Cobden Wastewater System

Waterworks #120000596

Annual Report

Prepared For: The Township of Whitewater Region

Reporting Period of January 1st – December 31st 2024

Issued: February 25th, 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	4306-B2YKK4	2018-09-05	N/A
ECA for Municipal Sewage Collection System	N/A	N/A	N/A

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1 Revision History

Date	Rev#	Revisions	Revised By
2025-02-25	0	Annual Report Issued	Kaylee Saar, OCWA

2 Operations and Compliance Reliability Indices

Compliance Event	Details
Ministry of Environment Inspections	0
Ministry of Labour Inspections	0
Non-Compliance	0 - See Raw Sewage Quality and Effluent Quality for details
Community Complaints	5 - See Summary of Complaints for details
Spills	1 - See Appendix D for details of Abnormal Sewage Discharge Events
Overflows	0
Bypass	0
Sewer main blockages	1 - Sewer main blockages, See Summary of Complaints for details 4 - Lateral blockages, See Summary of Complaints for details

3 Process Description

Cobden's wastewater treatment system consists of a gravity fed collection system of separated sewers and the Morton Street lift station that discharges to the wastewater treatment facility located at 1 Astrolabe Road in Cobden, Ontario. Cobden's wastewater treatment plant is a Class III treatment facility. Raw sewage is gravity fed through the existing inlet parallel grit channels and four (4) manual bar screens for preliminary treatment before entering one equalization (EQ) tank, with two (2) interconnected cells. The inlet channel is also equipped with overflow capabilities via a weir to the overflow channel. A level sensor measures the overflow volume.

From the EQ tank, the raw sewage is pumped into the treatment headworks where solids and rags are further removed using a two (2) rotary drum screens and a compacting screw auger. Wastewater then enters two bioreactor tanks that operate in parallel, each made up of an aeration cell and a membrane filtration cell. The aeration cell is where secondary treatment begins. Each tank is equipped with a fine bubble aeration system. PAS-8 is injected for phosphorus removal via the sludge recirculation line in the aeration cell. The membrane filtration cells is where post-secondary treatment continues. Each cell contains one Membrane BioReactor (MBR) filter consisting of two parallel ultrafiltration membrane trains, effluent pumps, and air scouring blowers. Permeate pulled from the MBR filters flows through individual UV reactors to achieve disinfection before combining at a common header to fill the 6000 L

permeate holding tank. The permeate holding tank is used to during the chemically enhanced backwash of the ultrafiltration fibers. Chemically assisted backwashes occur daily, with the chemicals sodium hypochlorite and citric acid rotated for use each day. Sodium hypochlorite is applied on to combat organics that can foul the fibers, and citric acid is applied to combat inorganics that can clog the fibers. When the permeate tank is not in use for chemically assisted backwashes, it acts as a holding tank before the effluent is directed to the outfall pipe. The outfall pipe directs the effluent to an earth bermed enclosure (lagoon) located southeast of the plant, then is discharged into Muskrat River and subsequently to Muskrat Lake.

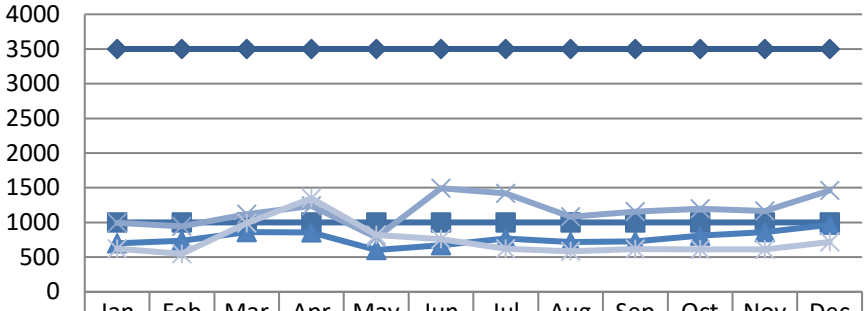
Activated sludge which has been removed from the MBR's is pumped into a two-celled aerobic sludge digestion/storage tank. The storage tank is equipped with a coarse bubble aeration system and two (2) manual decant arms, one in each cell. When aeration is stopped in one cell, the activated sludge is allowed settle and separate. The clear supernatant is collected by lowering the manual decant arm and is directed to a supernatant storage tank. A pump returns the supernatant to the headworks of the plant. The activated sludge that has settled and has "thickened' is then pumped to the centrifuge for further dewatering. The centrate produced is also piped to return to the supernatant storage tank to be pumped to the headworks of the plant. Dewatered biosolids are collected in a dump trailer and hauled offsite for landfill application under EASR #R-004-3114519011. Additionally, there is a provision for de-sludging the tanks by directly loading a hauling truck as a backup to the dewatering system during maintenance of the centrifuge system.

4 Treatment Flows

The annual average daily flow for 2024 was 772 m^3/d, which represents 77.2% of the facility's 1000 m^3/d rated capacity.

4.1 Raw Flow (m^3/d)

4.1.1 2024 Raw Flow

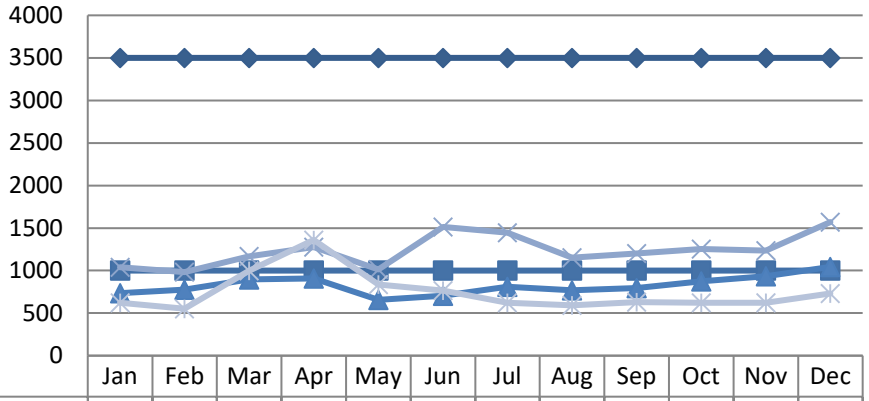


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Plant Max Design Flow (m3/d)	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
ECA Rated Capacity (m3/d)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Average Daily Flow (m3/d)	698	738	859	855	603	670	768	716	727	810	859	966
Maximum Daily Flow (m3/d)	992	944	1120	1,241	784	1493	1420	1083	1154	1197	1164	1462
5 Year Average Flow (m3/d)	621	548	990	1348	819	761	621	586	617	611	612	717

Note: the spikes in the maximum daily flow in March and April were due to the spring melt, spikes from June to December are a result of running the plant at a slower pace to reduce the demand on the membranes.

4.2 Effluent Flow (m^3/d)

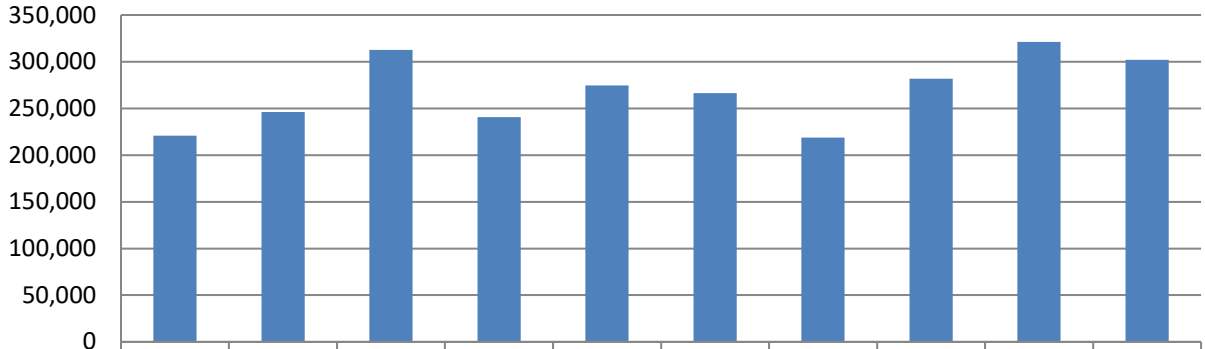
4.2.1 2024 Effluent Flow



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Plant Max Design Flow (m3/d)	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
ECA Rated Capacity (m3/d)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Average Daily Flow (m3/d)	736	777	897	906	656	703	808	769	796	873	933	1043
Maximum Daily Flow (m3/d)	1040	982	1169	1,277	1013	1515	1446	1154	1200	1252	1233	1570
5 Year Average Flow (m3/d)	622	552	996	1360	835	766	622	593	628	620	622	729

Note: the spikes in the maximum daily flow in January and May were due to maintenance activities, spikes in March and April were due the spring melt and the spikes from June to December are a result of running the plant at a slower pace to reduce the demand on the membranes.

