

# Bayfield Sewage Treatment Plant and Collection System Annual Performance Report



*Prepared For:  
The Municipality of  
Bluewater*

*Operating Authority:*



Reporting Period of January 1<sup>st</sup> – December 31<sup>st</sup>, 2023

Issued: March 27, 2024

## Table of Contents

Overview .....	3
System Process Description .....	3
Raw Wastewater Collection .....	3
Sewage Lagoons .....	3
Intermittent Sand Filters .....	4
System Facts: .....	4
Influent and Effluent Flow Monitoring .....	4
Influent Data .....	7
Imported Sewage .....	9
Effluent Monitoring .....	10
Comparison to Compliance Limits and Objectives .....	10
Effluent Quality Assurance .....	15
Summary of Efforts Made to Achieve Design Objectives .....	15
Operating Problems & Corrective Actions .....	16
Maintenance Activities .....	16
Calibration Records .....	17
Sludge Generation .....	17
Complaints .....	17
Bypass, Overflows, Spills and Abnormal Discharge Events .....	17
Summary of Efforts made to achieve conformance with F-5-1 .....	17
Notice of Modification to the Works .....	18
Alterations to the Wastewater Collection System .....	18
Additional Information the Water Supervisor Requires .....	18
Appendix A .....	
Appendix B .....	
Appendix C .....	

## Overview

The following report was prepared by Ontario Clean Water Agency on behalf of The Municipality of Bluewater in accordance with:

- Condition 10(4) (a) through (l) cited in Environmental Compliance Approval (ECA) #6250-AB4JCT issued August 26, 2016, to The Corporation of the Municipality of Bluewater.
- Schedule E (4) cited in the Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) #045-W601 issued June 20, 2023, to The Corporation of the Municipality of Bluewater.

## System Process Description

The Bayfield Sewage Treatment Plant (STP) is located at Lot 7, Concession Bayfield Road, Ontario. The facility has a rated capacity of 1072 m<sup>3</sup>/d and is comprised of the following components:

- Wastewater collection system (WWC) and pumping stations
- Two facultative lagoons with supplementary treatment
- Intermittent Sand Filters

### Raw Wastewater Collection

Raw sewage flows by gravity through the collection system. Where gravity flow is not possible due to elevation restrictions, there are four sewage pumping stations (SPS). Both the North and Marina SPS pump sewage through forcemains into gravity sewers that lead to the South SPS. Sewage from the South SPS is pumped to the Main SPS and then onto the Bayfield STP.

There are two designed overflows in the Bayfield WWC system. At the North SPS, a 250 mm overflow flows into the marina basin of the Bayfield River. The second is at South SPS, which discharges to a stormwater manhole that outlets to Lake Huron.

At the Marina SPS, the wet well when full fills a holding tank through a 200mm pipe located below the harbour building. The wastewater then drains back into the pumping station once inflows have dropped to a level that can be handled by the available pumping capacity.

The North, South and Main SPS have stand-by generators. The Main and South SPS are equipped with three submersible pumps and the North and Marina SPS with two submersible pumps. Miltronics monitor wet well levels, which control the start/stop cycle of all pumps and alarms. The exception is Marina SPS where pumps and alarms run off floats.

In addition to the community of Bayfield, the Bayfield STP also treats sewage from Wildwood Trailer Park. This park pumps its sewage directly to the Bayfield STP through a 100 mm forcemain.

### Sewage Lagoons

Raw sewage is pumped to the lagoon from both the Main SPS and from Wildwood Trailer Park. Raw sewage enters an inlet chamber between the two lagoon cells. Inflows may be directed into either or both cells. Leachate is received at the influent chamber for co-treatment at the works; leachate is imported from the Stanley Landfill site.

The two lagoon cells each had an original storage volume of approximately 110 554 m<sup>3</sup>. This volume has since been reduced by the construction of a berm in the footprint of cell 2 for a new Sequence Batch

Reactor (SBR); cell 2 volume is now 97 310 m<sup>3</sup>. Storage in the cells allows inflow to be stored during the winter when the Intermittent Sand Filter (ISF) cannot operate, as well as provides a minimum of 60 days retention time for treatment purposes. The lagoons operate in series with sewage flowing from one cell to the other through a transfer chamber and then by gravity to the filter pumping station inlet chamber. From here, effluent can be directed to the filter pumping station or to the discharge chamber.

A liquid aluminum sulfate feed system consists of one 27 000 L chemical storage tank and three metering pumps. Aluminum sulfate is injected into the raw sewage forcemain and into the transfer chamber between cell 1 and 2. Aluminum sulfate coagulates suspended particles in the sewage. The coagulated particles grow to sufficient size where they readily settle. This assists in removing phosphorous from the wastewater before being discharged from the lagoon.

### Intermittent Sand Filters

The filter pumping station has two submersible pumps that can direct effluent to either or both of the filters. Once filtered through the sand, effluent flows by gravity into the discharge chamber where it is discharged to the Bayfield River.

### System Facts:

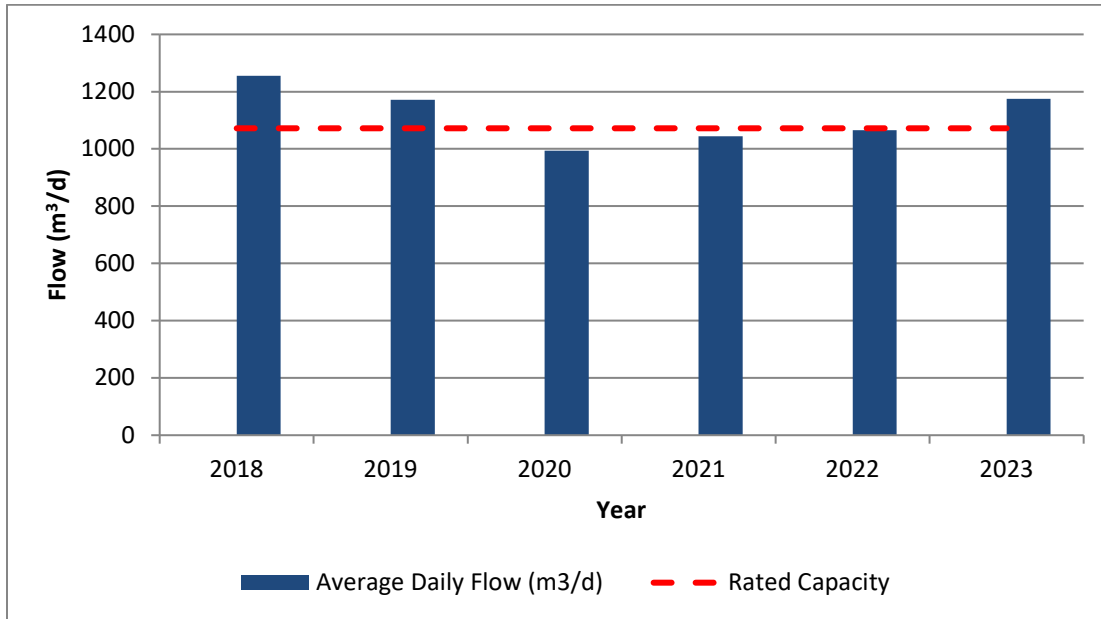
<b>Environmental Compliance Approval</b>	#6250-AB4JCT (issued August 21, 2023)
<b>CLI Environmental Compliance Approval</b>	#045-W601 (issued June 20, 2023)
<b>Rated Capacity</b>	1072 m <sup>3</sup> /d
<b>Receiving Water</b>	Bayfield River

In 2023, the Bayfield STP and WWC system were operated in accordance with the provincial regulations as required in ECA #6250-AB4JCT and CLI-ECA #045-W601.

