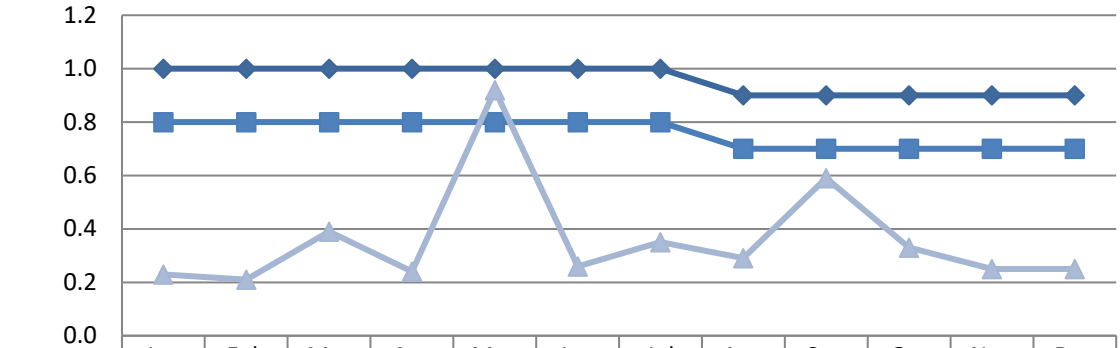
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2	68.2
Average	14.20	7.01	19.54	8.20	197.35	14.79	4.80	7.44	5.32	7.98	14.58	7.53

6.4 Total Phosphorus

Compliance concentration limit for this parameter is based on the monthly average being below 0.9 mg/L. The annual average for 2024 was 0.35 mg/L indicating compliance with the limit MET.

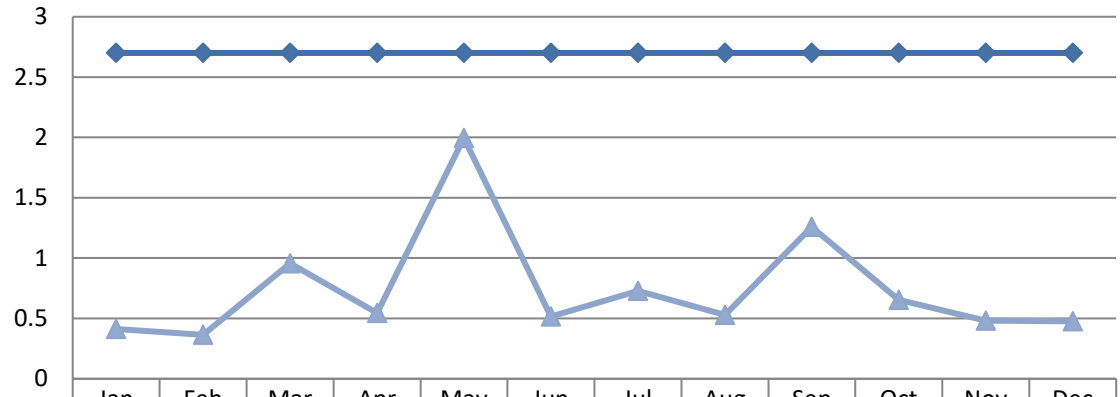
Compliance loading limit for this parameter is based on the monthly average being below 2.7 kg/d. The annual average for 2024 was 0.71 kg/d indicating compliance with the limit MET.

Compliance Objective (0.8 mg/L) for this parameter NOT MET (for May 2024) - See Table 7.1 for details.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
ECA Objective	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
Average	0.23	0.21	0.39	0.24	0.92	0.26	0.35	0.29	0.59	0.33	0.25	0.25

6.4.1 Loading (kg/d)



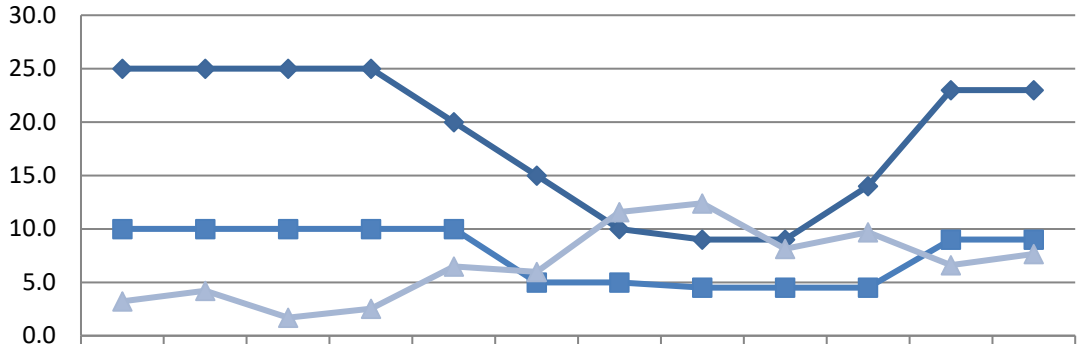
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Average	0.41	0.36	0.96	0.55	2.00	0.52	0.73	0.53	1.26	0.65	0.48	0.48

6.5 Total Ammonia Nitrogen

Compliance concentration limit for this parameter is based on the differing monthly averages being below 23 mg/L. The annual average for 2024 was 6.71 mg/L. However, the Jul and Aug monthly averages DID NOT MEET LIMIT with results of 12.0 for both, with the ECA limits of 10.0/9.0 - See Table 7.1 for details.