4.2.2 Annual Effluent Flow Comparison (m^3)



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Annual Flow	220,942	246,123	312,466	240,620	274,432	266,303	218,875	281,830	321,285	301935

Imported Sewage

4.2.3 Leachate Flow (m^3/d)

There was no leachate accepted at this facility in 2024.

4.2.4 Septage Flow (m^3/d)

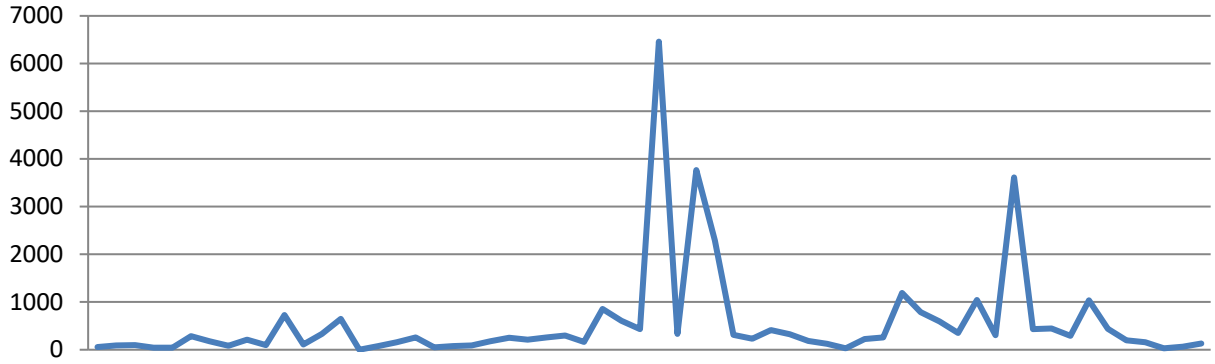
There was no septage accepted at this facility in 2024.

5 Raw Sewage Quality

5 Year Average Trends for Raw Sewage Quality are graphed below:

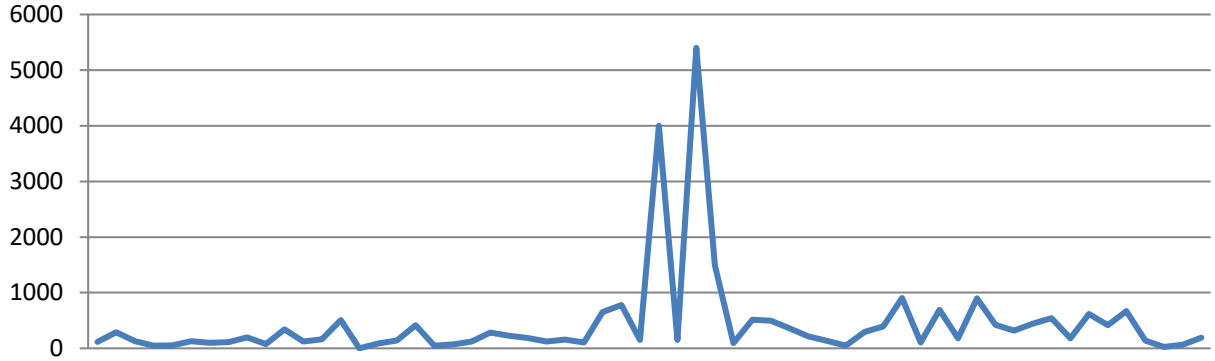
5.1 Biochemical Oxygen Demand (5 Day)

The graph below represents the monthly average of BOD_5 measured in mg/L from 2020-2024.



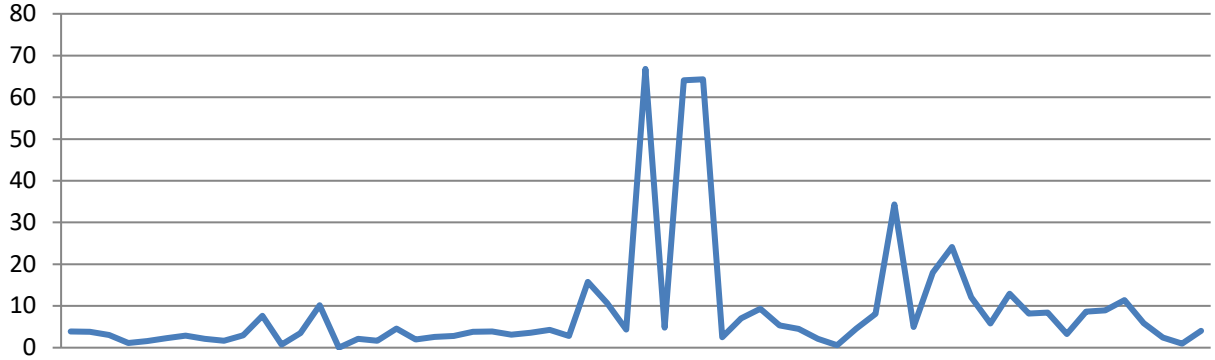
5.2 Total Suspended Solids

The graph below represents the monthly average of TSS measured in mg/L from 2020-2024.



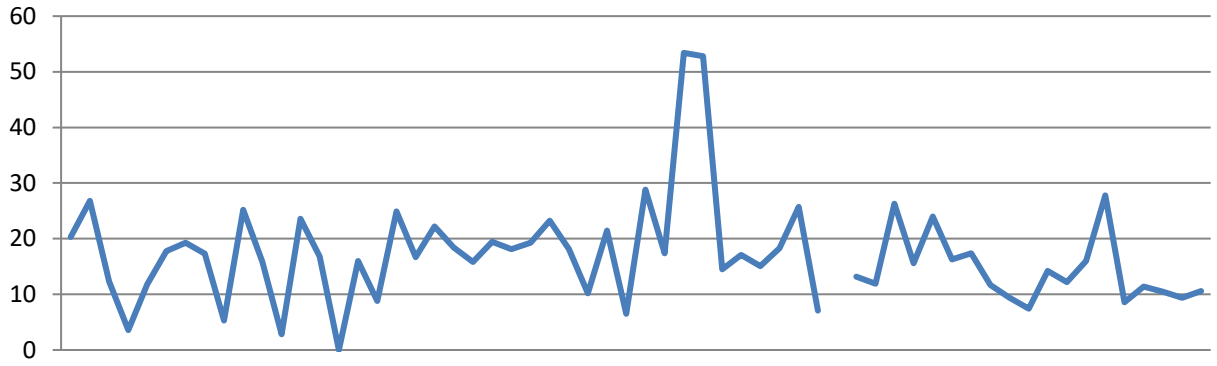
5.3 Total Phosphorus

The graph below represents the monthly average of TP measured in mg/L from 2020-2024.