### Influent and Effluent Flow Monitoring

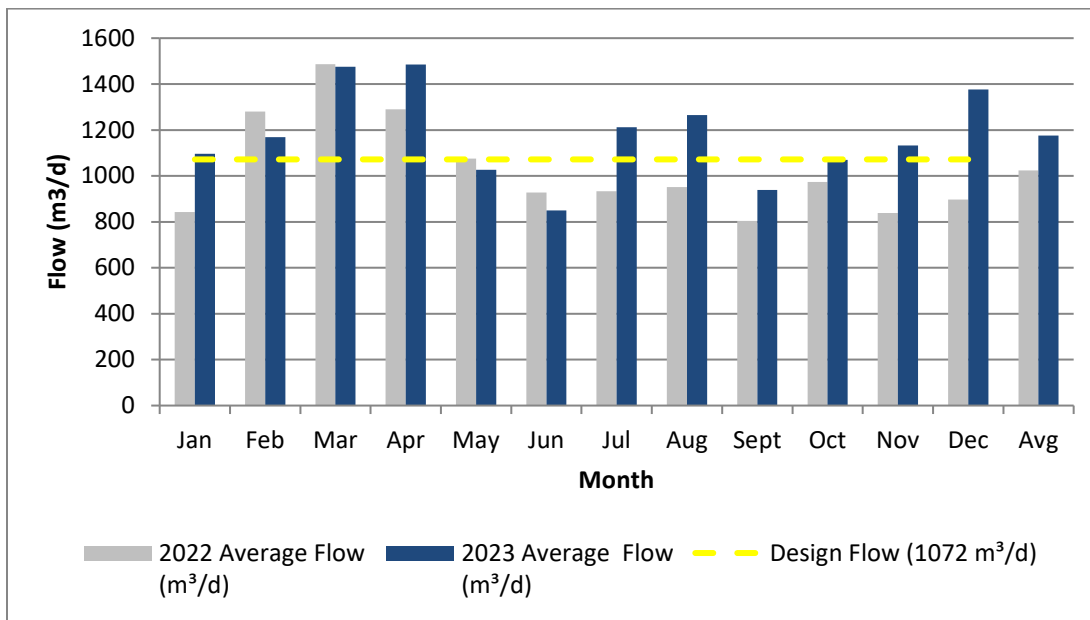
The Bayfield STP is rated to treat an average daily flow of 1072 m<sup>3</sup>. The Bayfield STP receives sewage from both the village of Bayfield and Wildwood Trailer Park. All flows in this report are a cumulative total of both flow sources. Refer to Figure 1 for a comparison of the average daily flow for the last six years against the rated capacity of the plant. The STP is at 110% of the rated capacity of 1072 m<sup>3</sup>/d.

Figure 1: Influent Flows 2018-2023



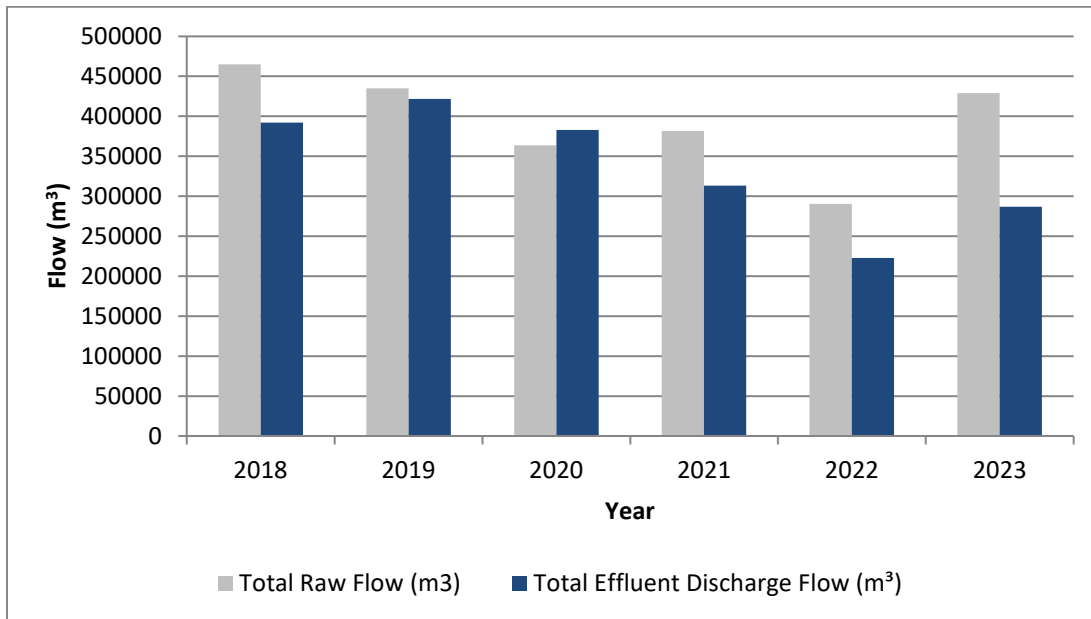
The raw sewage average daily flow was 1175 m<sup>3</sup>/d in 2023 and 1024 m<sup>3</sup>/d in 2022. This 15% annual increase was likely the result of wet weather throughout the year. Refer to Figure 2 for 2023 average daily flows by month and the corresponding annual average.

Figure 2: Average Daily Flows by Month



Refer to Figure 3 for the total raw and effluent flow in 2022 and 2023. There was a large difference between influent flows and effluent flows in 2023, this is due to estimations of volumes during the March discharge based on levels of the lagoon and the amount of liquid held in the cells to the following year.

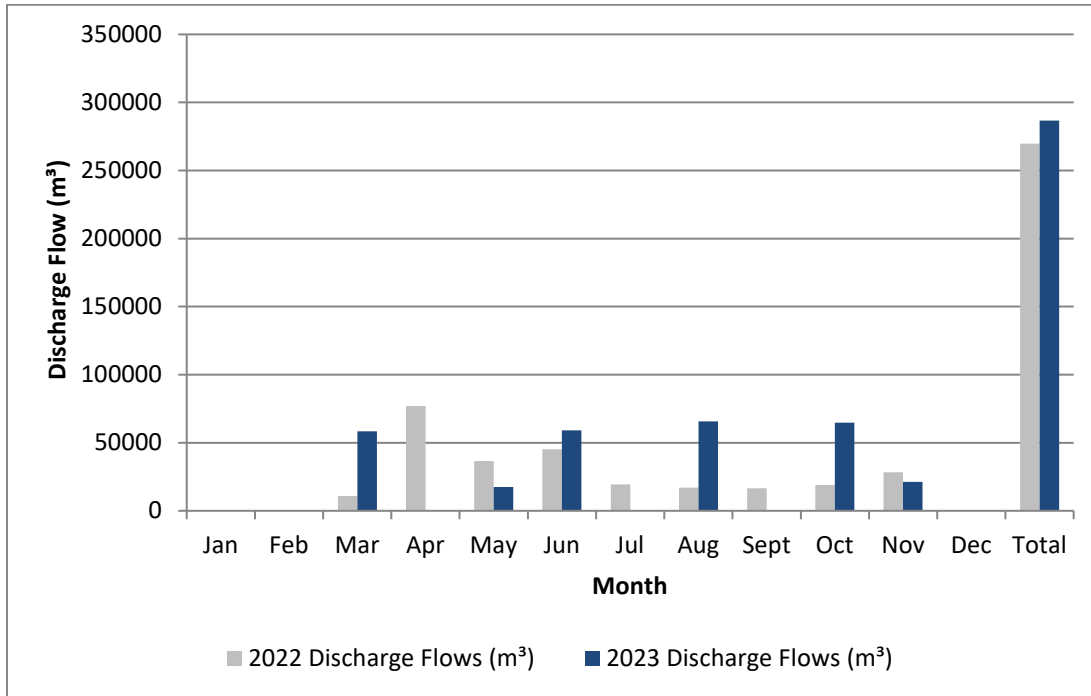
Figure 3: Total Raw and Effluent Flow 2018-2023