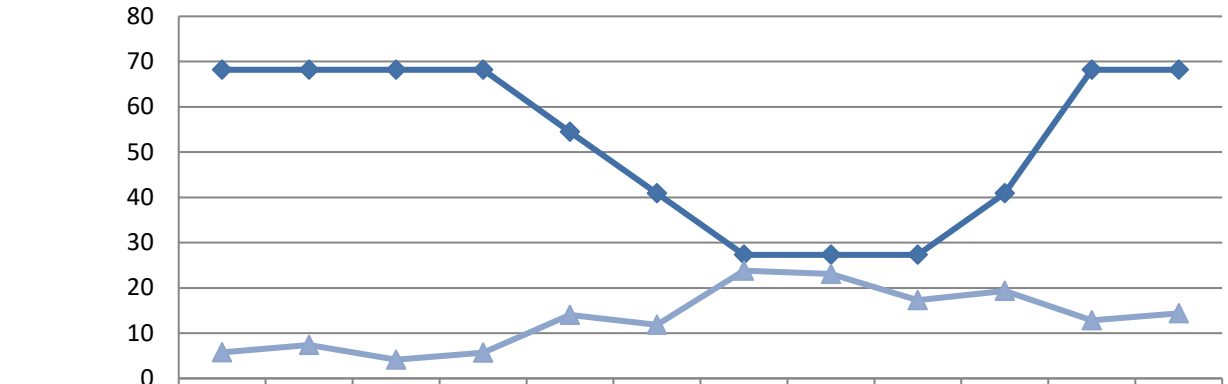
Compliance loading limit for this parameter is based on the differing monthly averages being between 27.3 – 68.2 kg/d. The annual average for 2024 was 13.54 kg/d indicating compliance with the limit MET.

Compliance Objectives (5.0/4.5) for this parameter were not MET (for Jul & Aug 2024) - See Table 7.1 for details.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	25.0	25.0	25.0	25.0	20.0	15.0	10.0	9.0	9.0	14.0	23.0	23.0
ECA Objective	10.0	10.0	10.0	10.0	10.0	5.0	5.0	4.5	4.5	4.5	9.0	9.0
Average	3	4	2	3	6	6	12	12	8	10	7	8

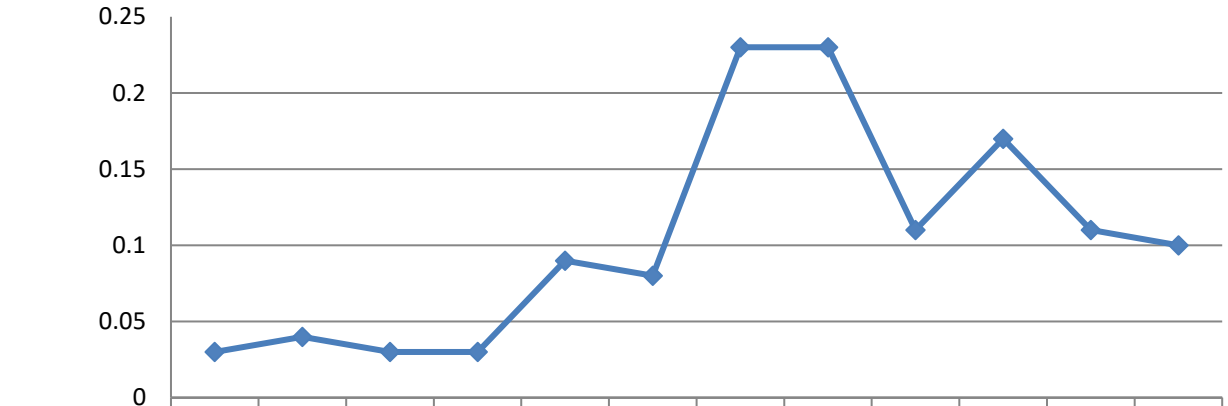
6.5.1 Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	68.2	68.2	68.2	68.2	54.5	40.9	27.3	27.3	27.3	40.9	68.2	68.2
Average	5.7	7.4	4.1	5.7	14.0	11.8	23.8	23.1	17.3	19.4	12.9	14.4

6.6 Un-ionized Ammonia

There are no compliance limits for this parameter.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	0.03	0.04	0.03	0.03	0.09	0.08	0.23	0.23	0.11	0.17	0.11	0.1

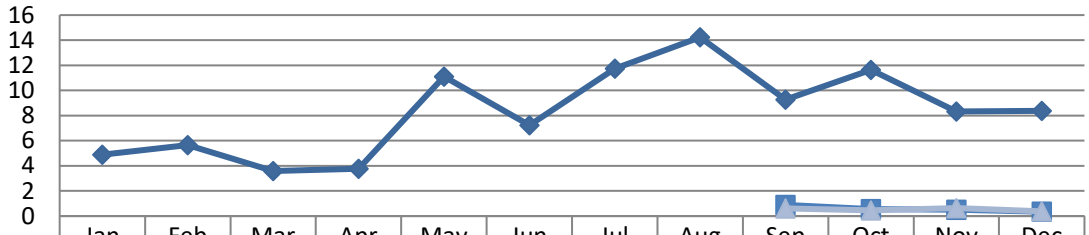
6.7 Acute Lethality

There was one (1) sample collected in 2024 and tested for acute lethality for both Rainbow Trout and Daphnia magna. This sampling is required annually, both provincially and federally. Results are displayed as % mortality. An adverse result is a > 50% mortality rate.

