Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Elizabeth Chee Sing
Water Compliance Supervisor
West Central Office
Ministry of the Environment, Conservation and Parks

March 31, 2023

Re: 2022 Annual Performance Report for the Port Rowan Wastewater Treatment Plant

Attached is the 2022 Annual Performance Report for the Port Rowan Wastewater Treatment Plant located at 55 Hunter Drive North, Port Rowan in Norfolk County. This report has been completed in accordance with:

- Section 10(6)(a) through (l) cited in Environmental Compliance Approval #7612-9XMJ26 issued on July 13, 2015 to the Corporation of Norfolk County.

This report was prepared by the Ontario Clean Water Agency on behalf of Norfolk County based on the information contained in our records. The report covers the period from January 1, 2022 to December 31, 2022.

Sincerely,

Allison Billingsley
Process and Compliance Technician
Ontario Clean Water Agency-Norfolk Cluster

Cc:
Stephanie Davis – Director, Environmental Services, Norfolk County
Shaun Earls - Manager, Water & Wastewater Compliance, Norfolk County
Stephan Burt – District Manager, MECP
Karl VanHeyst - Water Inspector, MECP
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Introduction

Port Rowan Wastewater Treatment Plant (WWTP) is located at 55 Hunter Drive North in the community of Port Rowan (Norfolk County), on the north shore of Lake Erie. The community of Port Rowan includes both permanent and seasonal residents and is designated as a Lakeshore Special Policy area within the Norfolk Official Plan.

The WWTP has a rated capacity of 1,140m^3/d, and has unit processes including screening and grit removal, primary clarification, chemical phosphorus removal, aeration and membrane

Filtration. Waste Activated Sludge (WAS) is co-thickened in the primary clarifiers and the combined sludge and scum are digested in an aerobic digester prior to disposal via land application. The treated effluent is discharged through an outfall pipe to the Dedrick Creek which discharges into Lake Erie. The facility also has two (2) odour control systems comprising biofilters—one each for the Headworks Building and the Aerobic Digester.

Raw Wastewater Collection

The wastewater collected in the sanitary sewers in Port Rowan flows from the Mallard Walk and Ducks Landing Pumping Stations (PS) to the Front Road PS and is pumped to the WWTP. These flows also include filter backwash water from the water treatment plant. In addition to receiving pumped flows the plant receives large volumes of hauled waste, and landfill leachate from other areas of the County.

Inlet Works- Preliminary Treatment System

The preliminary treatment units including coarse screening and grit removal which are enclosed inside the main process equipment area of the Headworks Building. Raw sewage is pumped to the WWTP via a 200 mm forcemain from the Front Road. Sewage flows by gravity to the Headworks Building where it gets screened by a 9.5 mm coarse screen before getting collected in the raw sewage wet well. There are two (2) coarse screens located in the Headworks Building (MBS-101/102), where the raw sewage from the community flows through the south screen (MBS-101).

The raw sewage and hauled waste are blended in a large wet well and pumped to downstream processes where it mixes with any leachate that has been received. The flow passes through a vortex grit chamber in the Headworks Building where it gets de-gritted before flowing to the primary clarifiers.

Primary Treatment

The blend of raw sewage, hauled wastes and leachate flows to the primary clarifier which removes a portion of the particulate load of TSS, BOD, TKN and TP via settling of suspended solids. In addition to gravity settling of the suspended solids, the primary clarifier influent is also dosed with ferrous chloride to remove a fraction of the soluble phosphorus load. Ferrous chloride acts as a coagulant that precipitates the soluble phosphorus and helps it settle along with the other suspended solids removed in the primary clarifier.

Aeration Tanks

At the Port Rowan WWTP, primary effluent enters the biological tanks via the biological tank feed channel. There are two (2) biological tanks, each consisting of two (2) cells, consisting of a small anoxic (swing) cell, followed by a larger aeration cell.

One or both biological tanks may receive primary effluent flow by adjusting the weir gates and opening or closing the slide gates located in the biological tank feed channel.

The mixed liquor in the Aeration Tanks is aerated by means of a fine bubble diffused air aeration system with the air supplied by positive displacement blowers. The air diffusers are spread across the bottom of aeration tanks allowing an even distribution of air. This promotes thorough mixing in all areas of the aeration tanks which maintains the solids in suspension and ensures a supply of oxygen throughout the tanks.

Supplementary Treatment

The mixed liquor from the aeration tanks flows into the membrane tanks, where a microfiltration membrane system separates the solids from the treated effluent (permeate). The membrane system comprises of hollow noodle shaped membrane fibers installed in modular membrane filtration units called cassettes. The permeate water is sucked out through hollow tube membranes via permeate pumps operating under a negative pressure. The permeate flows from outside to inside of the hollow tubes, is collected and discharged to the permeate tank, from where it overflows and discharges into the effluent outfall system.

The operation of the membrane system is automated based on the flux and permeability through the membranes. The intermittent aeration of membrane tanks helps to keep the membranes clean and reduces the cleaning frequency by chemicals. In addition to this, Maintenance Cleans and Recovery Cleans are executed intermittently to maintain peak performance and prolong membrane life. Maintenance Cleans, are initiated by staff weekly, employs sodium hypochlorite and citric acid to remove organic and inorganic fouling. The Recovery Cleaning is executed when the membrane permeability drops to below 50% of the initial stable permeability of the clean membranes every 9 months or when operations see declining permeability and little recovery after maintenance cleans. Recovery cleans are performed by soaking the cassettes in a series of chemical baths, first chlorine, then citric acid.

Sludge Management System

Sludge is periodically removed by licensed hauler for offsite storage, disposal, and/or land application. In order to limit nitrification, maintaining the required alkalinity and to optimize the aeration requirements, the digester aeration system is designed to operate at low DO and with an intermittently running aeration. While the low DO conditions limit nitrification, stoppage of air and further dropping of DO results in denitrification that generates alkalinity and helps restore the pH balance in the digester. The digester contents are kept mixed with the sludge removal pump when the aeration is switched off.

The digester supernatant is separated and recycled to the headworks at fixed interval by the operator. This allows the sludge solids to build up in the digester. When the sludge solids concentration builds up to a pre-determined level (usually 2.5 to 3%) in the digester, a portion of digested sludge from the digester is removed and hauled for land application.

Odour Control

Given the high odour potential of the hauled wastes received at the plant, odour control facilities are an important part of the WWTP. Two separate odour control units have been provided, one each for the Headworks Building and the aerobic digester. Each biofilter consists of a biofilter media bed comprising of a proportioned mixture of limestone compost and woodchips. The filter media bed is laid out uniformly over a bed of crushed limestone. The biofilter media is irrigated and kept moist by treated effluent to develop and sustain a biomass layer that helps remove the odours from the foul air received from the headworks and digester.

Standby Power

The emergency power for the entire plant is supplied from:

Cummins DFEK-61256223
500KW
475 HP
7,000 L diesel fuel tank

Plant Facts:

Environmental Compliance Approval	ECA 7612-9XMJ26 (issued July 13, 2015)
Rated Capacity	1,140m^3/day
Receiving Water	Dedrick Creek

For 2022, the Port Rowan WWTP was operated in accordance with provincial regulations as required in ECA #7612-9XMJ26 (ECA) issued July 13, 2015.The following report is presented such that it corresponds with ECA #7612-9XMJ26 Section 10(6) (a) through (l).