5.4 Total Ammonia Nitrogen

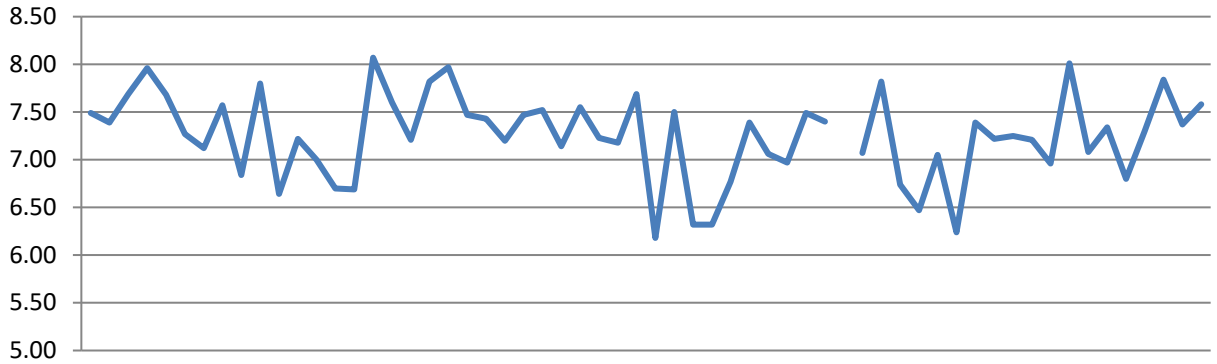
The graph below represents the monthly average of TAN measured in mg/L from 2020-2024.



Note: An incorrect COC was used during sampling in May of 2023 resulting in missing TAN data, this parameter is required to be sampled by the facility's ECA and a non-compliance was reported to the MECP.

5.5 pH

The graph below represents the monthly average of pH from 2020-2024, there is no measured unit for pH.



Note: An incorrect COC was used during sampling in May of 2023 resulting in missing pH data, this parameter is not required to be sampled by the facility's ECA, a non-compliance did not need to be issued.

6 Effluent Quality

The monthly average concentrations of the carbonaceous biochemical oxygen demand ($CBOD_5$), total suspended solids (TSS), total ammonia nitrogen (TAN) and the monthly geometric mean density (GMD) of E. coli remained below the effluent objectives and limits outlined in the facility's ECA during 2024. In addition, the effluent pH remained within the limits and objectives throughout the year. The monthly average concentration of total phosphorus exceeded the facility's ECA objective on one occasion but remained below the ECA limit. See the Operating Issues/Problems section of this report for further details.

The Federal Government also regulates the effluent flow, and the monthly averages of $CBOD_5$ and TSS in the effluent under the Federal Fisheries Act. The results are submitted to Environment and Climate Change Canada's effluent regulatory reporting information system, under wastewater systems effluent regulations (WSER) on a quarterly basis.

Effluent results from the Cobden wastewater treatment facility for 2024 are graphed on pages 8-11 of this report.

6.1 Effluent Quality Assurance and Control Measures Taken

This system is part of OCWA's Madawaska 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 SGS Lakefield Research Ltd. laboratory in Lakefield, Ontario for analysis, with the exception of disinfection residuals and temperature. SGS Lakefield Research Ltd. 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
    - SCADA system allows for process optimization and data logging, process trending, remote alarming.

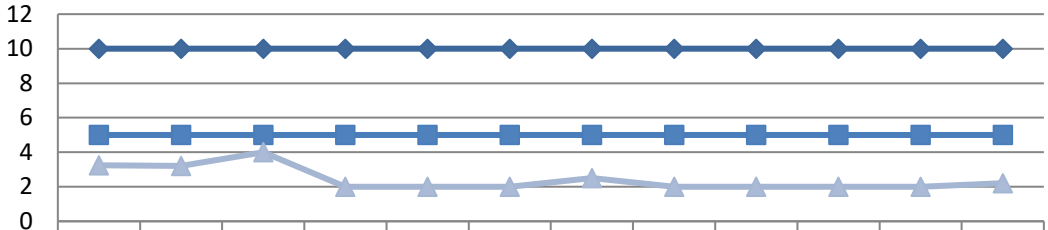
The operations team also has access to a network of operational compliance and process specialists to assist for emerging process issues. This aids in establishing additional control measures to ensure a quality effluent product.

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

6.2 CBOD5

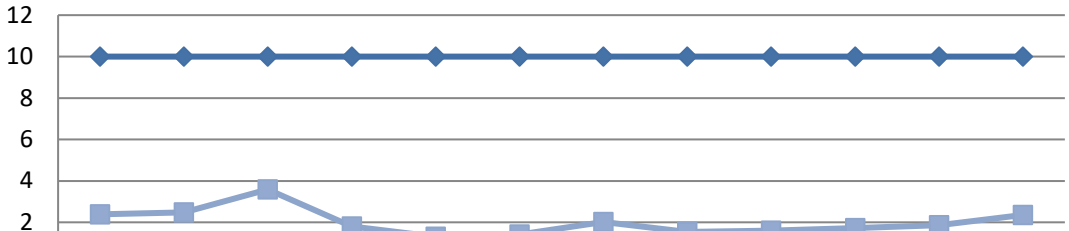
There was no Compliance Objective or Compliance Limit exceedance for this parameter.

6.2.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	10	10	10	10	10	10	10	10	10	10	10	10
Objective (mg/L)	5	5	5	5	5	5	5	5	5	5	5	5
Average (mg/L)	3	3	4	2	2	2	3	2	2	2	2	2

6.2.2 Loading (kg/d)

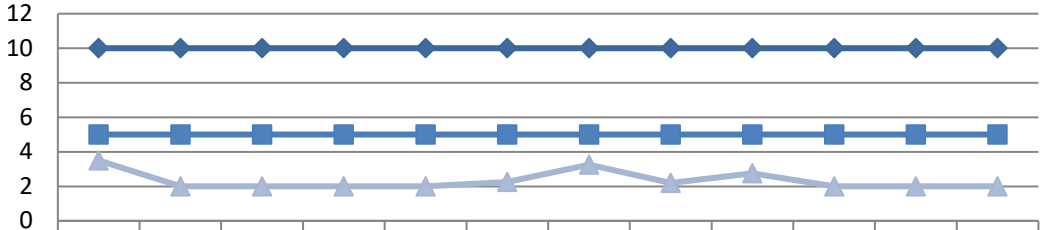


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (kg/d)	10	10	10	10	10	10	10	10	10	10	10	10
Average (kg/d)	2.4	2.5	3.6	1.8	1.3	1.4	2.0	1.5	1.6	1.7	1.9	2.4

6.3 Total Suspended Solids

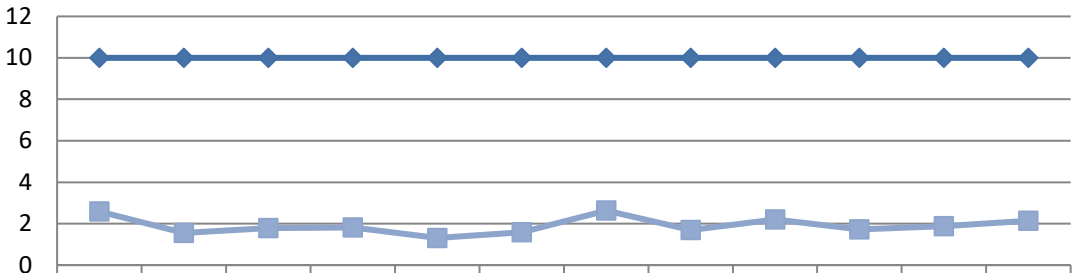
There was no Compliance Objective or Compliance Limit exceedance for this parameter.