Date	Rainbow Trout	Daphnia Magna
Oct 9, 2024	0	0

6.8 Nitrate/Nitrite/TKN

There are no compliance or objective limits for these parameters. Final Effluent TKN, Nitrate and Nitrite were not required to be sampled and tested by an accredited lab, until the new ECA was issued in August 2024.

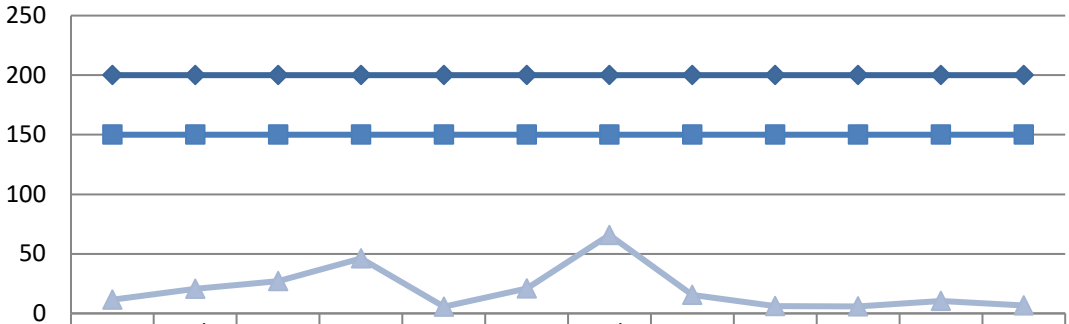


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TKN	4.88	5.66	3.59	3.76	11.1	7.23	11.73	14.23	9.28	11.63	8.34	8.37
Nitrate									0.89	0.55	0.52	0.35
Nitrite									0.620	0.460	0.640	0.380

6.9 E-coli

Compliance Limit for this parameter MET.
Compliance Objective for this parameter MET.

Geometric Mean (cfu/100mL)

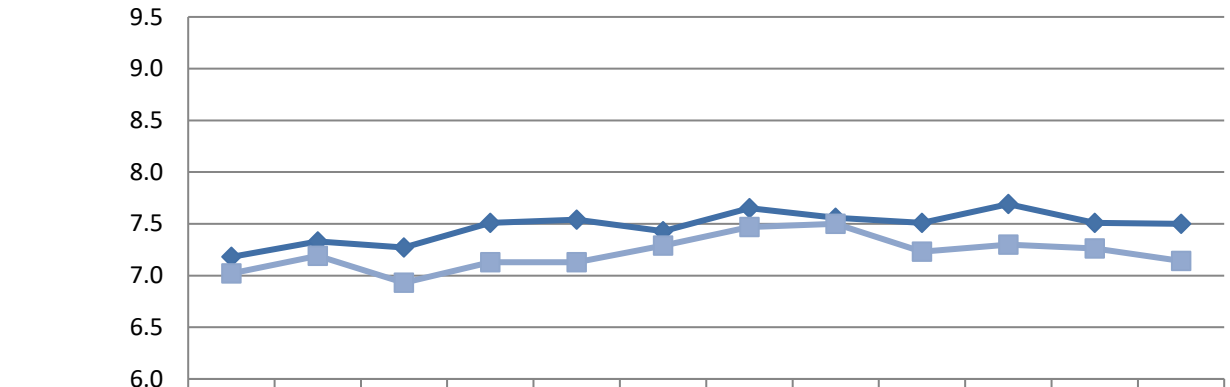


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	200	200	200	200	200	200	200	200	200	200	200	200
ECA Objective	150	150	150	150	150	150	150	150	150	150	150	150
Average	11.5	20.6	27.1	46.1	5.62	20.9	65.8	15.6	6.3	5.8	10.5	6.7

6.10 pH

Compliance Limit range for this parameter is 6.0 – 9.5. The parameter MET. Each instance the pH is outside of that range, it is reported as a non-compliance.

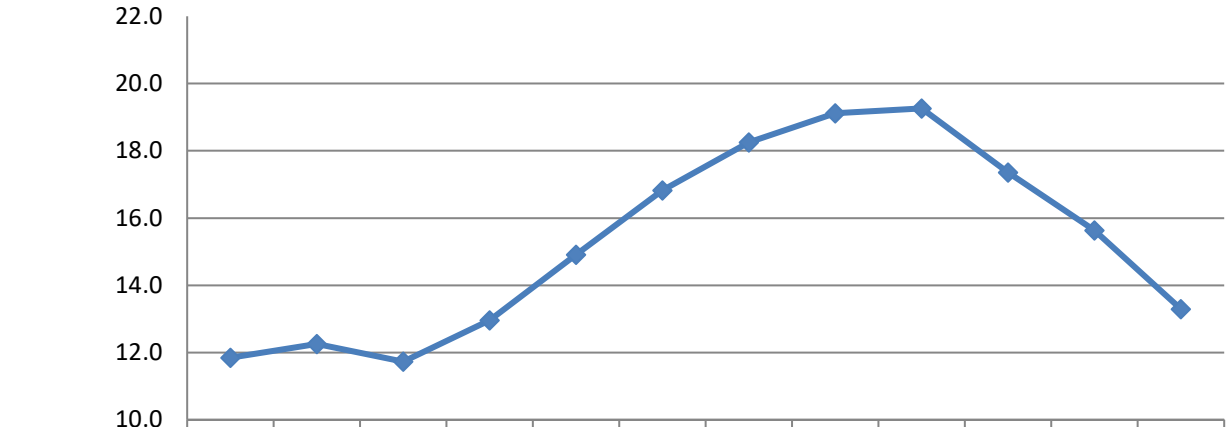
Compliance Objective range for this parameter is 6.5-8.5. The parameter MET.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum	7.2	7.3	7.3	7.5	7.5	7.4	7.7	7.6	7.5	7.7	7.5	7.5
Minimum	7.0	7.2	6.9	7.1	7.1	7.3	7.5	7.5	7.2	7.3	7.3	7.1