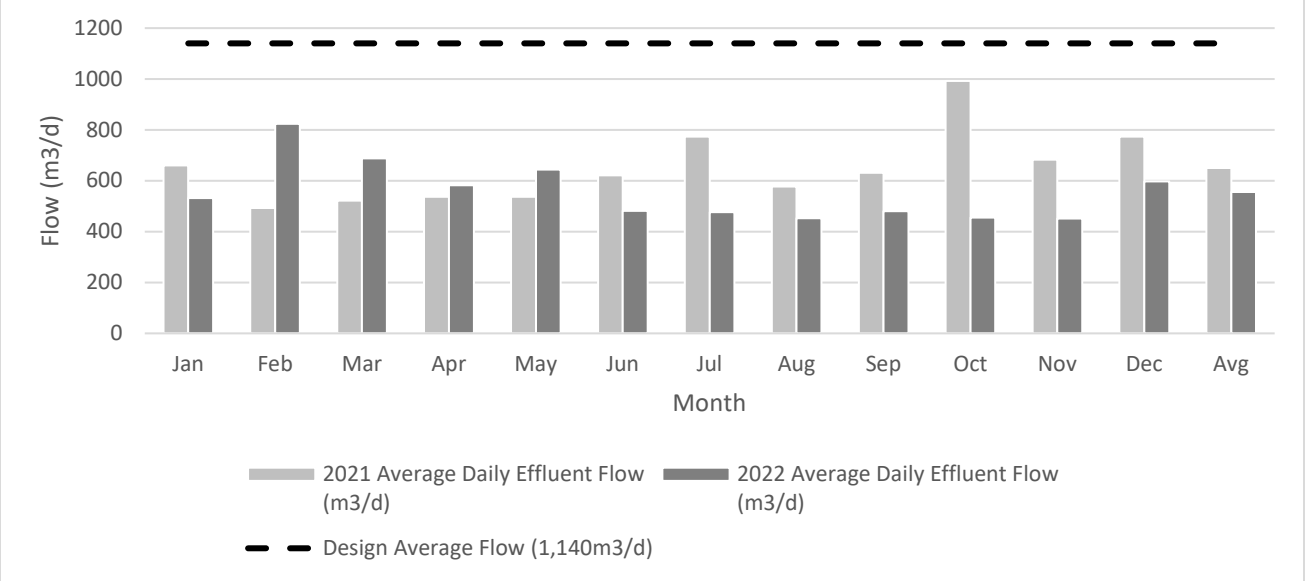
Section A: Summary of Monitoring Data

The Port Rowan Wastewater Treatment Plant is monitored as per the Environmental Compliance Approval requirements. Detailed monitoring data is supplied in Appendix A.

(l) Effluent Flow Monitoring

The average daily effluent flow for 2022 was 555.3m^3/d, which is 48.7% of the Port Rowan's WWTP's rated capacity of 1,140m^3/d. The following Graph 1 shows a comparison of the average daily flows per month for 2022 and 2021 compared to the rated capacity of the facility.

Graph 1. Average daily flows in 2022 compared to 2021.

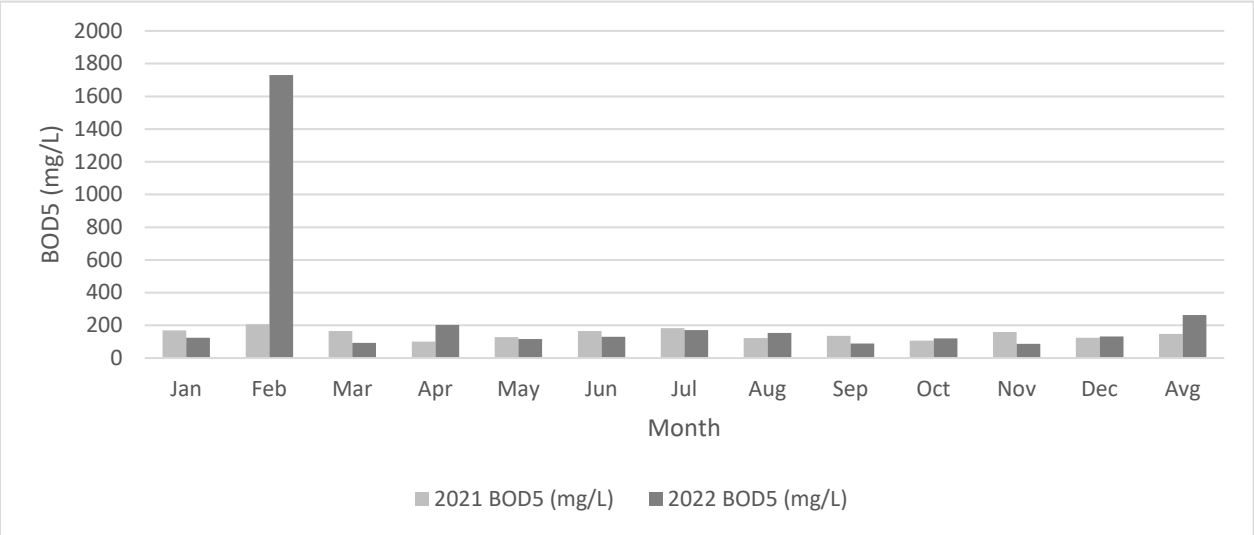


(II) Raw Sewage Monitoring

The raw sewage is monitored for BOD_5, total suspended solids, total phosphorus, total kjeldahl nitrogen, total ammonia nitrogen and alkalinity on a weekly basis (minimum) by means of a composite sample. The treatment capabilities of the facility were designed based on the raw water characteristics identified in the Operations Manual from the design engineers. Refer to Appendix A for the detailed monthly results. Graphs 2-6 below, show the monthly average concentrations for the required raw sewage parameters in 2022 compared to 2021.

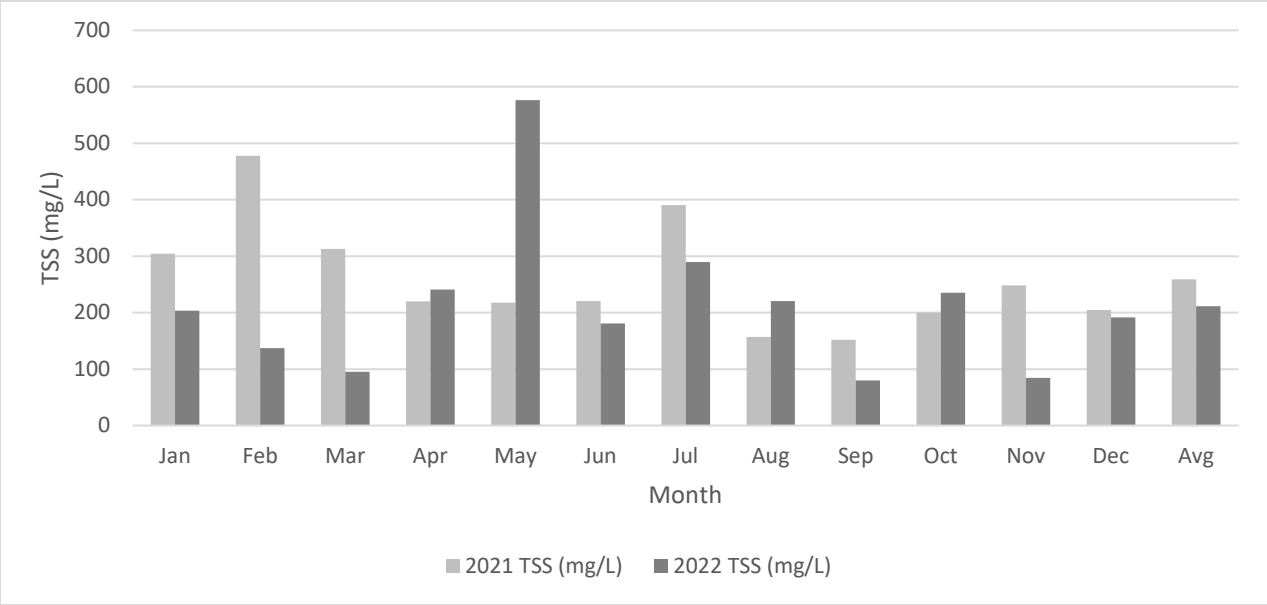
The annual average for the raw sewage BOD_5 concentration to the plant was 262.5mg/L with an average loading of 181.5kg/d. This annual average loading is below the design criteria of 570kg/d. Refer to Graph 2 for a comparison of monthly concentrations in 2022 to 2021.