In 2023, the Bayfield STP discharged 286 701 m<sup>3</sup> of effluent. This is 6% higher than the 2022 total discharge flow of 269 848 m<sup>3</sup> and consistent with higher raw inflow in 2023. The average daily discharge flow was 1459 m<sup>3</sup>/d in 2022 and 2705 m<sup>3</sup>/d in 2023. The maximum daily discharge flow in 2022 and 2023 was 12 804 m<sup>3</sup>/day recorded in March 2023.

Discharge periods in 2023 included: March 13 to March 17, May 1 to June 12, June 19 to June 30, August 1 to August 18, October 3 to October 20, and November 6 to November 12. Refer to Figure 4 for final effluent total monthly flows for 2022 and 2023.

Figure 4: Final Effluent Total Monthly Flows

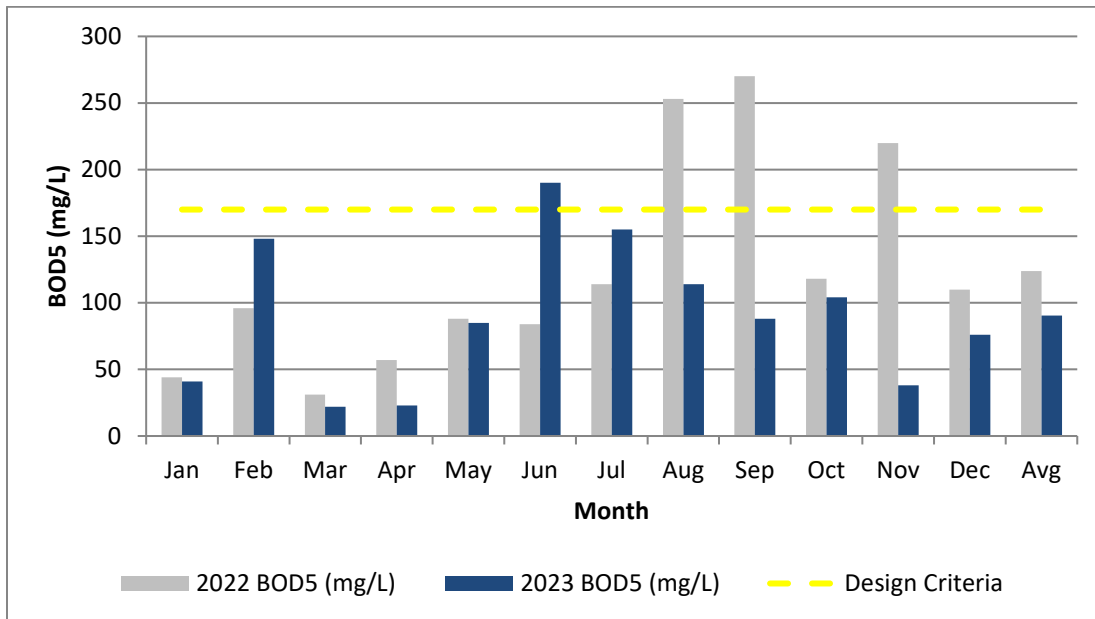


### Influent Data

Influent is monitored for Biological Oxygen Demand (BOD<sub>5</sub>), Total Suspended Solids (TSS), Total Phosphorous (TP), and Total Kjeldahl Nitrogen (TKN) on a monthly basis through a composite sample. These parameters are measured against the design criteria of the Bayfield STP. Values above design concentration can result in ineffective treatment of raw sewage and can lead to effluent limit exceedances. In 2023, there were exceedances of influent parameters for BOD<sub>5</sub> and TKN. However, this did not affect effluent water quality, which continues to meet ECA limits.

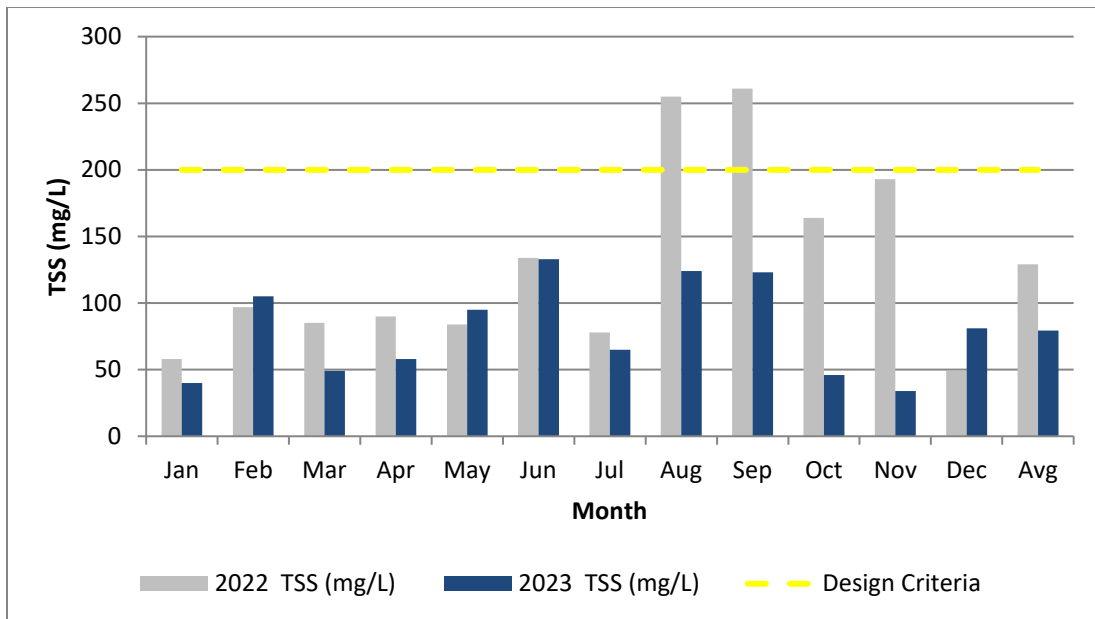
In 2023, the average raw BOD<sub>5</sub> concentration was 90 mg/L, a 27% decrease from 2022. Refer to Figure 5 for a comparison of 2023 monthly raw BOD<sub>5</sub> concentrations to 2022 concentrations.

Figure 5: Raw BOD<sub>5</sub> Concentrations



In 2023, the average raw TSS concentration was 79 mg/L, a 38% decrease from 2022. Refer to Figure 6 for a comparison of 2023 monthly raw TSS concentrations to 2022 concentrations.