6.11 Temperature

There are no compliance limits or objectives defined for Effluent.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average C	11.9	12.3	11.7	13.0	14.9	16.8	18.3	19.1	19.3	17.4	15.6	13.3

7 Operating Issues/Problems

There were no major operating issues during 2024 at the Deep River sewage plant. However, there was two incidents where the final effluent limits of Total Ammonia Nitrogen (TAN) were exceeded, in July and August. Both incidents were reported as non-compliance events. The causes of these exceedances were a result of higher than normal influent ammonia concentrations, blower capacity problems that resulted in improper aeration rates and sludge blanket depths. Corrective actions included increased monitoring, increasing aeration time settings and running double blowers. These actions resulted in a more consistent dissolved oxygen (DO) to the process, enhancing the ammonia removal.

Also, the plant experienced two incidents where the Total Suspended Solids (TSS) were exceeded, in May. This exceedance was reported to the Ministry of the Environment and required the quarterly

average to be reported to Environment Canada. The cause was increased solids within the process. To correct this, wasting was increased.

7.1 Effluent Quality Non-Compliance Summary

Date	Exceedance of	Limit	Value	Corrective Action
Jul 2024	ECA Limit - TAN	10.0	12.0	Checked SBR aeration rates, sludge blanket depths, and monitored DO performance
Aug 2024	ECA Limit - TAN	9.0	12.0	
Jul 2024	ECA Objective - TAN	5.0	12.0	
Aug 2024	ECA Objective - TAN	4.5	12.0	
May 2024	ECA Limit - TSS	25.0	91.0	Increased wasting, monitoring of sludge blanket depths and monitoring of plant processes, making adjustments as needed
May 2024	ECA Objective - TSS	15.0	91.0	
May 2024	ECA Objective - TP	0.8	0.92	Monitoring and adding alum when needed

7.2 Summary of Abnormal Sewage Discharge Events

There were no Abnormal Discharge Events (Bypass', Overflows, Diversions and Spills of Sewage) during 2024 for the Deep River STP.

7.3 Spills (Other than Sewage)

Date	Location	Details	Volume (m3)	Start Date and Time	End Date and Time
None to report for this year					

8 Maintenance

Routine planned maintenance activities are scheduled in WMS and include:

- Inspect, adjust and calibrate process control equipment to ensure proper operation of water distribution systems, pumps, chemical feeders, and all other equipment installed at the facilities.
- Carry out a routine maintenance program including greasing and oiling, as specified in the lubrication schedule.
- Perform day-to-day maintenance duties to equipment including checking machinery and electrical equipment when required.
- Maintain an equipment inventory.
- Maintain accurate records of work conducted, activities, and achievements.

Planned maintenance activities are communicated to the person responsible for completing the task through the issuance of WMS work orders. Work orders are automatically generated on a schedule as determined based on manufacturer's recommendations and site specific operational and maintenance needs and are assigned directly to the appropriate operations personnel. This schedule is set up by the designated WMS Primary. Work orders are completed and electronically entered into WMS, by the

person responsible for completing the task.

Unplanned maintenance is conducted, as required.

8.1 Normal Maintenance and Repairs

Work Order	Details
3752531	Diesel engine annual maintenance and monthly checks.
3752569	Test alarm/dialer in electrical service room.
3730251	Monthly H&S Equipment checks.
3730255	Quarterly H&S Equipment checks.
3730261	Annual facility lighting inspections.
3730265	Annual chemical review of SDS revision dates and spill kit.
3797778	Annual service on grit pump.
3797797	Annual service on chemical diaphragm pumps.
3797809	Monthly inspection and cleaning of the analyzer DO probes.
3893798	Annual inspection for the SBR blowers.
3893824	Maintenance for digester blowers.
3941995	Inspection of the SBR tanks.
3897137	Inspection of HVAC systems and replace parts, as needed.
3941989	Annual service on SBR mixing pumps.
3991747	Service on comminutor grinder.
3942014	Annual service on the final and raw sewage samplers.
3991722	Service on the submersible basement sump pump.
4086239	Annual service on separator grit teacup.
4135800	Annual service on compressor.
4186392	Annual submersible sludge loading pump service.
4154291	Testing on backflow valve preventers from the basement waterline to teacup, and from the basement sludge decant flush line.
4186369	Annual inspection and flushing of the natural gas hot water storage tank.
4138704	Annual inspection of lifting equipment by contractor.
3753621	Monthly building and ground maintenance.
3974693	Annual Corporate H&S inspection and checklist completed.