Graph 2. Influent sewage average monthly concentration of BOD_5 for 2022 compared to 2021.



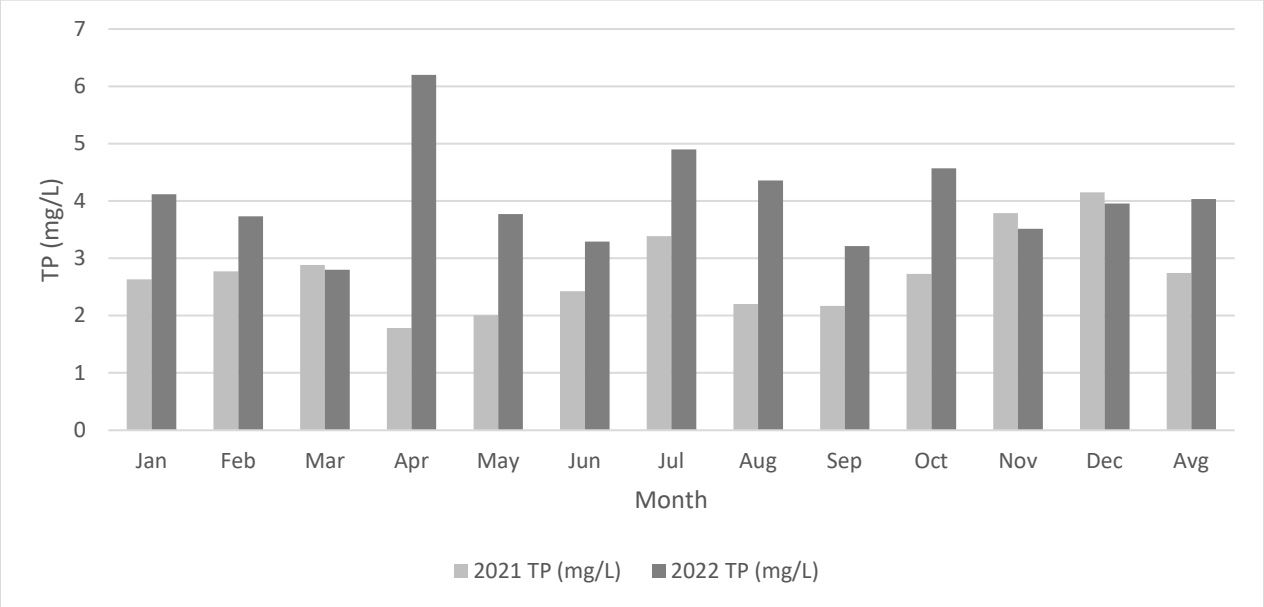
The annual average for raw sewage total suspended solids (TSS) concentration to the plant was 211.2mg/L. Refer to Graph 3 for a comparison of monthly concentrations in 2022 to 2021.

Graph 3. Raw sewage average monthly concentration of TSS for 2022 compared to 2021.



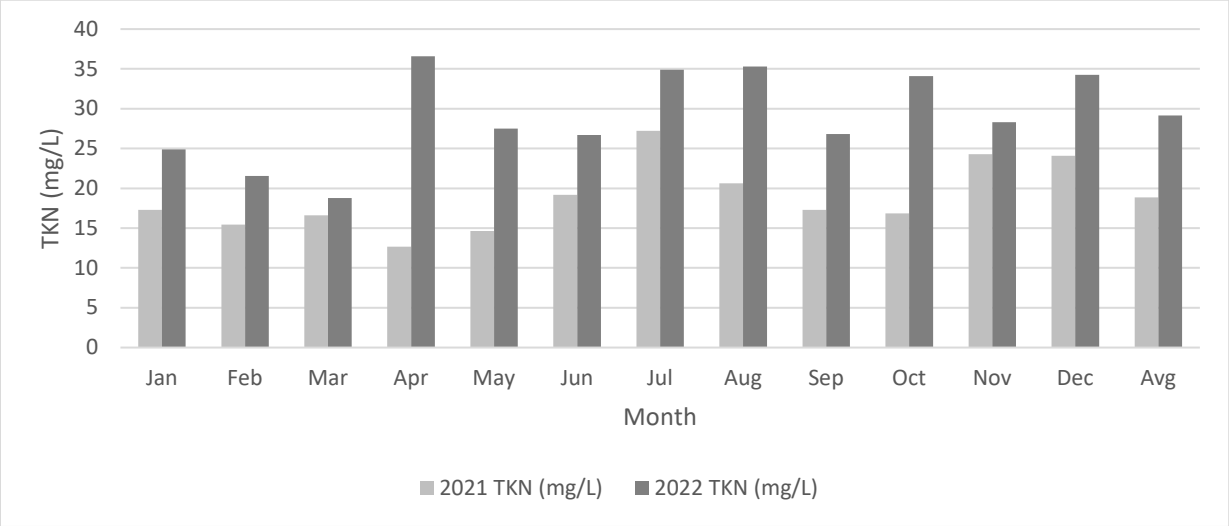
The annual average for raw sewage total phosphorus (TP) concentration to the plant was 4.03mg/L. Refer to Graph 4 for a comparison of monthly concentrations in 2022 to 2021.

Graph 4. Raw sewage average monthly concentration of TP for 2022 compared to 2021.



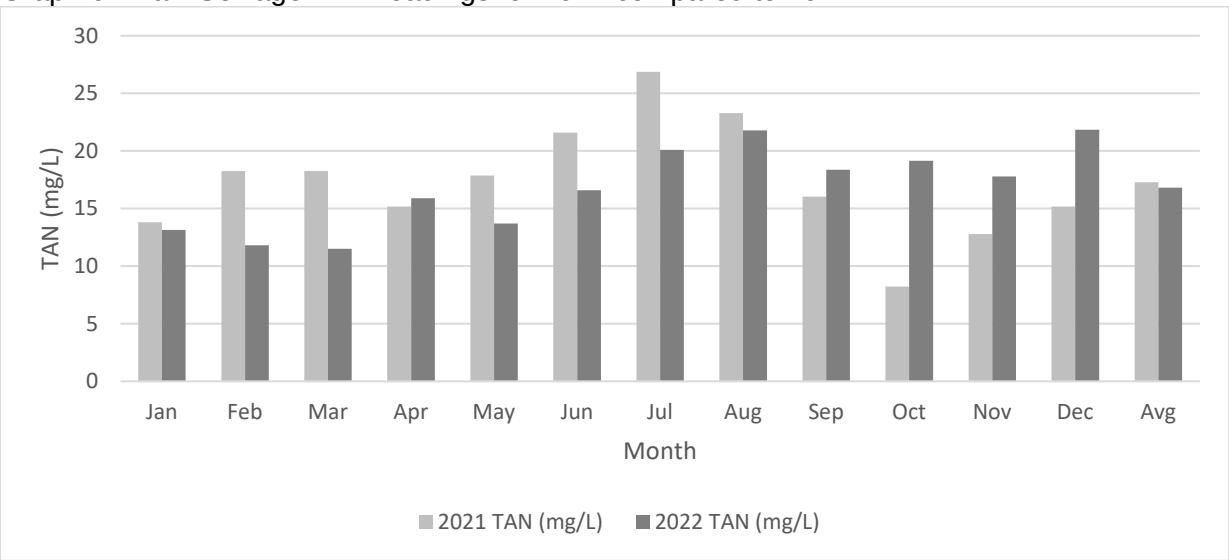
The annual average for raw sewage total kjeldahl nitrogen (TKN) concentration to the plant was 29.1mg/L. Refer to Graph 5 for a comparison of monthly concentrations in 2022 compared to 2021.