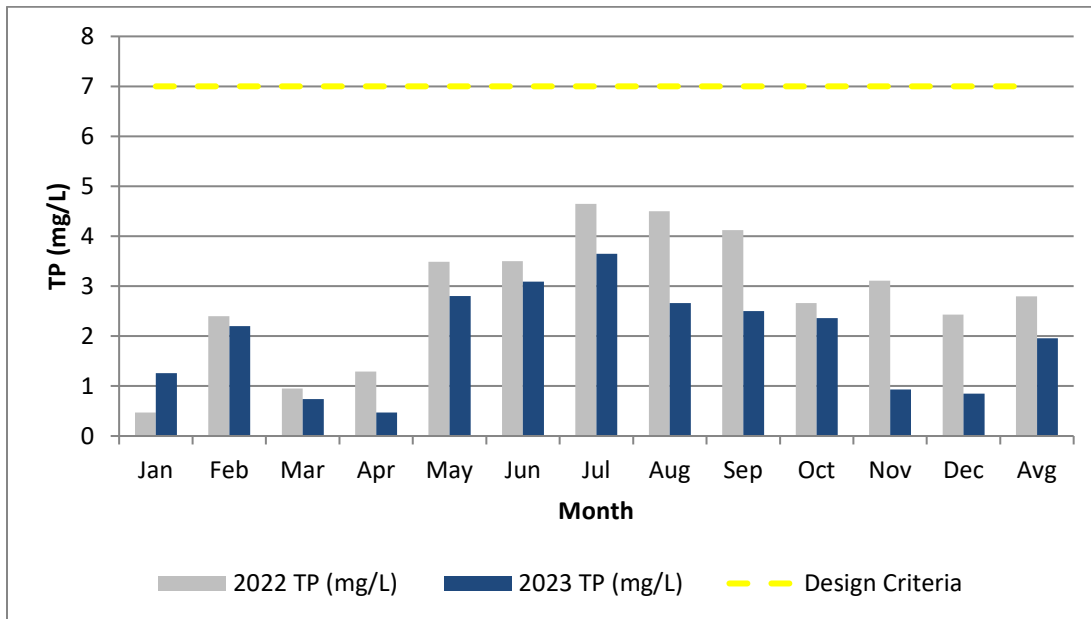
Figure 6: Raw TSS Concentrations



In 2023, the average raw TP concentration was 2 mg/L, a 30% decrease from 2022. Refer to Figure 7 for a comparison of 2023 monthly raw TP concentrations to 2022 concentrations.

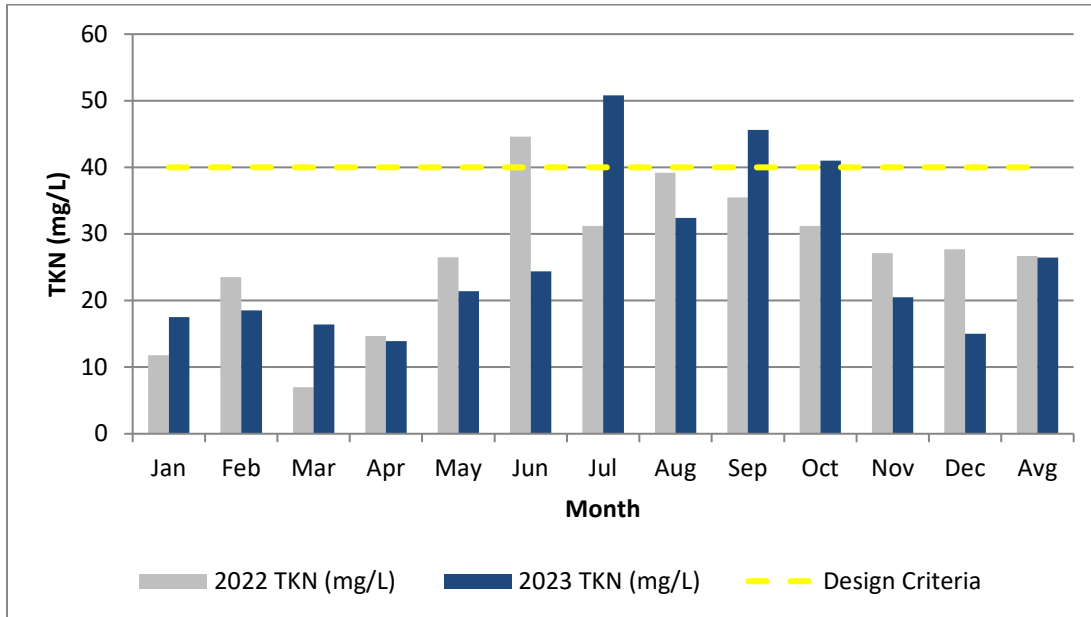


Figure 7: Raw TP Concentrations



In 2023, the average raw TKN concentration was 26 mg/L, a 0.8% decrease from 2022. Refer to Figure 8 for a comparison of 2023 monthly raw TKN concentrations to 2022 concentrations.

Figure 8: Raw TKN Concentrations



### Imported Sewage

The Bayfield STP is approved to accept leachate by Stanley Landfill for co-treatment. The Stanley Landfill did not deposit any leachate at the Bayfield STP in 2023 and therefore no quarterly composite sampling was conducted.

## Effluent Monitoring

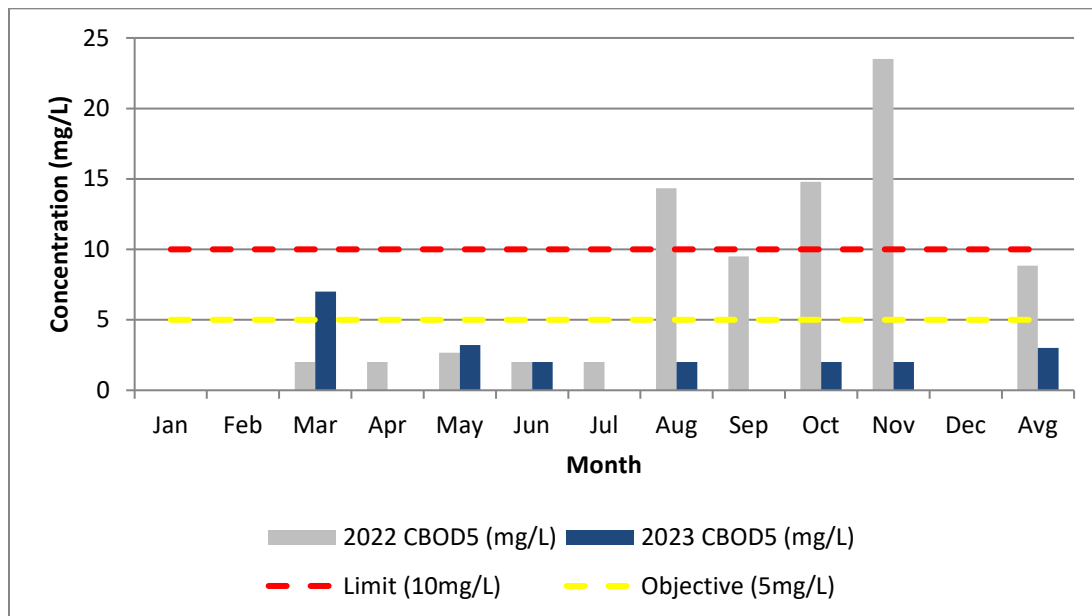
The lagoon effluent is permitted to be discharged between April 1 to December 15 in accordance with the ECA. Early discharge may be required to prevent a spill of wastewater over the banks due to capacity issues. This was the situation in 2023 and the MECP authorized a request for early discharge (including bypassing the ISF) on March 8. Discharge began on March 13 and ended March 17, 2023. Effluent samples obtained during this time were required to meet objectives set by the MECP and Procedure F-5-1. These objectives were less than 60 mg/L for a single sample and 50 mg/L for a running average of four consecutive samples of Carbonaceous Biological Oxygen Demand (CBOD<sub>5</sub>), Total Suspended Solids (TSS), and Total Phosphorus (TP). Therefore, while data in the figures below may exceed the ECA objective in the month of March, they do not exceed the objectives set during the emergency discharge.