8.2 Emergency Maintenance and Repairs

Work Order	Details
3761593	Call in due to high-level alarm for SBR #2.
3804691	Call in due to high-level alarm for SBR #1.
3805874	Call in due to high level for SBR #2.
3901542	Call in due to high-level for SBR #2.

Work Order	Details
3901628	Call in due to high-level for SBR #1.
3952557	Call in due to high-level for SBR #1.
3996883	Call in for digester high-level due to decanter plugged with rags.
4051967	Call in due to high-level for SBR #2.
4094621	Call in due to supervisory alarm for SBR #2 blower and holding tank tripped.
4146062	Generator would not start for monthly run test, so contractor called and replaced both batteries and the wiring.
4279520	Call in due to high-level for SBR #2.

8.3 Flow Meter Calibrations and Maintenance

Location	Date of Calibration	Additional Maintenance
Influent Flow Meter	Oct. 11, 2024	N/A
Effluent Flow Meter	Oct. 11, 2024	N/A
Collection Flow Meters	No collection flow meters	

8.4 Authorized Alterations in Collection System

Work Order	Details	Significant Drinking Water Threat (Y/N)
No authorized alterations were made to the collection system in this reporting period.		

8.5 Notice of Modifications

Date	Process	Modification	Status
No notifications provided in this reporting period.			

9 Sludge Generation

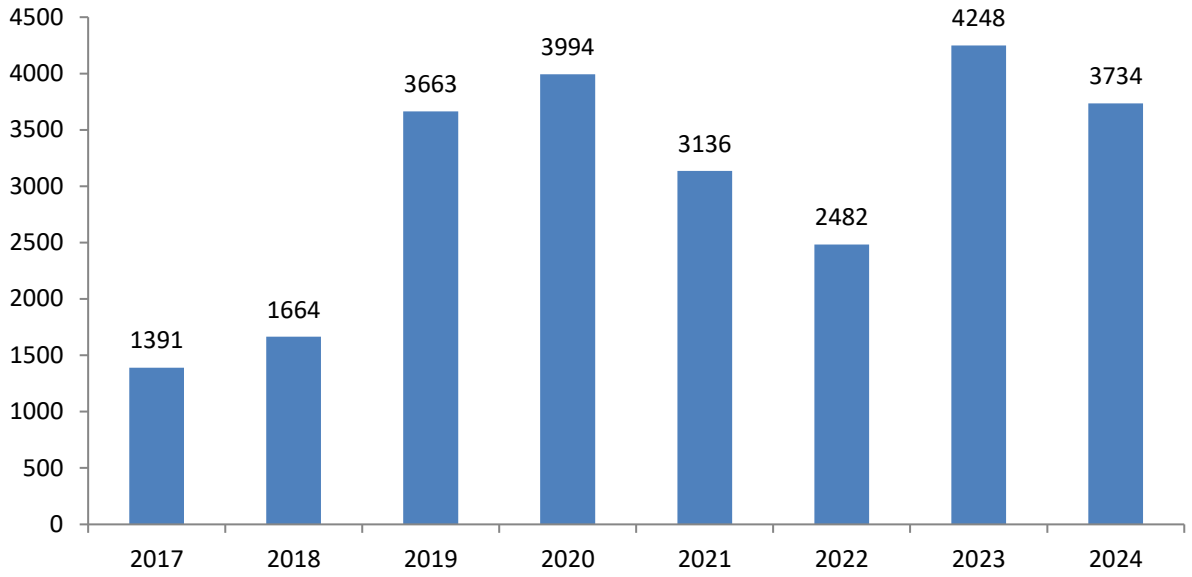
9.1 Sludge Volume Generation Summary

Month	Volume (m3)
January	
February	
March	
April	
May	2141
June	
July	
August	
September	
October	1593
November	
December	
TOTAL	**3734**

9.2 Sludge Disposal Summary – NASM Land Applications

Date	Disposal Location	NASM Approval Number	Total Volume (m3)
May 4	Scott Tabbert - Biggs Farm, Field 2	25039	780
May 5	Scott Tabbert - Biggs Farm, Field 2	25039	690
May 6	Scott Tabbert - Biggs Farm, Field 2	25039	550
May 7	Scott Tabbert - Biggs Farm, Field 2	25039	121
Oct 18	Scott Tabbert – Christink Farm, Field 2	60287	171
Oct 18	Scott Tabbert – Christink Farm, Field 2	60287	522
Oct 19	Scott Tabbert – Christink Farm, Field 2	60287	645
Oct 20	Scott Tabbert – Christink Farm, Field 2	60287	255
		Total Sludge	3734

9.3 Annual Comparison (m3/year)



It is anticipated that sludge volumes will be similar in the 2025 season, as in 2024.

10 Summary of Complaints

Location	Date	Nature of Complaint	Actions Taken
There were no complaints in this reporting year.			