Graph 5. Raw sewage average monthly concentration of TKN for 2022 compared to 2021.



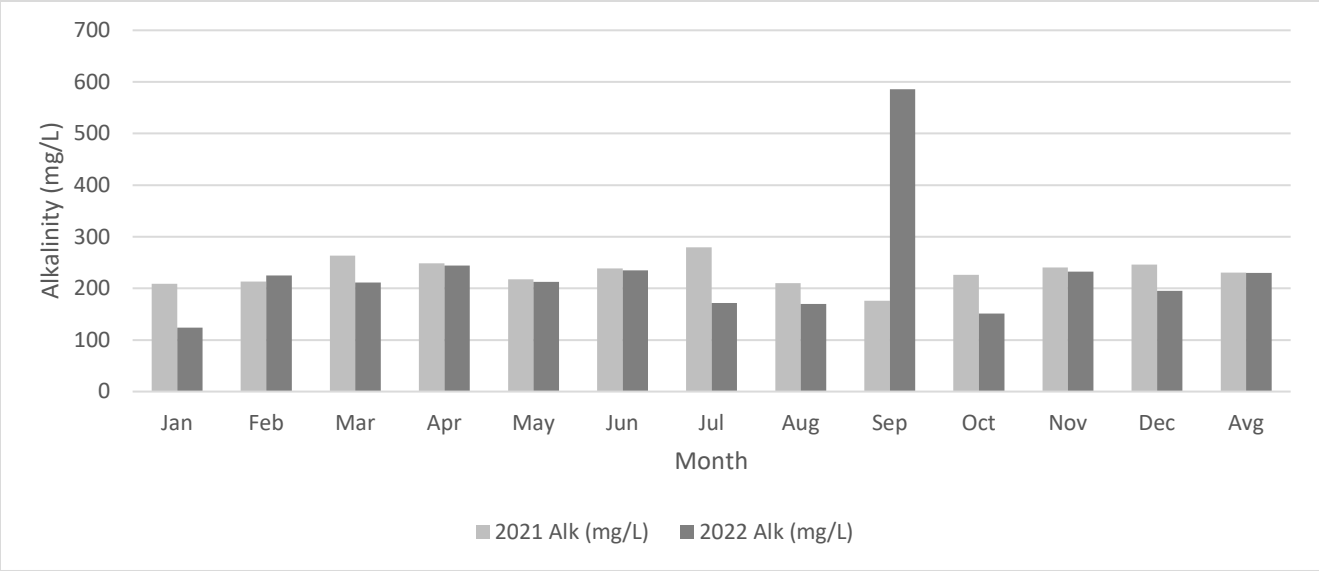
The annual average for raw sewage total ammonia nitrogen (TAN) concentration to the plant 16.8mg/L. Refer to Graph 6 for a comparison of monthly concentrations in 2022 to 2021.

Graph 6. Raw Sewage TAN readings for 2022 compared to 2021.



The annual average for raw sewage alkalinity concentration to the plant 230.0mg/L. Refer to Graph 6 for a comparison of monthly concentrations in 2022 to 2021.

Graph 6. Raw Sewage alkalinity readings for 2022 compared to 2021.



The raw sewage characteristics have changed throughout the year. This is to be expected with the flow variations that are experienced and fluctuations in hauled waste volumes and characteristics.

(III) Effluent Monitoring

Effluent is sampled on a weekly basis and tested for $cBOD_5$, total suspended solids, total phosphorus, total ammonia nitrogen, alkalinity and nitrate as nitrogen as a composite sample. A grab sample is collected weekly and tested for E. coli. Three times a week, samples are collected and tested for pH and temperature. Detailed results are found in Appendix A. Table 1 below shows the monthly average results from the composite samples, Table 2 shows the monthly average results from the grab samples and Table 3 shows the monthly average loadings. An interpretation of the results will follow the data tables.

Table 1. Monthly average effluent results for 2022.

Month	cBOD5 (mg/L)	TSS (mg/L)	TP (mg/L)	TAN (mg/L)	NO3 (mg/L)	Alkalinity (mg/L)
January	2.0	1.0	0.04	0.03	23.1	96.8
February	2.0	1.0	0.06	0.03	21.1	89.0
March	2.0	1.0	0.03	0.03	21.0	80.4
April	2.0	1.0	0.02	0.03	21.4	66.3
May	2.7	1.0	0.04	0.03	19.1	105.5
June	2.0	1.0	0.09	0.04	24.0	78.8
July	2.0	1.0	0.07	0.03	16.3	32.8
August	2.0	1.0	0.08	0.03	15.7	49.8
September	2.0	1.0	0.07	0.05	19.5	131.3
October	2.0	1.0	0.07	0.05	19.5	139.5
November	2.0	1.2	0.06	0.03	20.6	67.4
December	2.0	1.0	0.05	0.04	26.9	47.0
Average	**2.0**	**1.0**	**0.06**	**0.04**	**20.7**	**75.2**
Objective	2.5	1.0	0.06	2.0(1.0)	n/a	n/a
Limit	5.0	2.0	0.12	4.0(2.0)	n/a	n/a

- Values in brackets are temperature dependent limits and objectives

Table 2. Monthly average effluent ranges for 2022 obtained from grab samples.

Month	E. coli (cfu/100mL)*	pH **	Temp (°C)	Un-ionized Ammonia (mg/L)
January	4.0	7.36-7.90	10.7	0.0006
February	1.0	7.50-7.92	10.8	0.0006
March	1.0	7.33-7.73	12.1	0.0002
April	1.0	7.10-7.76	13.3	0.0003
May	1.6	7.67-8.06	17.4	0.0006
June	1.8	7.41-7.88	21.6	0.0008
July	2.1	7.00-7.62	23.9	0.0003
August	2.6	6.67-7.66	24.6	0.0002
September	3.5	6.76-7.52	23.1	0.0006
October	3.5	7.02-7.87	20.5	0.0006
November	1.0	7.05-7.68	17.9	0.0005
December	1.0	7.14-7.68	12.9	0.0002
Average	**1.7**	**6.67-8.06**	**17.5**	**0.0005**
Objective	12	7.0-8.5 (min-max)	n/a	0.012
Limit	200	6.0-8.5 (min-max)	n/a	0.024

*expressed as geometric mean

**minimum and maximum result range

Table 3. Monthly average loading limits for 2022.