During the regular discharge season, effluent from the Bayfield STP is sampled weekly through a composite sample and analyzed for Carbonaceous Biochemical Oxygen Demand (CBOD<sub>5</sub>), TSS, TP, Total Ammonia Nitrogen (TAN), and Unionized Ammonia. Grab samples are collected weekly and tested for E.coli, pH, Dissolved Oxygen (DO) and Temperature. For details on objective and limit exceedances, refer to ‘Summary of Efforts Made to Achieve Design Objectives’. On a quarterly basis the effluent is monitored for additional parameters, refer to Appendix A for the results.

### Comparison to Compliance Limits and Objectives

The average monthly effluent CBOD<sub>5</sub> concentration in 2023 was 3.0 mg/L, a 66% decrease from 2022. There were no limit or objective exceedances in 2023. The March results met the objective for emergency discharge. Refer to Figure 9 for a comparison of 2023 monthly effluent CBOD<sub>5</sub> concentrations to 2022 concentrations.

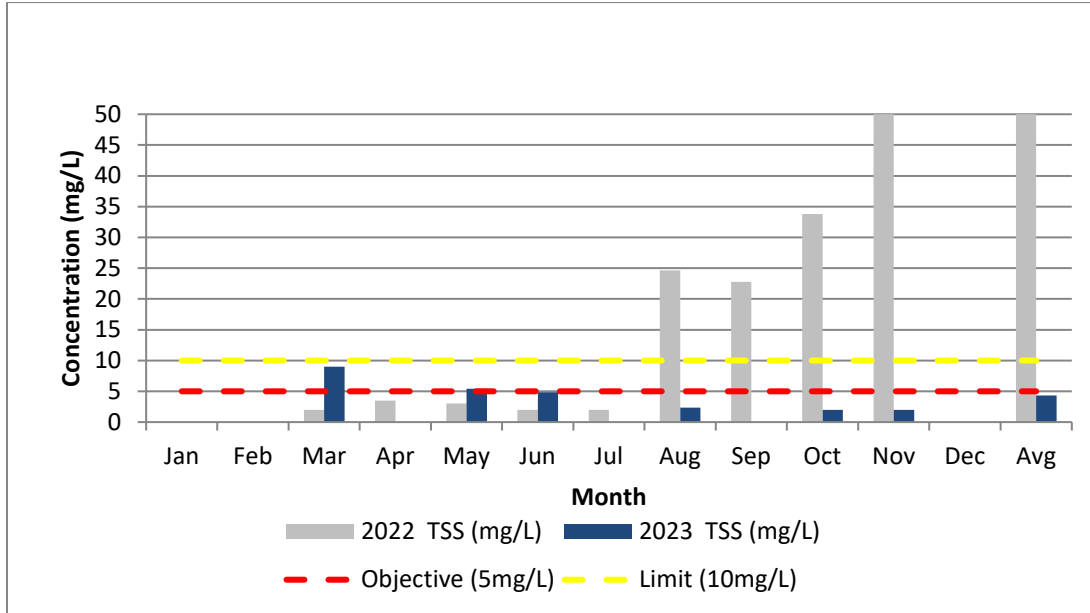
Figure 9: Effluent CBOD<sub>5</sub> Concentrations



The average monthly effluent TSS concentration in 2023 was 4.3 mg/L, a 93% decrease from 2022. There were no limit in 2023, however, the objective was not met in May (5.4 mg/L). The March result met the

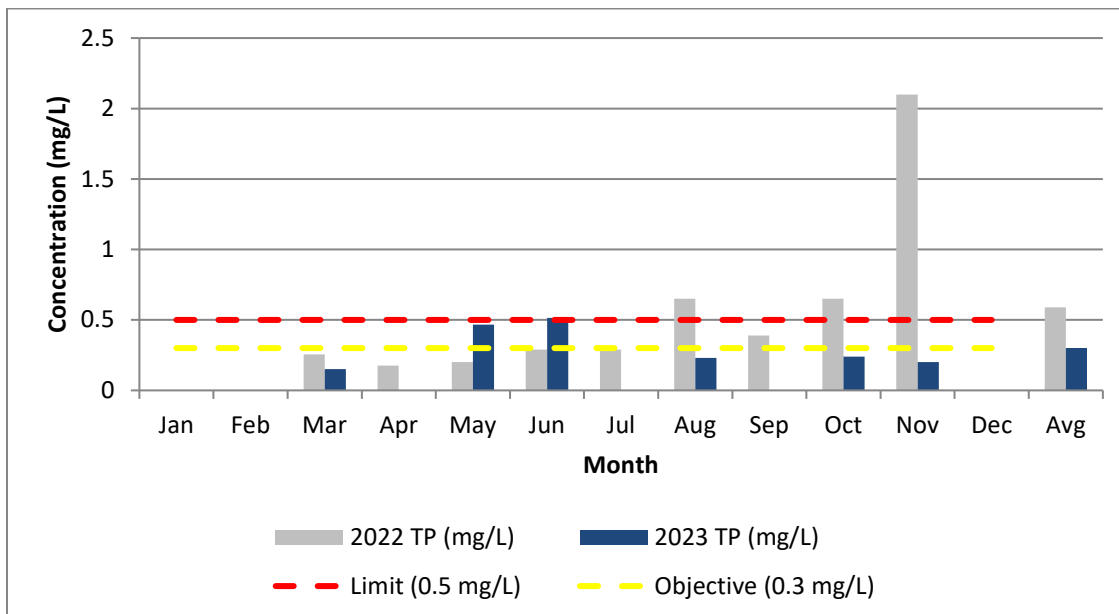
objective for emergency discharge. Refer to Figure 10 for a comparison of 2023 monthly effluent TSS concentrations to 2022 concentrations.

Figure 10: Effluent TSS Concentrations



The average monthly effluent TP concentration in 2023 was 0.3 mg/L, a 49% decrease from 2022. There were no limit exceedances in 2023. The objective was not met in May (0.5 mg/L) and June (0.5 mg/L). Refer to Figure 11 for a comparison of 2023 monthly effluent TP concentrations to 2022 concentrations.