Appendix A

Appendix A - Performance Assessment Report (PAR)

Ontario Clean Water Agency
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Performance Assessment Report

From 1/1/2024 to 12/31/2024 11:59:59 PM

5853 DEEP RIVER WASTEWATER TREATMENT FACILITY 120000612

	1 / 2024	2/ 2024	3/ 2024	4/ 2024	5/ 2024	6/ 2024	7/ 2024	8/ 2024	9/ 2024	10/ 2024	11/ 2024	12/ 2024	<--Total-->	<--Avg-->	<--Max-->	<-Criteria->
Flows																
Raw Flow: Total - Raw Sewage m³/d	55,013.86	50,836.18	75,711.83	67,104.63	67,227.79	59,163.44	63,703.61	57,663.49	63,847.28	61,855.23	58,335.26	58,370.65	738,833.25			0.00
Raw Flow: Avg - Raw Sewage m³/d	1,774.64	1,752.97	2,442.32	2,236.82	2,168.64	1,972.11	2,054.96	1,860.11	2,128.24	1,995.33	1,944.51	1,882.92		2,018.67		
Raw Flow: Max - Raw Sewage m³/d	2,100.78	2,308.28	3,393.00	2,979.66	2,963.68	2,605.90	3,181.89	2,548.36	2,572.94	2,351.03	2,432.78	2,846.16			3,393.00	0.00
Raw Flow: Count - Raw Sewage m³/d	31.00	29.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	366.00			0.00
Eff. Flow: Total - Final Effluent m³/d	55,013.86	50,836.18	75,711.83	67,104.63	67,227.79	59,163.44	63,703.61	57,663.49	63,847.28	61,855.23	58,335.26	58,370.65	738,833.25			0.00
Eff. Flow: Avg - Final Effluent m³/d	1,774.64	1,752.97	2,442.32	2,236.82	2,168.64	1,972.11	2,054.96	1,860.11	2,128.24	1,995.33	1,944.51	1,882.92		2,018.67		3,000.00
Eff. Flow: Max - Final Effluent m³/d	2,100.78	2,308.28	3,393.00	2,979.66	2,963.68	2,605.90	3,181.89	2,548.36	2,572.94	2,351.03	2,432.78	2,846.16			3,393.00	0.00
Eff Flow: Count - Final Effluent m³/d	31.00	29.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	366.00			0.00
Carbonaceous Biochemical Oxygen Demand: CBOD																
Raw: Avg cBOD5 - Raw Sewage mg/L	58.00	71.50	55.00	52.67	43.00	46.00	55.33	89.00	0.00	0.00	0.00	0.00		58.81	89.00	0.00
Raw: # of samples of cBOD5 - Raw Sewage	2.00	2.00	2.00	3.00	2.00	2.00	3.00	2.00	0.00	0.00	0.00	0.00	18.00			0.00
Eff: Avg cBOD5 - Final Effluent mg/L	6.00	5.00	5.50	6.33	10.50	< 1.50	2.33	< 1.50	4.00	< 2.00	4.00	< 2.00		4.23	10.50	25.00
Eff: # of samples of cBOD5 - Final Effluent	2.00	2.00	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	26.00			0.00
Loading: cBOD5 - Final Effluent kg/d	10.648	8.765	13.433	14.167	22.771	< 2.958	4.795	< 2.790	8.513	< 3.991	7.778	< 3.766		8.54	22.77	
Percent Removal: cBOD5 - Raw Sewage %	88.68	95.35	92.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		92.01	95.35	0.00
Biochemical Oxygen Demand: BOD5																
Raw: Avg BOD5 - Raw Sewage mg/L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	157.00	131.50	135.00	105.50		132.25	157.00	0.00
Raw: # of samples of BOD5 - Raw Sewage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	8.00			0.00
Percent Removal: BOD5 - Raw Sewage %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Total Suspended Solids: TSS																
Raw: Avg TSS - Raw Sewage mg/L	186.50	148.50	121.50	330.67	136.50	138.00	136.00	213.50	201.00	207.50	139.50	183.50		178.56	330.67	0.00
Raw: # of samples of TSS - Raw Sewage	2.00	2.00	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	26.00			0.00
Eff: Avg TSS - Final Effluent mg/L	8.00 <	4.00	8.00 <	3.67	91.00	7.50 <	2.33 <	4.00 <	2.50	4.00	7.50	4.00		11.50	91.00	25.00
Eff: # of samples of TSS - Final Effluent	2.00	2.00	2.00	3.00	2.00	2.00	3.00	2.00	2.00	2.00	2.00	2.00	26.00			0.00
Loading: TSS - Final Effluent kg/d	14.197 <	7.012	19.539 <	8.202	197.346	14.791 <	4.795 <	7.440 <	5.321	7.981	14.584	7.532		23.21	197.35	
Percent Removal: TSS - Raw Sewage %	95.71	97.31	93.42	98.89	33.33	94.57	98.28	98.13	98.76	98.07	94.62	97.82		91.58	98.89	0.00
Total Phosphorus: TP																
Raw: Avg TP - Raw Sewage mg/L	4.43	3.88	3.70	8.00	4.74	4.31	5.05	5.68	5.30	4.73	4.15	3.46		4.79	8.00	0.00
Raw: # of samples of TP - Raw Sewage	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg TP - Final Effluent mg/L	0.23	0.21	0.39	0.24	0.92	0.26	0.35	0.29	0.59	0.33	0.25	0.25		0.35	0.92	1.00
Eff: # of samples of TP - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TP - Final Effluent kg/d	0.413	0.364	0.956	0.545	1.995	0.516	0.727	0.530	1.258	0.654	0.482	0.477		0.71	1.99	
Percent Removal: TP - Raw Sewage %	94.74	94.65	89.41	96.96	80.58	93.93	92.99	94.98	88.84	93.07	94.03	92.67		92.24	96.96	0.00
Nitrogen Series																
Raw: Avg TKN - Raw Sewage mg/L	36.32	40.90	36.60	47.82	40.08	31.03	35.46	37.73	32.60	40.18	39.03	29.32		37.25	47.82	0.00
Raw: # of samples of TKN - Raw Sewage	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg TAN - Final Effluent mg/L	3.23	4.21	1.69	2.53	6.48	5.99	11.59	12.40	8.12	9.70	6.61	7.65		6.71	12.40	25.00
Eff: # of samples of TAN - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TAN - Final Effluent kg/d	5.725	7.380	4.136	5.655	14.042	11.818	23.809	23.065	17.271	19.355	12.853	14.408		13.54	23.81	
Disinfection																
Eff: GMD E. Coli - Final Effluent cfu/100mL	11.49	20.60	27.11	46.13	5.62	20.88	65.82	15.59	6.25	5.83	10.47	6.65				200.00
Eff: # of samples of E. Coli - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00