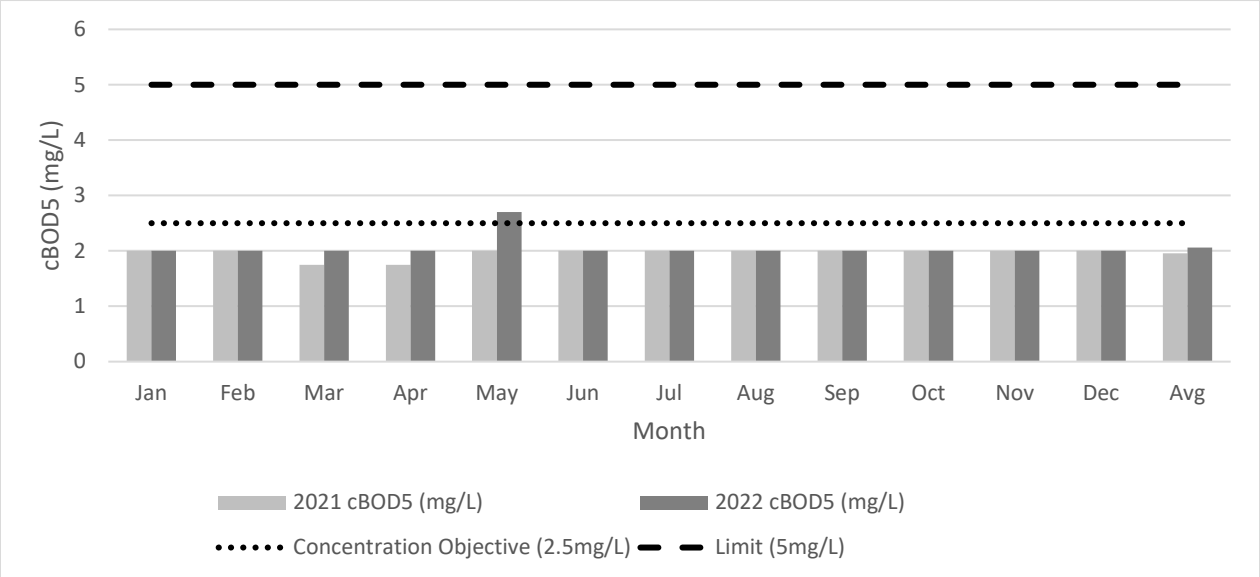
Month	cBOD5 (kg/d)	TSS (kg/d)	TP (kg/d)	TAN (kg/d)	UA (kg/d)
January	1.06	0.53	0.02	0.02	0.00
February	1.65	0.82	0.05	0.02	0.00
March	1.37	0.69	0.02	0.02	0.00
April	1.16	0.58	0.01	0.02	0.00
May	1.74	0.64	0.03	0.02	0.00
June	0.96	0.48	0.04	0.02	0.00
July	0.95	0.48	0.03	0.01	0.00
August	0.91	0.45	0.04	0.01	0.00
September	0.96	0.48	0.03	0.02	0.00
October	0.91	0.46	0.03	0.02	0.00
November	0.90	0.54	0.03	0.01	0.00
December	1.20	0.60	0.03	0.02	0.00
Average	**1.15**	**0.56**	**0.03**	**0.02**	**0.00**
Limit	5.7	2.28	0.14	1.28 (2.48)*	0.03

*value in brackets is from Dec 1 to March 31

(IV) Comparison to Compliance Limits and Objectives

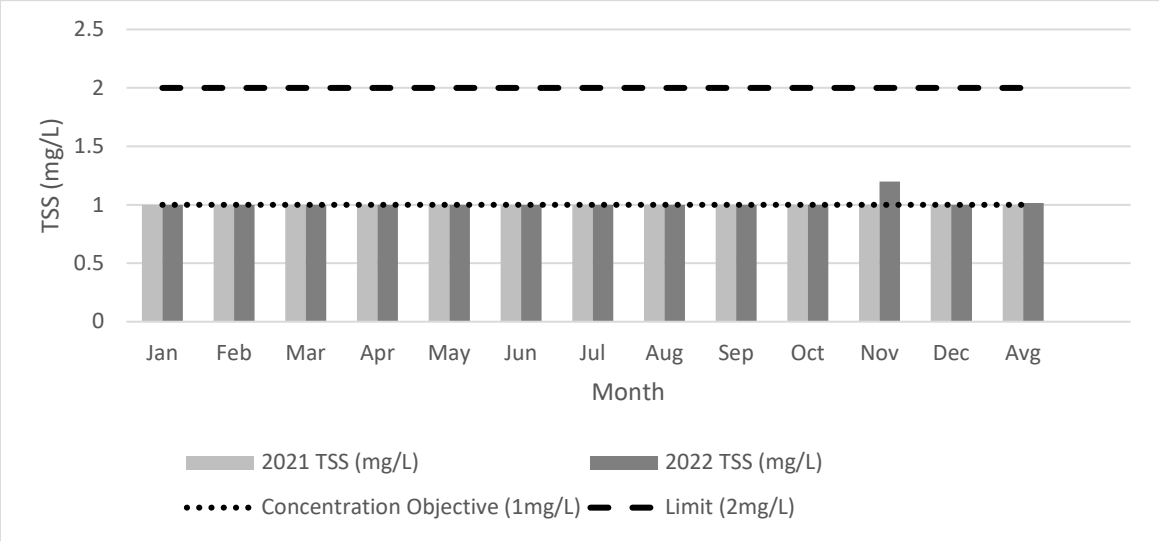
The annual average for effluent $cBOD_5$ in 2022 was 2.06mg/L; this value has increased by 4.9% compared to 2021. The annual loading of $cBOD_5$ was 1.15kg/d. The concentration and loading limits for cBOD5 were not exceeded in 2022. The concentration objective was exceeded in May of 2022 with an average of 2.7mg/l as discussed below in ***Section F: Objective Exceedances & Best Efforts***.. Refer to Graph 7 for a comparison of effluent monthly average concentration of $cBOD_5$.

Graph 7. The effluent monthly average concentration of $cBOD_5$ in 2022 compared to 2021



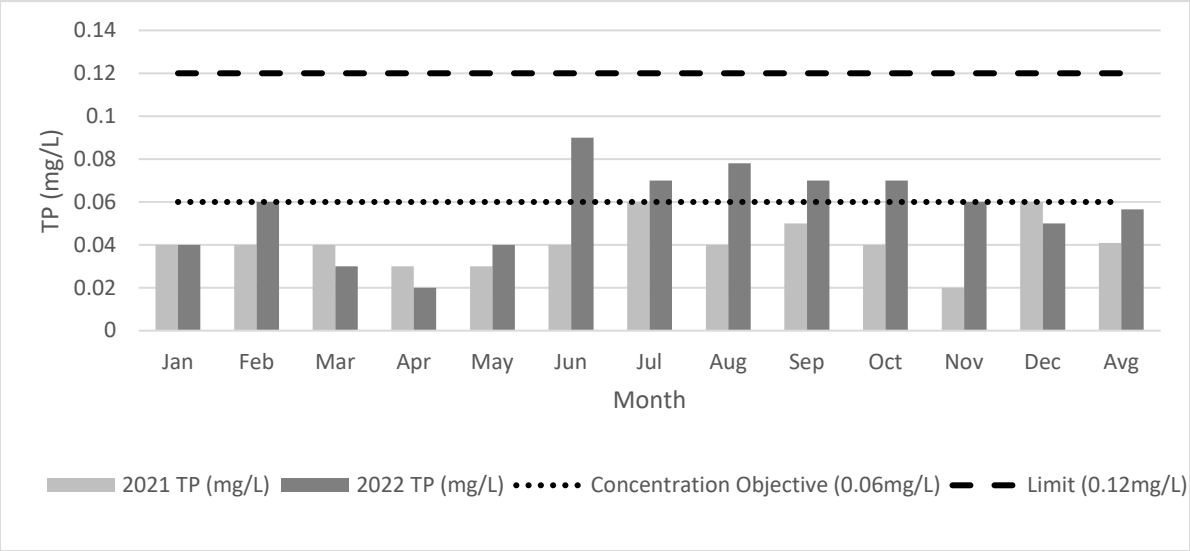
The annual average for effluent TSS in 2022 was 1.0mg/L; this value has not changed from the annual average in 2021.The annual loading of TSS was 0.56kg/d. The concentration and loading limits were not exceeded in 2022. The concentration objective was exceeded in November 2022 with a monthly average of 1.2mg/l as discussed below in ***Section F: Objective Exceedances & Best Efforts***. Refer to Graph 8 for the effluent monthly average concentration of TSS.