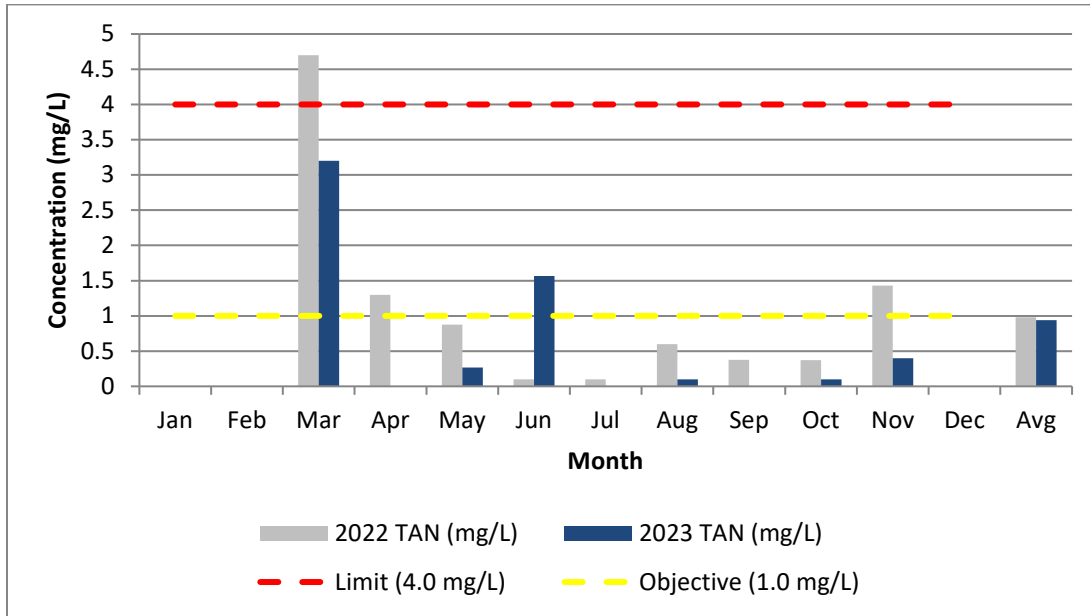
Figure 11: Effluent TP Concentrations



The average monthly effluent TAN concentration in 2023 was 0.9 mg/L, a 4% decrease from 2022. There were no limit exceedances in 2023, however, the objective was not met in June (1.6 mg/L). There were

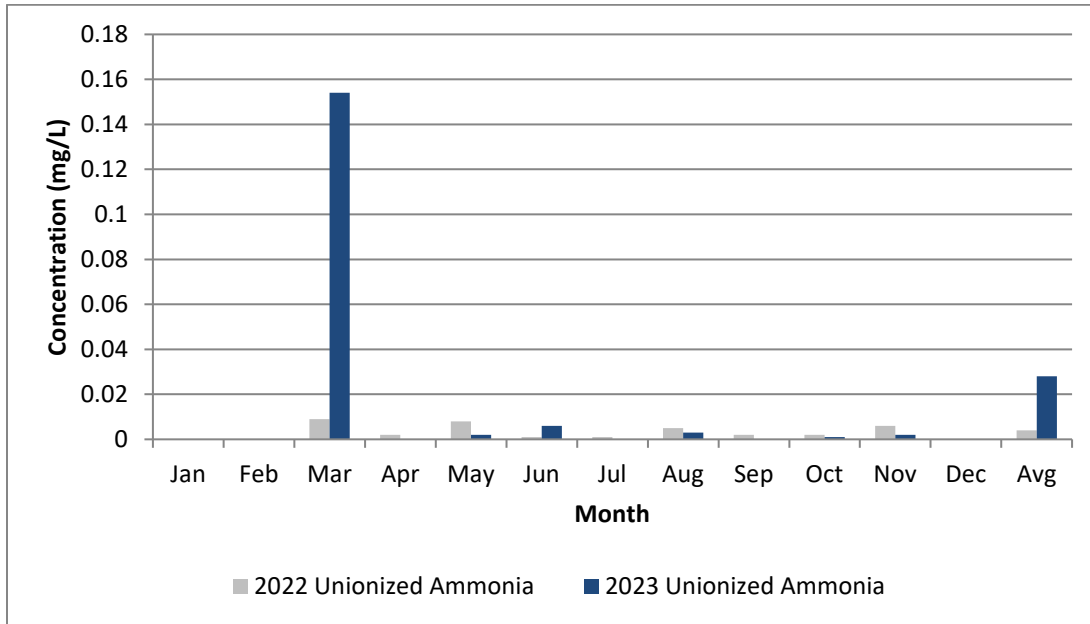
no objectives or limits set for TAN for the emergency discharge in March. Refer to Figure 12 for a comparison of 2023 monthly effluent TAN concentrations to 2022 concentrations.

Figure 12: Effluent TAN Concentrations



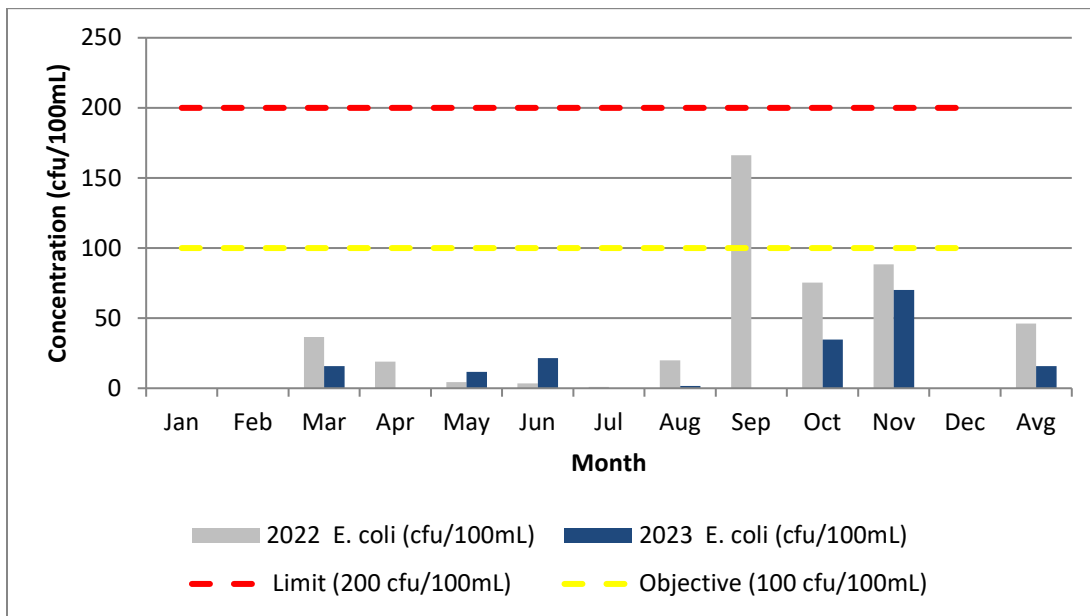
The average monthly effluent Unionized Ammonia concentration in 2023 was 0.028 mg/L, a 600% increase from 2022’s average of 0.004 mg/L. Despite the large percentage increase, these differences are minimal given the small scale of measurement. Moreover, March’s result was from the emergency discharge when final effluent bypassed the ISF. There was no limit or objective set for Unionized Ammonia during the emergency discharge in March. There are also no ECA objectives or limits for this parameter. Refer to Figure 13 for a comparison of 2023 monthly effluent Unionized Ammonia concentrations to 2022 concentrations.