6.3.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	10	10	10	10	10	10	10	10	10	10	10	10
Objective (mg/L)	5	5	5	5	5	5	5	5	5	5	5	5
Average (mg/L)	4	2	2	2	2	2	3	2	3	2	2	2

6.3.2 Loading (kg/d)

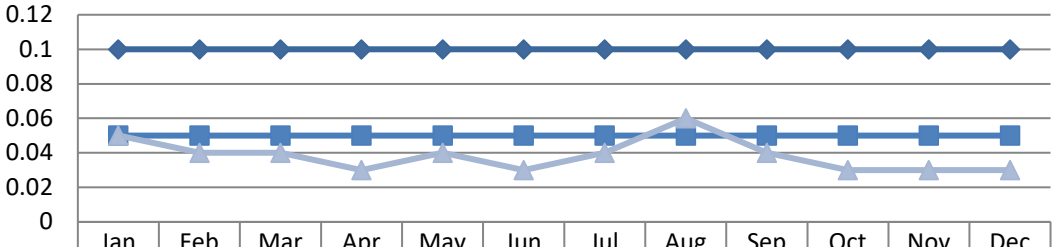


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (kg/d)	10	10	10	10	10	10	10	10	10	10	10	10
Average (kg/d)	2.6	1.6	1.8	1.8	1.3	1.6	2.6	1.7	2.2	1.7	1.9	2.1

6.4 Total Phosphorus

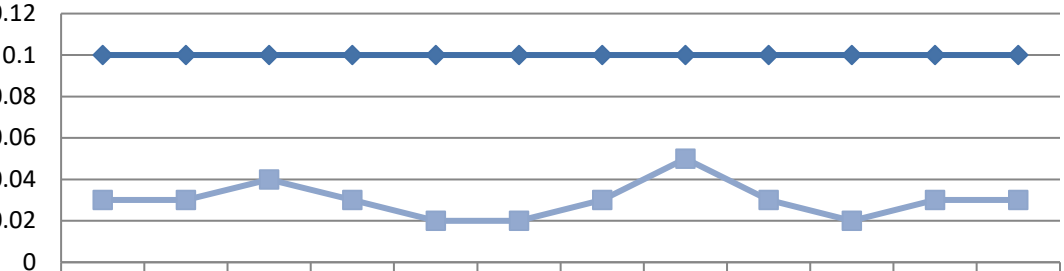
There was one Compliance Objective exceedance and no Compliance Limit exceedance for this parameter, see Operational Issues/Problems section of this report for details.

6.4.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Objective (mg/L)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Average (mg/L)	0.05	0.04	0.04	0.03	0.04	0.03	0.04	0.06	0.04	0.03	0.03	0.03

6.4.2 Loading (kg/d)

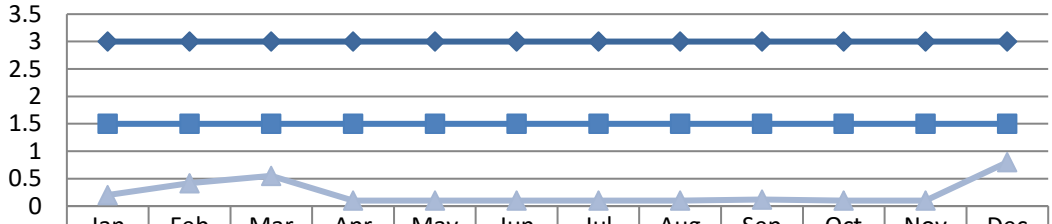


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (kg/d)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average (kg/d)	0.03	0.03	0.04	0.03	0.02	0.02	0.03	0.05	0.03	0.02	0.03	0.03

6.5 Total Ammonia Nitrogen

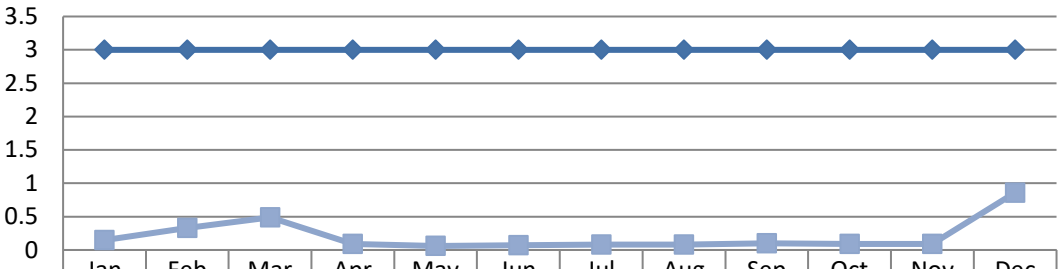
There was no Compliance Objective or Compliance Limit exceedance for this parameter.

6.5.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/)	3	3	3	3	3	3	3	3	3	3	3	3
Objective (mg/L)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Average (mg/L)	0.2	0.4	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8

6.5.2 Loading (kg/d)

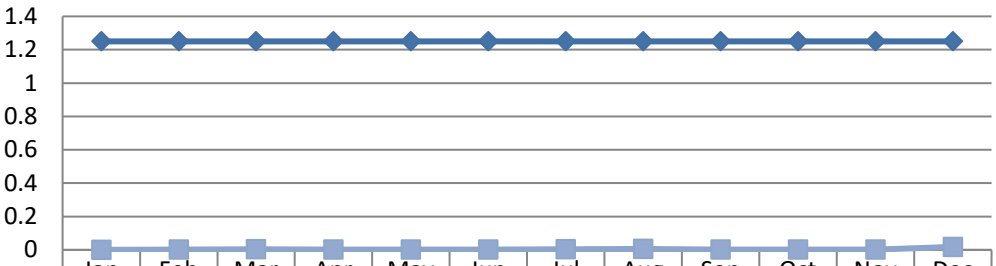


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (kg/d)	3	3	3	3	3	3	3	3	3	3	3	3
Average (kg/d)	0.2	0.3	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.9

6.6 Un-Ionized Ammonia/Nitrogen/TKN

There was no Compliance Limit exceedance for this parameter, there is no Compliance Objective for this parameter.

6.6.1 Concentration (mg/L)

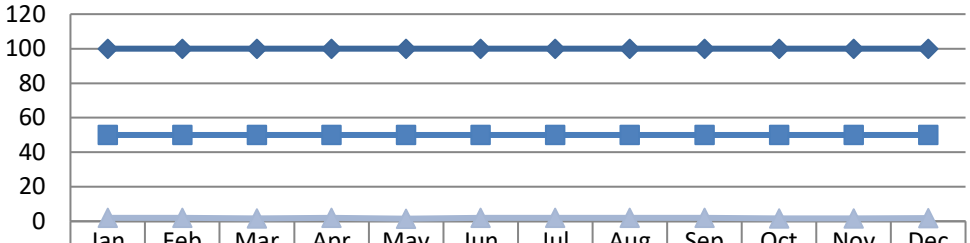


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Federal Limit (mg/L)	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Average (mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02

6.7 E-coli

There was no Compliance Objective or Compliance Limit exceedance for this parameter.

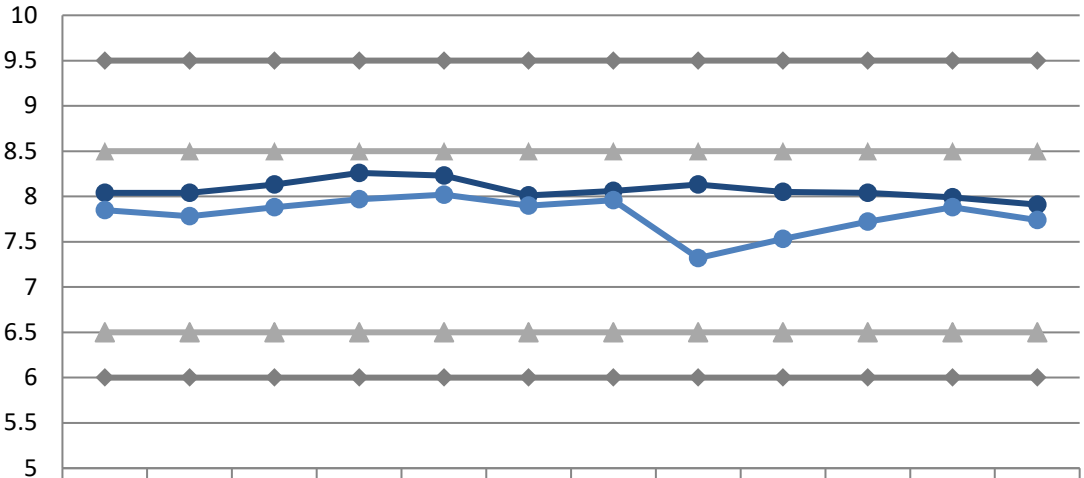
6.7.1 Geometric Mean (CFU/100mL)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (CFU/100 mL)	100	100	100	100	100	100	100	100	100	100	100	100
Objective (CFU/100 mL)	50	50	50	50	50	50	50	50	50	50	50	50
Average (CFU/100 mL)	2	2	2	2	2	2	2	2	2	2	2	2