Appendix B

Appendix B - 2024 Monitoring Schedule

Ontario Clean Water Agency
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Deep River Wastewater Treatment
Sample Schedule 2024

January	Week 1	Monday Stat-1st	1-5
	Week 2		8-12
	Week 3		15-19
	Week 4		22-26
	Week 5		29-31
February	Week 1		1-2
	Week 2		5-9
	Week 3		12-16
	Week 4	Monday Stat-19th	19-23
	Week 5		26-29
March	Week 1		1
	Week 2		4-8
	Week 3		11-15
	Week 4		18-22
	Week 5	Friday Stat-29th	25-29

April	Week 1	Monday Stat-1st	1-5
	Week 2		8-12
	Week 3		15-19
	Week 4		22-26
	Week 5		29-30
May	Week 1		1-3
	Week 2		6-10
	Week 3		13-17
	Week 4	Monday Stat-20th	20-24
	Week 5		27-31
June	Week 1		1
	Week 2		3-7
	Week 3		10-14
	Week 4		17-21
	Week 5		24-28

July	Week 1	Monday Stat-1st	1-5
	Week 2		8-12
	Week 3		15-19
	Week 4		22-26
	Week 5		29-31
August	Week 1		1-2
	Week 2	Monday Stat-5th	5-9
	Week 3		12-16
	Week 4		19-23
	Week 5		26-30
September	Week 1	Monday Stat-2nd	2-6
	Week 2		9-13
	Week 3		16-20
	Week 4		23-27
	Week 5	Monday Stat-30th	30

October	Week 1		1-4
	Week 2		7-11
	Week 3	Monday Stat-14th	14-18
	Week 4		21-25
	Week 5		28-31
November	Week 1		1
	Week 2		4-8
	Week 3	Monday Stat-11th	11-15
	Week 4		18-22
	Week 5		25-29
December	Week 1		2-6
	Week 2		9-13
	Week 3		16-20
	Week 4		23-27
	Week 5	Wed/Thurs Stats-25th/26th	30-31

Revisions

Date	Revision#	Author	Revision
07-Dec-2018	0	B.Royce	Created
18-Dec-2019	1	B.Royce	Edited for 2020
04-Nov-2020	2	B.Royce	Edited for 2021
09-Dec-2021	3	B.Royce	Edited for 2022
01-Dec-2022	4	B.Royce	Edited for 2023
07-Dec-2023	5	B.Royce	Edited for 2024

WSER - Wastewater Systems Effluent Regulations
Annual Lethality Testing for Rainbow Trout & Daphnia magna
>2500 - <17500 (ADF) Average Day Effluent Flow of Previous Year - Bi-weekly Sampling of TSS & CBOD5

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **January 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 1 of 12
Reviewed by: Brenda Royce (PCT)		Approved by: Senior Ops Manager

Sample days = Tuesday

In the event of STAT, sample day moved to next working day

STAT- Mon. Jan. 1st

	Week 1			Week 2			Week 3			Week 4			Week 5		
	Monday Stat-1st														
	2			**9**			**16**			**23**			**30**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
If planning to spread sludge in April, take 2 samples in January to meet the 90-day requirement
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **February 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 2 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Mon. Feb. 19th

	Week 1			Week 2			Week 3			Week 4			Week 5		
										Monday Stat-19th					
				6			**13**			**20**			**27**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
If planning to spread sludge in April, take 2 samples in February to meet the 60-day requirement
If planning to spread sludge in May, take 2 samples in February to meet the 90-day requirement
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **March 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 3 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample day = Tuesday

In the event of STAT sample day moved to next working day

STAT - Fri. Mar. 29th

	Week 1			Week 2			Week 3			Week 4			Week 5		
													Monday Stat-29th		
				5			**12**			**19**			**26**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
If planning to spread sludge in April, take 2 samples in March to meet the 30-day requirement
If planning to spread sludge in May, take 2 samples in March to meet the 60-day requirement
If planning to spread sludge in June, take 2 samples in March to meet the 90-day requirement
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **April 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 4 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Mon. Apr. 1st