Graph 8. The effluent monthly average concentration of TSS in 2022 compared to 2021.



The annual average for effluent TP in 2022 was 0.06mg/L. The annual average result for TP in 2022 has increased by 28% compared to the 2021 annual average. The annual loading of TP was 0.03kg/d. The concentration and loading limits were not exceeded in 2022. The concentration objective was exceeded five (5) times in 2022 as discussed below in ***Section F: Objective Exceedances & Best Efforts***. Refer to Graph 9 for the effluent monthly average concentration of TP

Graph 9. The effluent monthly average concentration of TP in 2022 compared to 2021.

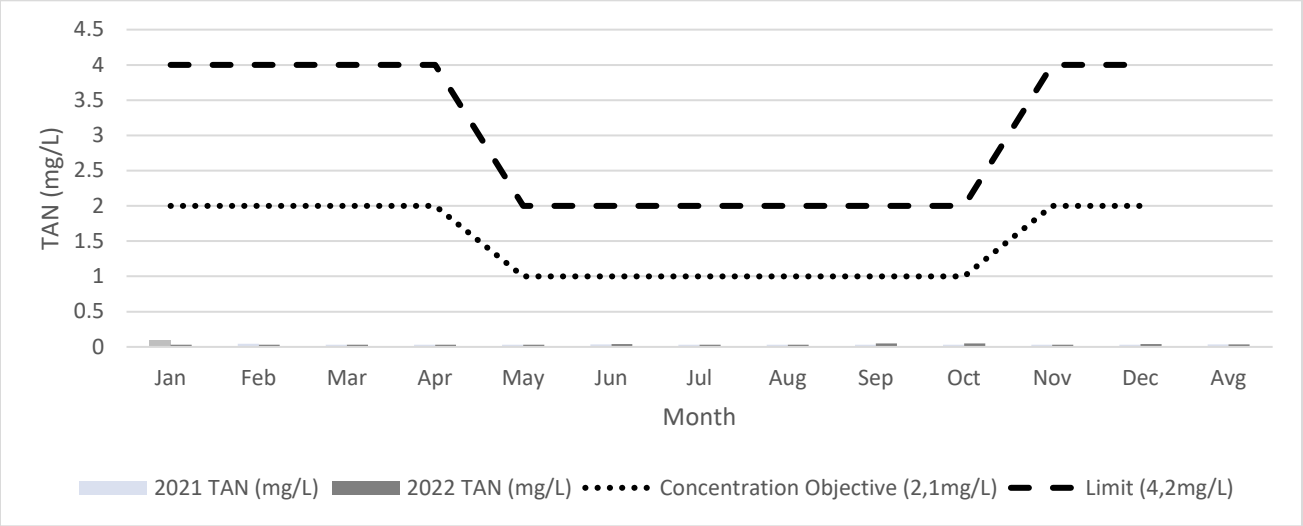


The annual average for effluent Total Ammonia Nitrogen (TAN) in 2022 was 0.04mg/L; this value has not changed from the annual average in 2021. The annual loading of TAN was 0.02kg/d. The limits and objectives for TAN are based on temperature:

- December 1st to April 30th – limit is 4.0mg/L, objective is 2.0mg/L
- May 1st to November 30th - limit is 2.0mg/L, objective is 1.0mg/L.

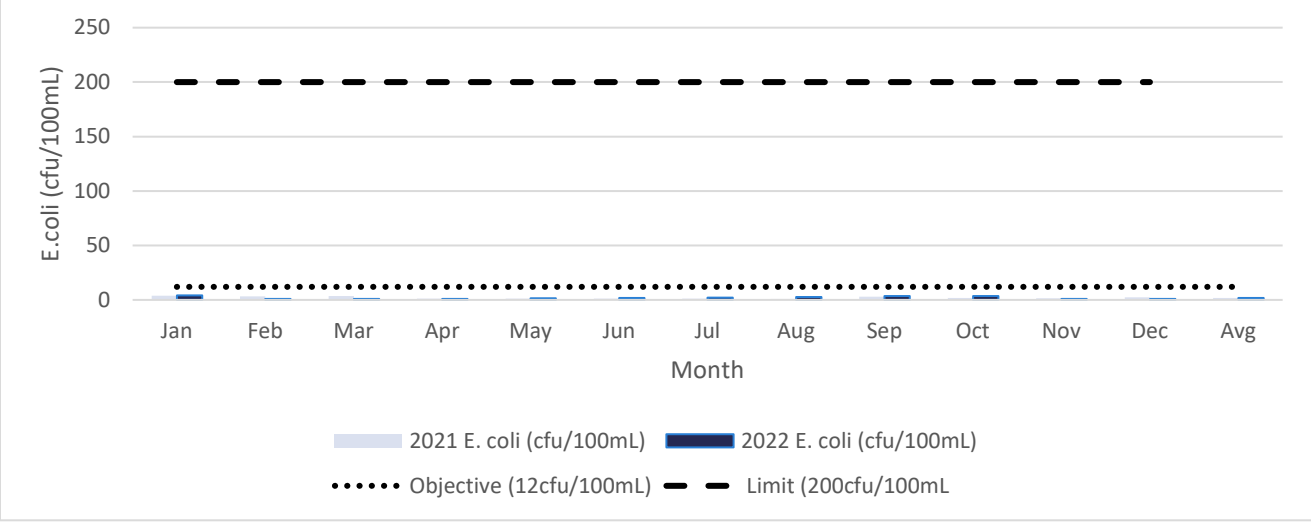
There were no limit or objective exceedances for TAN in 2022. Refer to Graph 10 for the effluent monthly average concentrations.

Graph 10. The effluent monthly average concentration of TAN in 2022 compared to 2021.