Figure 13: Effluent Unionized Ammonia Concentrations



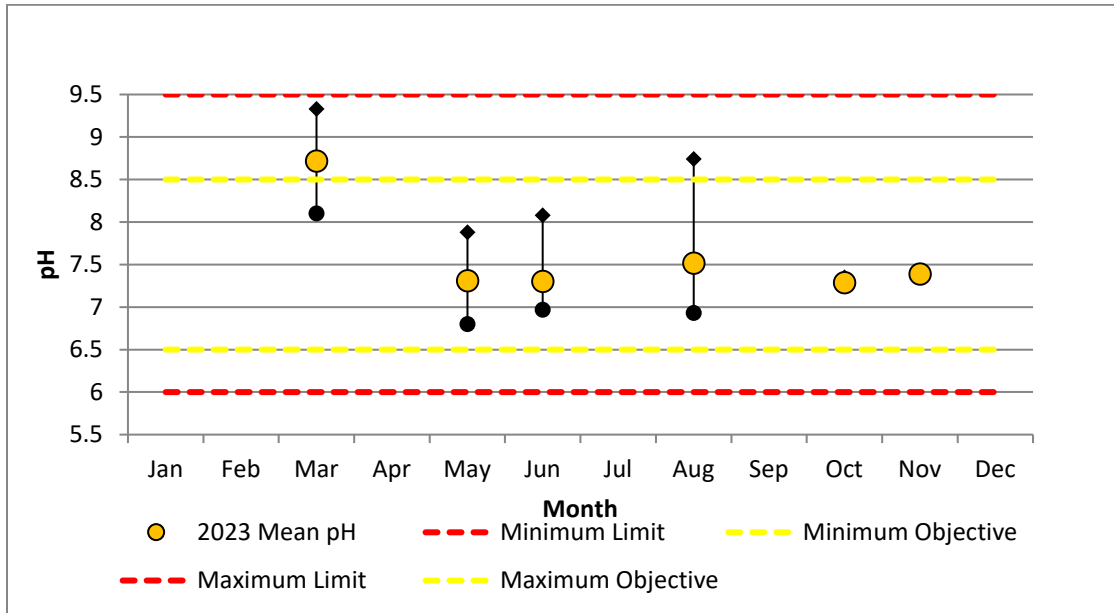
The average monthly effluent E. coli concentration in 2023 was 16 cfu/100mL, a 66% decrease from 2022. There were no limit or objective exceedances in 2023. Refer to Figure 14 for a comparison of 2023 annual effluent E. coli concentrations to 2022 concentrations.

Figure 14: Effluent E. coli Concentrations



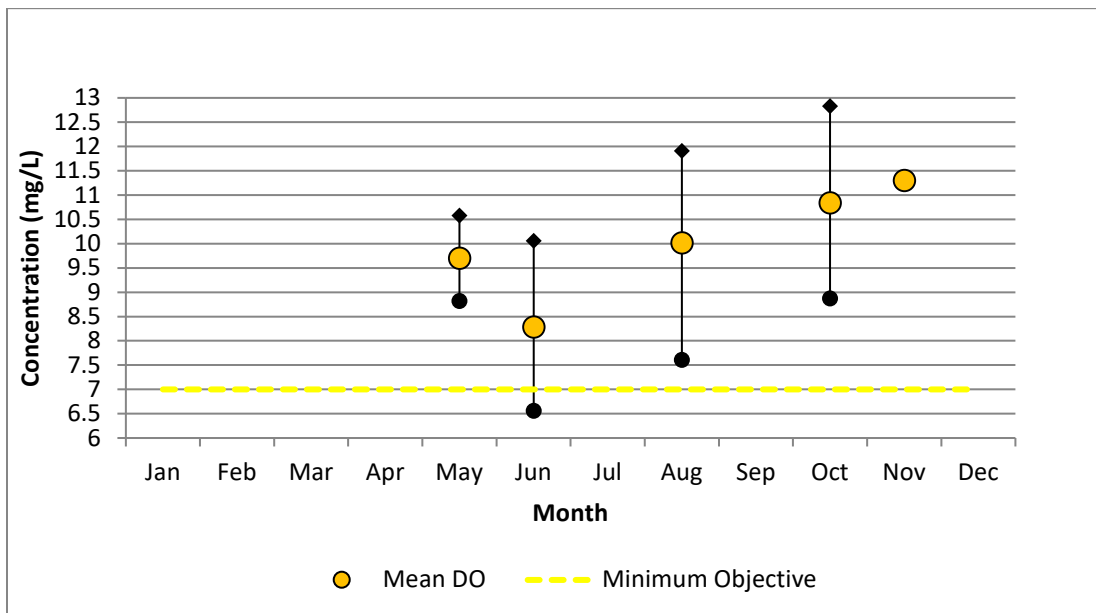
In 2023, effluent pH at the Bayfield STP ranged from 6.8 to 9.33. All limits were met, however the maximum pH objective was not met in August. There were no pH limits or objectives set for the emergency discharge in March. Refer to Figure 15 for a comparison of 2023 monthly effluent pH values to the objectives and limits.

Figure 15: Effluent pH Values



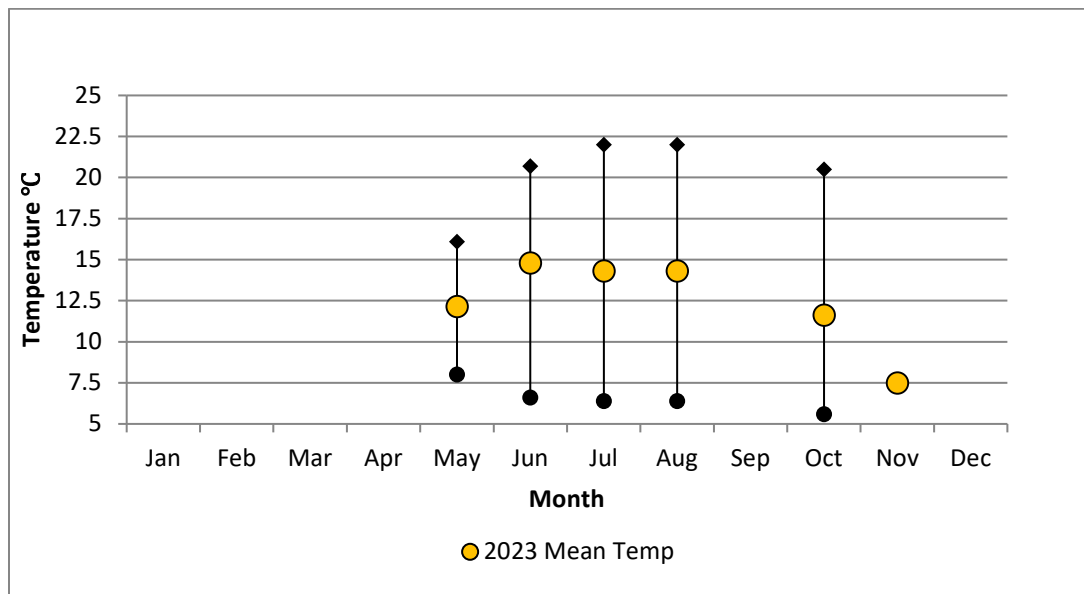
In 2023, effluent DO at the Bayfield STP ranged from 6.6 to 11.9 mg/L. The value in June, 2023, did not meet the minimum objective. There is no DO limit. Refer to Figure 16 for a comparison of 2023 monthly effluent DO values to the minimum objective.

Figure 16: Effluent DO Concentrations



In 2023, effluent Temperature at the Bayfield STP ranged from 5.6 °C to 22 °C. There are no objectives or limits for Temperature. Refer to Figure 17 for monthly effluent Temperature values in 2023.

Figure 17: Effluent Temperatures



In 2023, average waste loadings were calculated for CBOD<sub>5</sub>, TSS, and TP. No loading limits were exceeded. Refer to Table 1 below for details.

Table 1: Average Waste Loadings in 2023

Effluent Parameter	Average Waste Loading Limit (kg/d)	2023 Loading (kg/d)
CBOD <sub>5</sub>	15.1	2.04
Total Suspended Solids	15.1	3.39
Total Phosphorus	0.76	0.34

## Effluent Quality Assurance

Effluent quality assurance is evaluated by monitoring parameters and changes in the lagoons. Operational staff monitor plant performance by conducting in-house tests on dissolved oxygen, pH, and temperature. Staff also monitor and record chemical dosages and any adverse observations in the lagoon cells. 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.