	Week 1			Week 2			Week 3			Week 4			Week 5		
	Monday Stat-1st														
	2			**9**			**16**			**23**			**30**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes

2 sludge holding samples MUST be completed monthly until the end of the hauling season

If planning to spread sludge in May, take 2 samples in April to meet the 30-day requirement

If planning to spread sludge in June, take 2 samples in April to meet the 60-day requirement

This schedule is for guidance purposes only

Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **May 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 5 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT- Monday, May 20th

	Week 1			Week 2			Week 3			Week 4			Week 5		
										Monday Stat-20th					
				7			**14**			**21**			**28**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
If planning to spread sludge in June, take 2 samples in May to meet the 30-day requirement
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **June 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 6 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

	Week 1			Week 2			Week 3			Week 4			Week 5		
				4			**11**			**18**			**25**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **July 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 7 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Mon. July 1st

	Week 1			Week 2			Week 3			Week 4			Week 5		
	Mon. STAT - Jul 1st														
	2			**9**			**16**			**23**			**30**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															
Final Effluent - Acute Lethality Test - (1 sample/year) 1 bucket required**															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
****Sample to be sent by Purolator Courier to Aquatox - BE SURE TO USE APPROPRIATE CHAIN OF CUSTODY & SAMPLING FOR BOTH RAINBOW TROUT AND DAPHNIA MAGNA.**
IF EFFLUENT IS NOT GOOD, HOLD OFF ANOTHER MONTH OR SO, BUT ADVISE PCT.
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **August 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 8 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Mon. Aug. 5th

	Week 1			Week 2			Week 3			Week 4			Week 5		
				Monday Stat-5th											
				6			**13**			**20**			**27**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **September 2023**	Issued: 07-Dec-2023 Rev.#:4 Page 9 of 12
Reviewed by: Brenda Royce (PCT)	Approved By: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Mon. Sept. 2nd & 30th

	Week 1			Week 2			Week 3			Week 4			Week 5		
	Monday Stat-2nd												***Monday Stat-30th***		
	3			**10**			**17**			**24**					
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **October 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 10 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Mon. Oct. 14th

	Week 1			Week 2			Week 3			Week 4			Week 5		
							Mon Stat-14th								
	1			**8**			**15**			**22**			**29**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **November 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 11 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Mon. Nov. 11th

	Week 1			Week 2			Week 3			Week 4			Week 5		
							Monday Stat-11th								
				5			**12**			**19**			**26**		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Deep River Wastewater Treatment** **December 2024**	Issued: 07-Dec-2023 Rev.#: 5 Page 12 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tuesday

In the event of STAT sample day moved to next working day

STAT - Wed. Dec. 25th & Thurs. Dec. 26th

	Week 1			Week 2			Week 3			Week 4			Week 5		
													Wed/Thurs Stats-25th/26th		
	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded	Sampled	Received	Uploaded
Final Effluent - EC (1 sample/week) 1 bottle required															
Final Effluent FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Final Effluent REG. RUN - (1 sample/Bi-weekly) 1 bottle required															
Raw Sewage FULL RUN (includes CBOD5 & TSS) - (2 samples/monthly) 2 bottles required															
Raw Sewage REG. RUN - (1 sample/Bi-weekly) 1 Bottle required															
Test Wells (Both Wells - EC) (1 sample/month) 2 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. COLI (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
Ensure there are materials to complete Acute Lethality Testing in 2024 (July)
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

Appendix C

Appendix C - Details of Abnormal Sewage Discharge Events

Event Details Summary

Facility Bypass

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
N/A								

Facility Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
N/A								

Collection Overflow

There are no authorized overflow locations in this system.

Spills of Sewage

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
N/A								

Collection System Monitoring Data

Event Date	Event Location	Volume (m3)	Parameter	mg/L	Source Loading	Any Adverse Impacts & Corrective Actions
N/A			BOD			
			Total Suspended Solids			
			Total Phosphorus			
			Total Kjeldahl Nitrogen (TKN)			
			E.Coli			

Appendix C

Appendix C - ECA Annual Report Requirements

Facility ECA #1655-7P8SPE **Section 10(6)**	**Section in Report**
A summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the works;	Treatment Flows Effluent Quality
A description of any operating problems encountered and corrective actions taken;	Operating Issues/Problems
A summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the works;	Maintenance
A summary of any effluent quality assurance or control measures undertaken in the reporting period;	Effluent Quality
A summary of the calibration and maintenance carried out on all effluent monitoring equipment; and	Maintenance
A description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6	Effluent Quality
A tabulation of the volumes to be generated in the next reporting period and a summary of the location to where the sludge was disposed;	Sludge Generation
A summary of any complaints received during the reporting period and any steps taken to address the complaints	Summary of Complaints
A summary of all By-pass, spill or abnormal discharge events; and	Operating Issues/Problems
Any other information the District Manager requires from time to time;	N/A

Collection ECA # **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.	Operating Issues and Problems
4.6.4 Includes a summary of any operating problems encountered and corrective actions taken.	Operating Issues and Problems
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.	Maintenance
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.	Summary of 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.	Maintenance
4.6.8 Includes a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including:	Operating Issues/Problems

Collection ECA # **Schedule E**	**Section in Report**
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.	
4.6.9 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.	Maintenance Operating Issues and Problems