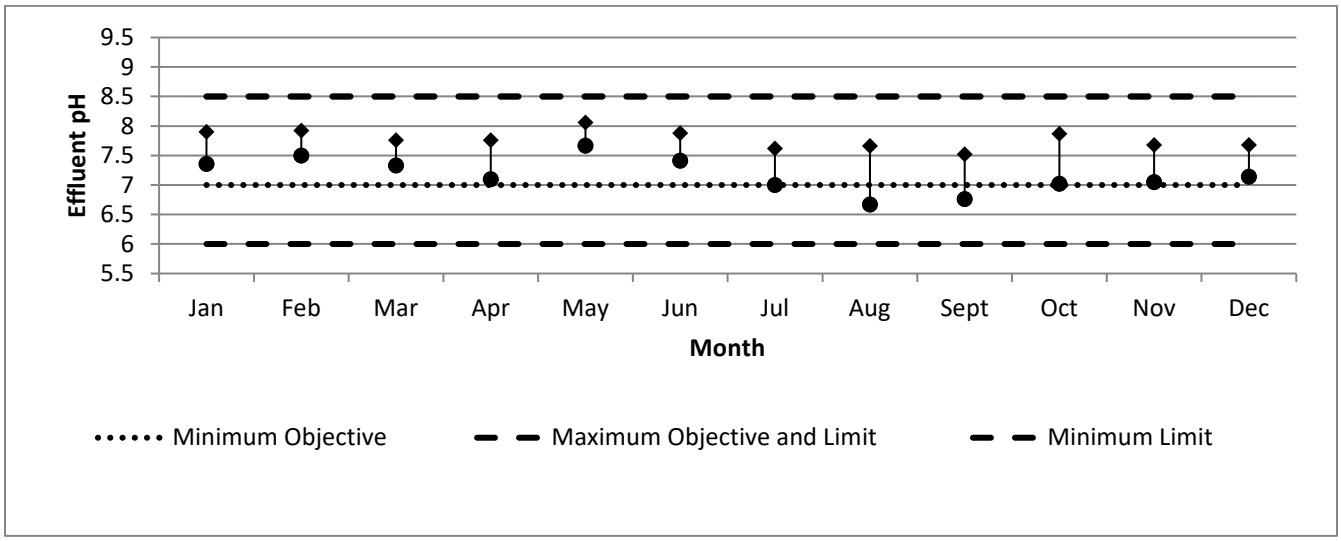
The annual geometric mean for effluent E. coli in 2022 was 1.7cfu/100mL. The annual average result for E.coli in 2022 has decreased by 6.2% compared to the 2021 annual average. There were no limit or objective exceedances for E.coli in 2022. Refer to Graph 11 for the effluent monthly geometric mean concentrations.

Graph 11. The effluent monthly geometric mean of E. coli in 2022 compared to 2021.



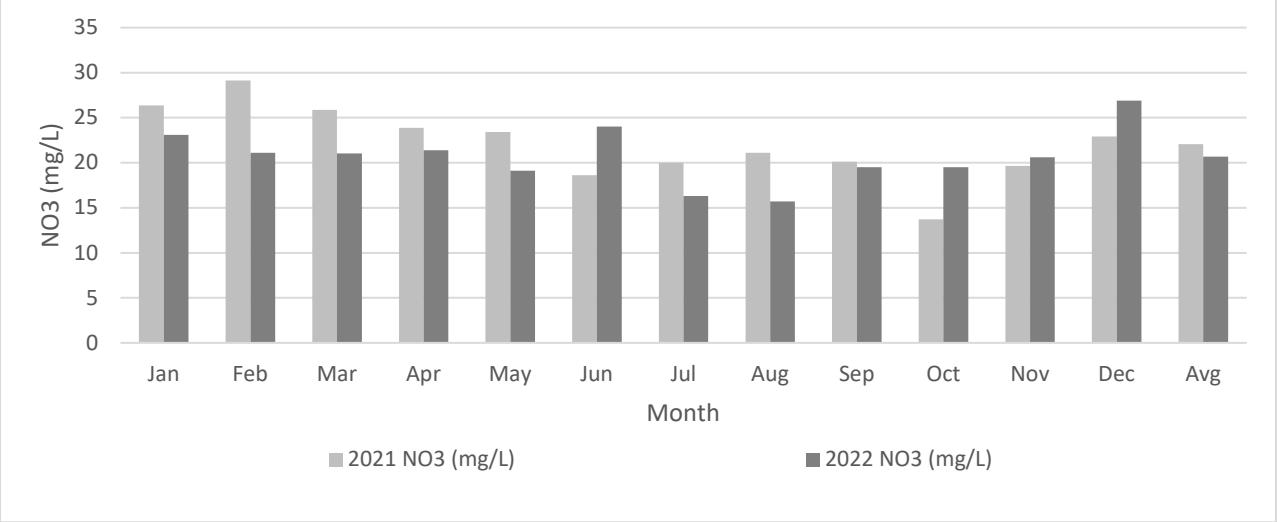
The effluent pH is monitored three times per week at a minimum at the Port Rowan WWTP. The pH is required to be maintained between 6.0-9.5 at all times (limit) with an objective range of 7.0-8.5. In 2022, there were no pH results that were above or below the limit range. There were two months that had values below the objective of 7.0 (three individual events total) as discussed below in ***Section F: Objective Exceedances & Best Efforts***. Refer to Graph 12 for the monthly minimum and maximum pH readings.

Graph 12. Effluent pH minimum and maximum ranges for 2022



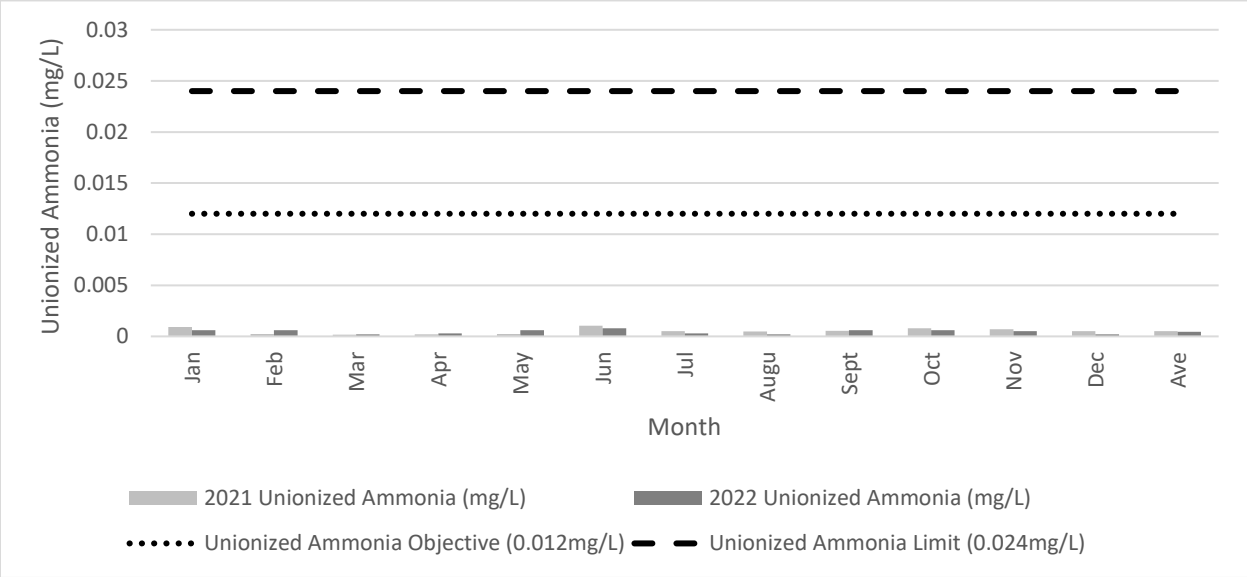
The annual average for effluent NO_3 was 20.7mg/L in 2022. There are no limits or objectives for NO_3.

Graph 13. The effluent monthly average concentration of NO_3 in 2022 compared to 2021.



The annual average for effluent concentration of unionized ammonia was 0.0005mg/L in 2022. There were no objective or limit exceedances in 2022, refer to Graph 15 for the effluent monthly average concentration of Unionized Ammonia.

Graph 15. The effluent monthly average unionized ammonia in 2022 compared to 2021.



The Port Rowan Wastewater Plant performed well in 2022 producing quality effluent meeting all limits for the ECA's required parameters. There were some objective exceedances for total suspended solids, total phosphorus and pH and they are discussed further below in ***Section F: Objective Exceedances & Best Efforts.***

Section B: Operating Problems and Corrective Actions

1. On June 2nd, 2022 at 12:25, the effluent channel which contains the effluent flow meter was temporarily bypassed in order to complete maintenance on the effluent water pipe line at the Port Rowan WWTP. The maintenance was completed and the bypass ended at 14:30 on June 2nd, 2022. A total amount of 77.44m^3 was bypassed around the meter and added to the total effluent flow for the day. Effluent had undergone all treatment processes and there were no affects to the effluent quality.