6.8 pH

pH is to remain in the range of 6-9.5, each instance the pH is outside of that range is reported as a non-compliance.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Max Limit	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Min Limit	6	6	6	6	6	6	6	6	6	6	6	6
Max Objective	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Min Objective	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Monthly Max	8.04	8.04	8.13	8.26	8.23	8.01	8.06	8.13	8.05	8.04	7.99	7.91
Monthly Min	7.85	7.78	7.88	7.97	8.02	7.9	7.96	7.32	7.53	7.72	7.88	7.74

7 Monitoring Schedule

The 2025 Sample Calendar can be viewed in Appendix A.

7.1 Deviations

Date	Details	Cause of Deviation
February 2nd 2024	Monthly raw sample was collected on Friday, which is a deviation from the standard day of Thursday.	Influent sampler failed to collect sample when started January 31st, restarted sampler February 1st for sample collected on the 2nd.
March 8th 2024	Monthly raw sample was collected on Friday, which is a deviation from the standard day of Thursday.	Influent sampler failed to collect sample when started March 6th, restarted sampler March 7th for sample collected on the 8th.
March 27th 2024	Weekly effluent samples were collected on Wednesday which is a deviation from the standard day of Thursday.	Effluent sampler started on March 26th instead of March 27th.
August 22nd 2024	Monthly raw sample was collected on the fourth week of the month, which is a deviation from the standard first week.	Influent sampler failed to collect sample when started July 31st, sampler required repairs. Backup sampler procured August 21st for sample collection on the 22nd.
September 17th 2024	An additional E.Coli sample was collected on Tuesday, which is a deviation from the standard day of Thursday.	E.Coli from September 12th sample was analyzed from a 500mL PET bottle, a resample in the correct bottle was taken the following week
October 4th 2024	Monthly raw sample and weekly effluent sample was collected on Friday, which is a deviation from the standard day of Thursday.	Influent and Effluent sampler started on October 3rd instead of October 2nd.
December 23rd 2024	Weekly samples were collected on Monday, which is a deviation from the standard day of Thursday.	Due to the Christmas Day and Boxing Day Stat Holidays on December 25th and 26th falling on a Wednesday and Thursday, operations staff started the effluent sampler Sunday to ensure that the full 24 hours had passed before collecting the composite sample Monday. Samples were delivered to the lab to be processed within the 48 hour holding time.
December 30th 2024	Weekly samples were collected on Monday, which is a deviation from the standard day of Thursday.	Due to the News Year Day Stat Holiday on January 1st falling on a Wednesday, operations staff started the effluent sampler Sunday to ensure that the full 24 hours had passed before collecting the composite sample Monday. Samples were delivered to the lab to be processed within the 48 hour holding time.

Weekly effluent sampling is scheduled to occur on Tuesdays in 2025.

8 Operating Issues/Problems

Overall, the Cobden WWTP operated well in 2024 with no overflow events or ECA effluent limit exceedances reported. However, after multiple clean in place (CIP) soaks and chemically enhanced backwashes (CEB) were performed without improvement to the declining permeability and increasing trans-membrane pressure (TMP) scheduled maintenance to remove the four cassettes, then clean and inspect the ultrafiltration fibers of MBR train#1 and Train #2 occurred in March and April of 2024. The fibers were inspected for signs of fouling or damage at the manufacturers request. Once the MBR's were cleaned, additional operational adjustments were made to support the improved TMP and permeability including:

- Reducing flow rates to extend the runtime of the plant decreasing the demand of the membranes
- Daily CEB's at lower volume of chemical, rotating daily between sodium hypochlorite and citric acid
- CIP procedure revised to include draining MBR tank, rinsing fibers, and re-filling tank with permeate water before allowing chemicals to dose and soak for 24 hours each

Additionally, since the plant has regularly experienced influent with a BOD_5 concentration above the treatment criteria of 250 mg/L provided by the WWTP membrane manufacturer, a sampling program from July 23rd 2024 to August 16th 2024 was conducted. Sampling occurred daily from 6:00-12:00, 12:00-18:00 and 18:00-00:00 in the collection system and at the head of the plant. Township staff also monitored flow and temperature in the collection system. The average BOD_5 in the influent since the plant's commissioning in November 2021 is 769 mg/L. The average BOD_5 experienced in the influent during the sample period was 572 mg/L and 6749 mg/Lin the collection system. Based on the sampling results the Township staff created a sewer use by-law to limit elevated BOD_5 discharges to the collection system.

8.1 Effluent Quality Non-Compliance Summary

The effluent objectives are based on current requirements in the facility's Environmental Compliance Approval (ECA). ECA objective exceedances are non-reportable, and are used as an operational target. As the operating authority we shall use our best efforts to operate the facility in a manner that ensures the objectives are not exceeded in the treated effluent.

The Final Effluent did not see objective exceedances more than 50% of the time during the year or experience an increased deterioration in the final effluent. At this time no proactive actions are suggested.

The following table is a summary of objective and limit exceedances and the efforts made to meet the objectives and corrective actions taken when the limit was exceeded.

Date	Exceedance of	ECA Objective	ECA Limit	Value	Corrective Action
August 2024	Monthly average concentration Total Phosphorus	0.050 mg/L	0.10 mg/L	0.060 mg/L	Adjusted sludge wasting volume

8.2 Summary of Abnormal Sewage Discharge Events

Abnormal Discharge Events include Bypass', Overflows, Diversions and Spills of Sewage. Summary Details are included in Appendix C.

8.3 Spills (Other than Sewage)

Date	Location	Details	Volume (kg)	Start Date and Time	End Date and Time
11/06/2024	Astrolabe Road and Highway 17	Processed biosolids from the facility's centrifuge spilled onto the road surface. No waterways were affected, sludge was removed then rinsed from the pavement and storm sewers by a vac truck. It was not raining at the time of the spill.	100 kg	13:26 pm	14:21 pm

9 Maintenance

Routine planned maintenance activities are scheduled in WMS and include:

- Inspect, adjust and calibrate process control equipment to ensure proper operation of 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.

9.1 Normal Maintenance and Repairs

Work Order	Details
3903086	Repaired Membrane Train #2 process blower, installed new bearing
4049991	HydroVac flushing of Morton Street Lift Station and problem areas in collection system
4050842	Purchased air filter cartridges for the process blowers to maintain optimum performance
4094990	Replaced Raw Sampler Controller
4144922	Repaired leak in line at membrane train 2 chlorine injector. Remove and clean chlorine injector as well as acid injector

4145887	Repaired chlorine leak at chlorine pump number 1 fitting
4192802	Completed MBR #2 recovery clean

9.2 Emergency Maintenance and Repairs

Work Order	Details
3764540	Camera inspection of 29 Gould Street lateral to identity issue and repair lateral
3805002	Locate collapsed sewer lateral under home at 47 Pembroke Street
3947967	Updates to SCADA programming to improve automated wasting
4001915	Cleaned and inspected MBR Train #1 & #2 ultrafiltration fibers with Manufacturer
4051583	Multiple faults received at Morton Street Lift Station for pump #2, removed rags, reinstalled and tested operations. No faults received.
4096373	Pulled Morton Street Lift Station pump #1, removed rags, reinstalled and tested operations. No faults received.
4196953	Removed blockage from sewer main at 38 Pembroke Street
4235604	Troubleshoot MBR#2 flow meter, lost signal post schedule annual calibration.