Section C: Maintenance Activities

Regular scheduled monthly preventative maintenance is assigned and monitored using the Workplace Management System (WMS) program. Refer to Appendix B for preventative maintenance schedule. Items that were repaired or replaced in 2022 were:

Table 4. Major Maintenance Completed in 2022

Date	Maintenance Activities
January 10-14	Operations completed recovery cleans on Train 1
January 17-21	Operations completed recovery cleans on Train 2
February 2	Contractor completed work on alarm dialers at the plant
February 24	Operations replaced the broken belts in aeration blower 503.
March 28	Mechanical contractor fixed explosion proof emergency lighting in the headworks building.

Date	Maintenance Activities
March 29	Contractor on site completing annual lifting inspections.
March 30	Contractor on site completing gas meter calibrations
April 6	Contractor on site to replace blower 2 VFD
April 8	Mechanical contractor on site to repair emergency lights
April 26,28	Contractor on site to complete annual flow meter calibrations at the plant and pumping stations
April 26	Mechanical Contractor on site to install transformer for the on-site power monitor
May 9	Septage hauler on site to pump out air relief chamber
May 19	Operations replaced aeration Dissolved Oxygen probes and contractor on site to complete initial setup and calibration
May 19	Contractor on site to complete the annual compressor maintenance
June 1	Contractor on site to replace pump seals on permeate pump 1. Pump 2 was completed September 12
June 7	Electrical contractor on site to install contactor in place of the VFD for aeration blower 1
June 27	Electrical contractor on site to install spare mixer
July 4	Mechanical Contractor on site to replace aeration drain valve in aeration tank 2
August 29	Septage hauler on site for Pump station wet well clean outs
September 15	Ferrous Chloride day tank installed
September 26-29	Operations completed recovery cleans on Train 1
October 3-6	Operations completed recovery cleans on Train 2
October 18	Contractor on site to replace the generator battery charger
November 3	Electrical contractor on site install new VFD for Aeration Blower 1
November 15	Contractor on site completing backflow preventer tests
December 5	ESA Inspection Completed

Section D: Effluent Quality Assurance

Effluent quality assurance is evaluated by monitoring parameters and changes throughout the plants processes. The operators monitor the basin by performing weekly tests on the mixed liquor. These tests include dissolved oxygen, pH, temperature, settling tests and Mixed Liquor Suspended Solids (MLSS). As well, monitoring of chemical dosages and wasting volumes are completed. Data collected from these tests provide valuable information to the operators to make the appropriate adjustments in the treatment process and take corrective actions before the plant reaches its effluent limits.

Section E: Calibration and Maintenance on Effluent Monitoring Equipment

The Port Rowan WWTP effluent flow meter was calibrated by SCG Flowmetrix on April 25, 2022. In house meters for pH and dissolved oxygen were calibrated by JBF Controls Ltd. on September 16, 2022 as per manufacturer's instructions.

Section F: Objective Exceedances & Best Efforts

Table 5. Sample results compared against the effluent objectives and loading limits.

Parameter	Effluent Objective (mg/L)	Monthly Effluent Result Ranges (mg/L)	# of Objective Exceedances	Effluent Loading Limit (kg/d)	Monthly Loadings Result Ranges (kg/d)	# of Limit Loading Exceedances
$cBOD_5$	2.5	2.0-2.7	1	2.85	0.90-1.74	0
TSS	1.0	1.0-1.2	1	1.14	0.45-0.82	0
TP	0.06	0.02-0.09	5	0.07	0.01-0.05	0
TAN	2.0(1.0)	0.03-0.05	0	2.48(1.28)	0.01-0.02	0
UA	0.012	0.0002-0.0008	0	n/a	n/a	n/a
E. coli (cfu/100mL)	12	1.0-3.5	0	n/a	n/a	n/a
pH*	7.0-8.5	6.67-8.06	3	n/a	n/a	n/a

*minimum and maximum result (not monthly averages)

Table 6. Objective exceedances in 2022.

Date	Parameter	Concentration mg/L	Loadings kg/d	Issue and Proactive Actions Taken
05/2022	$cBOD_5$	2.7	1.74	Decrease solids and increased DO in Aeration Basin
11/2022	TSS	1.2	0.54	Cleaned Membranes
06/2022	TP	0.09	0.04	Increased Ferrous Chloride
07/2022	TP	0.07	0.03	Increased Ferrous Chloride
08/2022	TP	0.08	0.04	Increased Ferrous Chloride
09/2022	TP	0.07	0.03	Increased Ferrous Chloride
10/2022	TP	0.07	0.03	Increased Ferrous Chloride
11/08/2022	pH	6.84	n/a	Monitor and adjust alkalinity
18/08/2022	pH	6.67	n/a	Monitor and adjust alkalinity
19/09/2022	pH	6.76	n/a	Monitor and adjust alkalinity

The Port Rowan WWTP performed well in 2022 producing quality effluent. There were ten (10) objective exceedances in 2022. In order to ensure compliance, the operators continue to use best operating practices.

Section G: Sludge Handling and Generated

Sludge sampling results can be found in Appendix C. Sludge is removed from the Port Rowan WWTP and sent to the Townsend Lagoon for processing or taken to field for land application. The total volume generated in 2022 was 1,745m^3, refer to Table 7 below for a breakdown and Table 8 for the sludge disposal locations.

It is expected that 2023 will be similar to 2022 with approximately 2,000m^3 of sludge being removed from the Port Rowan WWTP.

Table 7. Sludge Generation 2022.

Month	Townsend Lagoon (m^3)	Field (m^3)	Total (m^3)
January	181	0	181
February	168	0	168
March	180	0	180
April	0	396	396
May	0	0	0
June	0	180	180
July	185	0	185
August	0	0	0
September	139	0	139
October	0	0	0
November	136	0	136
December	180	0	180
Total	**1,169**	**576**	**1,745**

Table 8. Sludge Disposal Locations 2022.

Site	NASM#	Expiry	Lot	Con.	Township	Area Spread (ha)	Port Rowan WWTP (m^3)	Dates Spread
OX1110	24975	2026	6	12	Norwich	20.73	396	April 5 & 6
HN1122	23414	2022	14-18	2	Oneida	4.83	180.00	June 20
Total						**25.56**	**576.00**	

Section H: Complaints

There were no complaints received for the Port Rowan WWTP in 2022.

Section I: By-pass, Spill or Abnormal Discharge Events

Norfolk County Collection/Distribution Operators flush twenty percent of the wastewater collection system annually to help eliminate the possibility of bypass/overflows. This also allows operations to assess the system for deficiencies. This information is then taken into consideration when planning infrastructure upgrades and budget forecasting.

There were no bypasses or spills at the Port Rowan WWTP in 2022.

Section J: Copy of Notice of Modifications Submitted

There were no modifications to the process at the Port Rowan WWTP that required a Notice of Modification to Sewage Works in 2022.

Section K: Report Summarizing Modifications as a result of Schedule B, Section 3

There were no modifications to the process at the Port Rowan WWTP as a result of Schedule B, Section 3 in 2022.

Section L: Other Information:

There is no other information for the Port Rowan WWTP to report to the Water supervisor for 2022.

Appendix A: Port Rowan WWTP Monitoring Data

Appendix B: Maintenance Summary

Appendix C: Sludge Monitoring Data