9.3 Flow Meter Calibrations and Maintenance

Location	Date of Calibration	Additional Maintenance
EQ Pump Discharge (Raw) Flow Meter	November 7, 2024	N/A
Sludge Feed to Centrifuge Flow Meter	November 7, 2024	N/A
Screen Outlet Train 1 Flow Meter	November 7, 2024	N/A
Screen Outlet Train 2 Flow Meter	November 7, 2024	Replacement required (scheduled 2025)
Permeate Train 1 Flow Meter	November 7, 2024	N/A
RAS Train 1 Flow Meter	November 7, 2024	N/A
Permeate Train 2 Flow Meter	November 7, 2024	N/A
RAS Train 2 Flow Meter	November 7, 2024	N/A
Supernatant Flow Meter	November 7, 2024	N/A
Collection System Flow Meter	No collection system flow meter	N/A

9.4 Authorized Alterations in Collection System

Work Order	Details	Significant Drinking Water Threat (Y/N)
There were no authorized alterations made to the collection system during the reporting period.		

9.5 Notice of Modifications

Date	Process	Modification	Status
There were no modifications made to the treatment facility or the collection system during the reporting period.			

10 Sludge Generation

In the event that the centrifuge isn't operational, a provision in the ECA allows liquid biosolids to be hauled off site. In 2024 no liquid biosolids were removed from site.

10.1 Processed Volumes

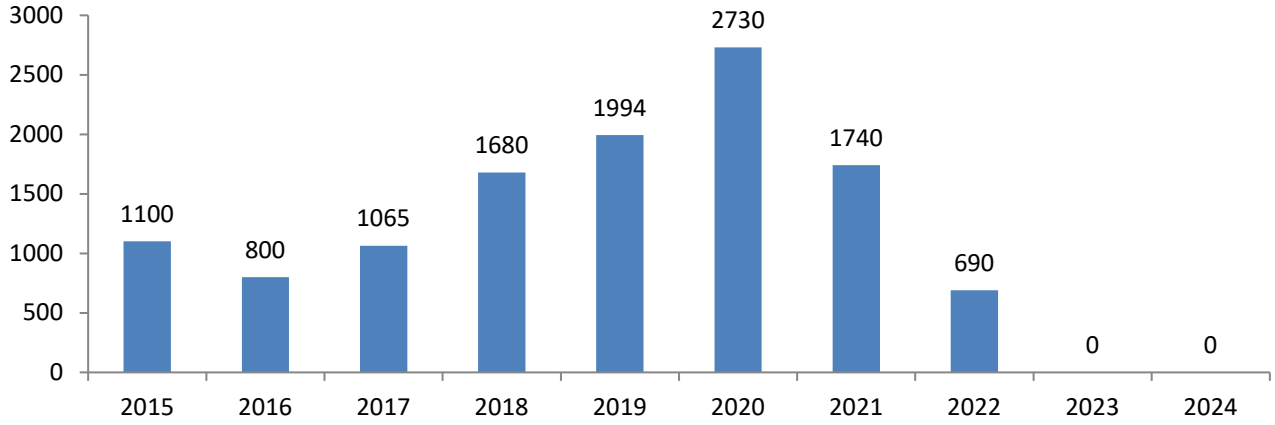
Cobden's Wastewater Treatment Facility's centrifuge processed approximately 4161 m^3 of liquid sludge in 2024. The dewatered biosolids were disposed of at the Ross Landfill site located at 990 Kohlsmith Road in Whitewater Region, Ontario under certificate of approval #A413209. It is anticipated that approximately the same volume of sludge will be processed in 2025.

10.2 Sludge Disposal Summary

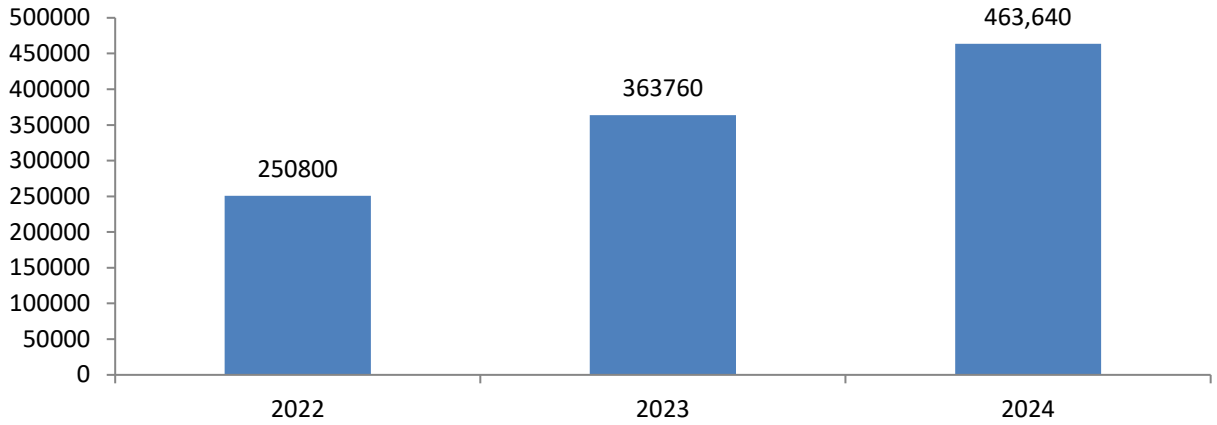
Month	Disposal Location	Approval Number	Number of Loads	Total (kg)
January	Ross Landfill	A413209	22	48,770
February	Ross Landfill	A413209	16	31,300
March	Ross Landfill	A413209	17	35,370
April	Ross Landfill	A413209	20	44,810
May	Ross Landfill	A413209	19	36,870
June	Ross Landfill	A413209	20	40,760
July	Ross Landfill	A413209	11	27,670
August	Ross Landfill	A413209	12	28,680
September	Ross Landfill	A413209	11	27,840
October	Ross Landfill	A413209	14	63,960
November	Ross Landfill	A413209	14	32,840
December	Ross Landfill	A413209	17	44,770
Total Annual Loads				463,640
Total Annual Weight (kg)			193	

Annual Comparison

10.2.1 Volume Hauled (m^3/year)



10.2.2 Weight Hauled (kg/year)



10.3 Quality

The biosolids sampling results are summarized in Appendix C. All results met the established guidelines.

11 Summary of Complaints

Location	Date	Nature of Complaint	Actions Taken
29 Gould Street	01/26/2024	Sewer Backup	Lateral was inspected with a camera, repairs to lateral completed
10 Bromley Street	04/27/2024	Sewer Backup	Checked sewer main above and below residence for flow, flow present. Plumber was on site before OCWA was notified, where a blockage was found 25 ft out, Vac truck contacted to clean out lateral
2 Cowley Street	06/03/2024	Sewer Backup	Checked sewer main above and below residence for flow, flow present, advise home owner to contact plumber to upgrade pump that was installed in residence
39 Pembroke Street	08/09/2024	Sewer Backup	Checked sewer main above and below residence for flow, flow present, advise home owner to contact plumber to clear blockage within residence
38 Pembroke Street	10/29/2024	Sewer Backup	Checked sewer main above and below residence for flow, no flow present. Vac truck contacted to clean out sewer main, confirmed with resident of resolution

Appendix A

Appendix A - Sample Calendar

Ontario Clean Water Agency	External Laboratory Sample Schedule **Cobden Wastewater Treatment Plant** **January 2025**	Issued: Dec-6-2024 Rev: 0 Page 1 of 12
Reviewed by: Process and Compliance Technician		Approved by: Senior Operations Manager

	Week 1		Week 2		Week 3		Week 4		Week 5	
	5-11		12-18		19-25		26-1			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis										
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

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 **Cobden Wastewater Treatment Plant** **February 2025**	Issued: Dec-6-2024 Rev: 0 Page 2 of 12
Reviewed by: Process and Compliance Technician	Approved by: Senior Operations Manager	

	Week 1		Week 2		Week 3		Week 4		Week 5	
					Monday Stat					
	2-8		**9-15**		**16-22**		**23-1**			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis					Sample Wednesday					
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

This schedule is for guidance purposes only

Please refer to all regulatory requirements that affect the sampling schedule

Ontario Clean Water Agency	External Laboratory Sample Schedule **Cobden Wastewater Treatment Plant** **March 2025**	Issued: Dec-6-2024 Rev: 0 Page 3 of 12
Reviewed by: Process and Compliance Technician		Approved by: Senior Operations Manager

	Week 1		Week 2		Week 3		Week 4		Week 5	
	2-8		9-15		16-22		23-29			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis										
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

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 **Cobden Wastewater Treatment Plant** **April 2025**	Issued: Dec-6-2024 Rev: 0 Page 4 of 12
Reviewed by: Process and Compliance Technician	Approved by: Senior Operations Manager	

	Week 1		Week 2		Week 3		Week 4		Week 5	
					Friday Stat		***Monday Stat***			
	30-5		**6-12**		**13-19**		**20-26**		**27-3**	
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis							Sample Wednesday			
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

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 **Cobden Wastewater Treatment Plant** **May 2025**	Issued: Dec-6-2024 Rev: 0 Page 5 of 12
Reviewed by: Process and Compliance Technician	Approved by: Senior Operations Manager	

	Week 1		Week 2		Week 3		Week 4		Week 5	
					Monday Stat					
	4-10		**11-17**		**18-24**		**25-31**			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis					Sample Wednesday					
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

This schedule is for guidance purposes only

Please refer to all regulatory requirements that affect the sampling schedule

Ontario Clean Water Agency	External Laboratory Sample Schedule **Cobden Wastewater Treatment Plant** **June 2025**	Issued: Dec-6-2024 Rev: 0 Page 6 of 12
Reviewed by: Process and Compliance Technician		Approved by: Senior Operations Manager

	Week 1		Week 2		Week 3		Week 4		Week 5	
	1-7		8-14		15-21		22-28			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis										
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

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 **Cobden Wastewater Treatment Plant** **July 2025**	Issued: Dec-6-2024 Rev: 0 Page 7 of 12
Reviewed by: Process and Compliance Technician	Approved by: Senior Operations Manager	

	Week 1		**Week 2**		**Week 3**		**Week 4**		**Week 5**	
	Tuesday Stat									
	29-5		**6-12**		**13-19**		**20-26**		**27-2**	
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis	Sample Wednesday									
Effluent Plant Analysis	Sample Wednesday									
RAS Train 1 & 2	Sample Wednesday									
Aerated Sludge	Sample Wednesday									

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

This schedule is for guidance purposes only

Please refer to all regulatory requirements that affect the sampling schedule

Ontario Clean Water Agency	External Laboratory Sample Schedule **Cobden Wastewater Treatment Plant** **August 2025**	Issued: Dec-6-2024 Rev: 0 Page 8 of 12
Reviewed by: Process and Compliance Technician		Approved by: Senior Operations Manager

	Week 1		Week 2		Week 3		Week 4		Week 5	
	Monday Stat									
	3-9		**10-16**		**17-23**		**24-30**			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis	Sample Wednesday									
Effluent Plant Analysis	Sample Wednesday									
RAS Train 1 & 2	Sample Wednesday									
Aerated Sludge	Sample Wednesday									

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

This schedule is for guidance purposes only

Please refer to all regulatory requirements that affect the sampling schedule

Ontario Clean Water Agency	External Laboratory Sample Schedule **Cobden Wastewater Treatment Plant** **September 2025**	Issued: Dec-6-2024 Rev: 0 Page 9 of 12
Reviewed by: Process and Compliance Technician		Approved by: Senior Operations Manager

	Week 1		Week 2		Week 3		Week 4		Week 5	
	Monday Stat									
	31-6		**7-13**		**14-20**		**21-27**			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis	Sample Wednesday									
Effluent Plant Analysis	Sample Wednesday									
RAS Train 1 & 2	Sample Wednesday									
Aerated Sludge	Sample Wednesday									

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

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 **Cobden Wastewater Treatment Plant** **October 2025**	Issued: Dec-6-2024 Rev: 0 Page 10 of 12
Reviewed by: Process and Compliance Technician		Approved by: Senior Operations Manager

	Week 1		**Week 2**		**Week 3**		**Week 4**		**Week 5**	
	Tuesday Stat				***Monday Stat***					
	28-4		**5-11**		**12-18**		**19-25**		**26-1**	
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis	Sample Wednesday									
Effluent Plant Analysis	Sample Wednesday				Sample Wednesday					
RAS Train 1 & 2	Sample Wednesday									
Aerated Sludge	Sample Wednesday									

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **Cobden Wastewater Treatment Plant** **November 2025**	Issued: Dec-6-2024 Rev: 0 Page 11 of 12
Reviewed by: Process and Compliance Technician	Approved by: Senior Operations Manager	

	Week 1		Week 2		Week 3		Week 4		Week 5	
			Tuesday Stat							
	2-8		**9-15**		**16-22**		**23-29**			
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis			Sample Wednesday							
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

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 **Cobden Wastewater Treatment Plant** **December 2025**	Issued: Dec-6-2024 Rev: 0 Page 12 of 12
Reviewed by: Process and Compliance Technician	Approved by: Senior Operations Manager	

	Week 1		Week 2		Week 3		Week 4		Week 5	
							Thur/Fri Stat		***Thursday Stat***	
	30-6		**7-13**		**14-20**		**21-27**		**28-3**	
	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received	Sampled	Received
Raw Analysis										
Effluent Plant Analysis										
RAS Train 1 & 2										
Aerated Sludge										

Additional Samples/Monthly Notes

Sludge sampling needs to occur annually as per ECA, though sampling monthly will occur

Samples are taken on Tuesday in 2025

RAS Train 1 & 2 samping not required by ECA, operational monitoring only

This schedule is for guidance purposes only

Please refer to all regulatory requirements that affect the sampling schedule

Appendix B

Appendix B - Biosolids Quality Report

Biosolids Quality Report **Facility: COBDEN WASTEWATER TREATMENT FACILITY**

Solids & Nutrients **Period: 01/01/2024 to 12/31/2024** **Works: 1275 / Digestor Type: Aerobic**

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Solids & Nutrients | **Metals & Criteria** | **Last 4 Samples**

Facility Works Number:	120000596	Receiver:	MUSKRAT LAKE
Facility Owner:	Municipality: WHITEWATER REGION	Service Population:	1845
Facility Classification:	Class 3 Wastewater Treatment	Total Design Capacity:	696 m3/day

Note: all parameters in this report are derived from the Bslq Station

Month	Hauled Volume to Landfill (m^3)	Total Solids (mg/L)	Volatile Solids (mg/L)	Total Phosphorus (mg/L)	Total Ammonia Nitrogen (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Ammonia + Nitrate (mg/L)	Potassium (mg/L)
Parameter Short Name	**HauledVol**	**TS**	**VS**	**TP**	**NH3p_NH4p_N**	**NO3-N**	**NO2-N**	**TKN**	**Calculation in Report**	**K**
T/S	**IH Month.Total**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**Lab Published Month Mean**	**- no T/S**	**Lab Published Month Mean**
Jan		23,300.00	16,100.00	750.00	15.20	3.00	3.00	1,180.00	9.10	130.00
Feb		16,250.00	12,100.00	350.00	11.50	3.00	3.00	942.00	7.25	71.00
Mar	60.60	15,400.00	11,600.00	330.00	10.60	3.00	3.00	956.00	6.80	75.00
Apr		15,650.00	11,600.00	360.00	16.80	73.00	15.00	1,060.00	44.90	100.00
May		15,800.00	11,200.00	240.00	26.70	4.00	3.00	857.00	15.35	79.00
Jun		18,000.00	13,000.00	50.00	23.40	32.00	7.00	712.00	27.70	58.00
Jul		14,500.00	9,720.00	250.00	8.90	3.00	3.00	666.00	5.95	48.00
Aug		10,500.00	8,490.00	270.00	23.40	15.00	3.00	511.00	19.20	51.00
Sep		17,900.00	12,500.00	410.00	22.60	10.00	3.00	972.00	16.30	57.00
Oct		17,700.00	12,100.00	380.00	15.00	3.00	3.00	823.00	9.00	49.00
Nov		20,100.00	15,000.00	369.00	18.80	3.00	3.00	1,160.00	10.90	47.00
Dec		28,800.00	22,200.00	646.00	13.90	3.00	3.00	1,740.00	8.45	98.00
Average	60.60	17,825.00	12,967.50	367.08	17.23	12.92	4.33	964.92	15.08	71.92
Total	60.60	213,900.00	155,610.00	4,405.00	206.80	155.00	52.00	11,579.00	180.90	863.00

Note: all parameters in this report are derived from the Bslq Station

Month	Arsenic (mg/L)	Cadmium (mg/L)	Cobalt (mg/L)	Chromium (mg/L)	Copper (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Lead (mg/L)	Selenium (mg/L)	Zinc (mg/L)
Parameter Short Name	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Zn
T/S	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean
Jan	0.10	0.01	0.03	0.15	5.90	0.00	0.11	0.20	0.60	0.10	7.00
Feb	0.10	0.01	0.01	0.08	2.70	0.00	0.05	0.09	0.20	0.10	3.00
Mar	0.10	0.01	0.01	0.08	2.90	0.00	0.05	0.10	0.10	0.10	2.00
Apr	0.10	0.01	0.02	0.10	3.10	0.00	0.05	0.12	0.10	0.10	3.00
May	0.10	0.01	0.01	0.07	1.90	0.00	0.05	0.08	0.10	0.10	2.00
Jun	0.10	0.01	0.01	0.01	0.40	0.00	0.05	0.04	0.10	0.10	1.00
Jul	0.10	0.01	0.01	0.07	1.90	0.00	0.05	0.07	0.10	0.10	2.00
Aug	0.10	0.01	0.01	0.07	2.10	0.00	0.05	0.09	0.10	0.10	3.00
Sep	0.10	0.01	0.02	0.11	3.00	0.00	0.05	0.14	0.10	0.10	5.00
Oct	0.10	0.01	0.01	0.10	3.00	0.00	0.07	0.11	0.10	0.10	5.00
Nov	0.10	0.01	0.02	0.09	3.00	0.00	0.07	0.20	0.10	0.10	4.00
Dec	0.10	0.01	0.02	0.14	4.60	0.01	0.11	0.17	0.20	0.10	6.00
Average	0.10	0.01	0.02	0.09	2.88	0.00	0.06	0.12	0.16	0.10	3.58
Max. Permissible Metal Concentrations (mg/kg of Solids)	170.00	34.00	340.00	2,800.00	1,700.00	11.00	94.00	420.00	1,100.00	34.00	4,200.00
Metal Concentrations in Sludge (mg/kg)	5.61	0.29	0.84	5.00	161.29	0.16	3.55	6.59	8.88	5.61	201.03

Biosolids Quality Report

Facility: COBDEN WASTEWATER TREATMENT FACILITY

Last 4 Samples

Period: 01/01/2024 to 12/31/2024

Works: 1275 / Digestor Type: Aerobic

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Solids & Nutrients **Metals & Criteria** **Last 4 Samples**

Note: all parameters in this report are derived from the Bslq Station

Parameter Short Name	Time Series	09/05/2024	10/10/2024	11/07/2024	12/05/2024	Average	Metal Concentrations in Sludge (mg/kg)	Max. Permissible Metal Concentrations (mg/kg of Solids)
As (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	4.73	170
Cd (mg/L)	Lab Published	0.01	0.01	0.01	0.01	0.01	0.24	34
Co (mg/L)	Lab Published	0.02	0.01	0.02	0.02	0.02	0.83	340
Cr (mg/L)	Lab Published	0.11	0.10	0.09	0.14	0.11	5.21	2800
Cu (mg/L)	Lab Published	3.00	3.00	3.00	4.60	3.40	160.95	1700
Hg (mg/L)	Lab Published	0.00	0.00	0.00	0.01	0.00	0.19	11
Mo (mg/L)	Lab Published	0.05	0.07	0.07	0.11	0.08	3.55	94
Ni (mg/L)	Lab Published	0.14	0.11	0.20	0.17	0.16	7.34	420
Pb (mg/L)	Lab Published	0.10	0.10	0.10	0.20	0.13	5.92	1100
Se (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	4.73	34
Zn (mg/L)	Lab Published	5.00	5.00	4.00	6.00	5.00	236.69	4200
E.Coli Dry Wt (cfu/g)	Lab Published	162,011.00	209,040.00	190,217.00	155,709.00	177,964.85	E. Coli average is the GMD	
TS (mg/L)	Lab Published	17,900.00	17,700.00	20,100.00	28,800.00	21,125.00		
VS (mg/L)	Lab Published	12,500.00	12,100.00	15,000.00	22,200.00	15,450.00		
TP (mg/L)	Lab Published	410.00	380.00	369.00	646.00	451.25		
NO2-N (mg/L)	Lab Published	3.00	3.00	3.00	3.00	3.00		
TKN (mg/L)	Lab Published	972.00	823.00	1,160.00	1,740.00	1,173.75		
K (mg/L)	Lab Published	57.00	49.00	47.00	98.00	62.75		
NH3p_NH4p_N (mg/L)	Lab Published	22.60	15.00	18.80	13.90	17.58		
NO3-N (mg/L)	Lab Published	10.00	3.00	3.00	3.00	4.75		

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
There were no Bypass events reported during the reporting period.								

Facility Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
There were no Overflow events reported during the reporting period.								

Collection Overflow

There are no authorized overflow locations in this system.

Spills of Sewage

Date	Location	Details	Volume (kg)	Start Time	End Time	Duration (min)	Discharge Receiver	Disinfection Provided
There were no Spill of Sewage events reported during the reporting period.								

Collection System Monitoring Data

Event Date	Event Location	Volume (m3)	Parameter	mg/L	Source Loading	Any Adverse Impacts & Corrective Actions
There were no overflow or spill of sewage events in the Collection System reported during the reporting period.			BOD			
			Total Suspended Solids			
			Total Phosphorus			
			Total Kjeldahl Nitrogen (TKN)			
			E.Coli			

Appendix D

Appendix D - ECA Annual Report Requirements

Facility ECA #4306-B2YKK4 Section 11	Section in Report
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	Treatment Flows Raw Sewage Quality
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	Treatment Flows Effluent Quality
4.c. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year	Monitoring Schedule Appendix A
4.d. a summary of all operating issues encountered and corrective actions taken	Operating Issues and Problems
4.e. 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	Maintenance
4.f. a summary of any effluent quality assurance or control measures undertaken	Effluent Quality
4.g. a summary of the calibration and maintenance carried out on all Influent 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;	Maintenance
4.h. 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;	Operating Issues and Problems
4.i. 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;	Sludge Generation
4.j. a summary of any complaints received and any steps taken to address the complaints;	Summary of Complaints
4.k. 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;	Operating Issues and Problems Appendix C
4.l. 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.	Maintenance
4.m. 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.	Maintenance Operating Issues and Problems

4.n any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works.	Maintenance