## Summary of Efforts Made to Achieve Design Objectives

Design objectives were not exceeded more than 50% of the time in 2023 and there were no trends in deterioration of final effluent quality. The average influent flow has exceeded 80% of the rated capacity; however, exceedances were unrelated to this. Refer to Table 2 for exceeded objectives and an explanation for the exceedance.

**Table 2: Summary of Objective Exceedances**

Month	Parameter	Concentration (mg/L)	Objective (mg/L)	Issue
May	TSS	5.4	5.0	Adjusting flows to ISF upon start-up
May	TP	0.5	0.3	Adjusting flows to ISF upon start-up
June	TP	0.5	0.3	High flows through ISF caused pooling
June	TAN	1.6	1.0	High flows through ISF caused pooling
June	DO	6.6	7.0	High flows through ISF caused pooling
August	pH	8.74	8.5	Excess algae on lagoon

## Operating Problems & Corrective Actions

The major challenge in 2023 for the Bayfield STP was being over capacity. The plant is currently operating at 110% of its rated capacity and in 2023 an emergency discharge had to be requested to prevent a spill over the lagoon berms. There is currently a plan to build a Sequence Batch Reactor on site to assist with capacity.

Capital and major maintenance recommendations have been submitted by OCWA to the Municipality of Bluewater to address aging infrastructure and ongoing maintenance requirements for the collection system and STP to continue to produce high quality effluent. Items included on the list for 2024 are:

- Charcoal canister for odour – Marina SPS
- Pump rebuilds – Marina and Main SPS
- Float replacements – Marina SPS
- Pump base replacement – North SPS
- Housing repair on charcoal filter – South and Main SPS
- New roof – Main SPS
- Sand replacement, filter bed 1– Bayfield ISF
- High velocity flushing and camera inspection of WWC system
- Air valve replacement – WWC system

## Maintenance Activities

Preventative and corrective maintenance is assigned and monitored within the Workplace Management System (WMS) program. Refer to Appendix B for the 2023 maintenance summary. Refer to Table 3 for a list of repairs and replacements that took place in 2023.

**Table 3: Major Maintenance in 2023**

Major Maintenance Wastewater
Interior plumbing repairs – South SPS
New pump installation – North SPS
Float replacement – Main SPS
Sand replaced – Filter Bed 2, ISF



## Calibration Records

Pierce Services and Solutions Inc. calibrated influent and effluent flow meters, level sensors and level transmitters on March 23, 2023. Flow meters met the accuracy tolerance of within 15% of the actual flow rate. Operational staff complete routine pH meter calibrations and verifications. Refer to Appendix C for 2023 Calibration Records.

## Sludge Generation

In 2023, the Bayfield STP generated 106 m<sup>3</sup> of sludge. No sludge was hauled in 2023. It is estimated that approximately 110 m<sup>3</sup> of sludge will be generated in 2024.

## Complaints

There was one complaint received in 2023. On July 13, 2023, a Bayfield resident complained about a sewer back up in their basement. It was determined that the pumps at the Bayfield MPS faulted during a heavy rain event. Pumps were reset and vacuum trucks restored wet well levels preventing further sewer back ups.

## Bypass, Overflows, Spills and Abnormal Discharge Events

The ECA requires additional daily sampling when a bypass, overflow or spill event occurs. In 2023, there was a spill on July 13, 2023. Pumps at the Main SPS faulted during a heavy rain event, resulting in raw sewage flowing out of a manhole on Sarnia Street in Bayfield. Approximately 1 m<sup>3</sup> of sewage was spilled. The event lasted for 1 hour, 11 minutes. The Spills Action Centre (reference #1-3MMKWO) and Medical Officer of Health were notified. Pumps were reset and vacuum trucks used to restore wet well levels. A sample was obtained; refer to Table 4 below for sample results.

Table 4: Spill Event Summary

Type of Event	Date of Event	Reason for Event	Sample Results					
			E. coli	CBOD <sub>5</sub>	TSS	TP	Unionized Ammonia	TAN
Spill	July 13/23	Heavy Rain and Pump Faults	2 900 000 cfu/100mL	200 mg/L	546 mg/L	4.1 mg/L	0.028 mg/L	5.9 mg/L
			n/a	0.2 kg/d	0.5 kg/d	0.004 kg/d	n/a	0.006 kg/d

There were no bypass or overflow events in the collection system in 2023.

## Summary of Efforts made to achieve conformance with F-5-1

The Municipality of Bluewater has a separated collection system, therefore a Pollution Prevention Control Program is not required to be established or maintained.

There are two designed overflows within the collection system for the protection against basement flooding, damage to equipment/property and prevention of treatment process wash out. No overflows or bypasses have occurred in 2023. There was one spill of sewage in 2023 as identified in 'Bypass, Overflows, Spills and Abnormal Discharge Events'. In 2023, there were some float replacements at Main

SPS and new pump at North SPS. In 2024, it has been proposed to complete float replacements, air valve replacements and flushing/cameraing of a portion of the collection system. These projects are recommended to be undertaken to provide an overflow/bypass/spill overall reduction or elimination.

## Notice of Modification to the Works

There were no 'Notice of Modification to Sewage Works' forms submitted in 2023. The Bayfield STP has been issued a new ECA # A-500-1518928419 for the proposed works of a new wastewater treatment plant. The construction of the new plant will address the capacity issues of the current lagoon system once constructed and operational.

## Alterations to the Wastewater Collection System

No alterations to the collection system posed any significant threat to the drinking water systems in 2023.

## Additional Information the Water Supervisor Requires

No additional information requests were required in 2023.

# Appendix A

## Quarterly Effluent Monitoring Results

Bayfield STP Quarterly Effluent Monitoring Results

	01/2023	02/2023	03/2023	04/2023	05/2023	06/2023	07/2023	08/2023	09/2023	10/2023	11/2023	12/2023	Total	Avg
Final Effluent / Biochemical Oxygen Demand: BOD5 - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					< 2			< 2		< 2			<	2
Final Effluent / Chemical Oxygen Demand: COD - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					18			14		17				16.333
Final Effluent / Dissolved Organic Carbon: DOC - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					8			5		6				6.333
Final Effluent / Total Oil & Grease - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					< 2			< 2		< 2			<	2
Final Effluent / Total Dissolved Solids: TDS - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					383			317		374				358
Final Effluent / Conductivity - µS/cm														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					701			602		652				651.667
Final Effluent / Aluminum: Al - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0.04			0.024		0.016				0.027
Final Effluent / Total Ammonia Nitrogen: NH3 + NH4+ as N - mg/L														
Count Lab	0	0	2	0	6	6	0	4	0	5	1	0	24	
Mean Lab			3.2		< 0.267	1.567		< 0.1		< 0.1	0.4		<	0.809
Final Effluent / Arsenic: As - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0.003			0.002		0.001				0.002
Final Effluent / Beryllium: Be - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					< 0			< 0		< 0			<	0
Final Effluent / Boron: B - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0.117			0.141		0.132				0.13
Final Effluent / Cadmium: Cd - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0			0		0				0
Final Effluent / Calcium: Ca - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					74.6			52.2		54.4				60.4
Final Effluent / Chloride - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					63			75		76				71.333
Final Effluent / Chromium: Cr - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0			0		0				0
Final Effluent / Copper: Cu - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0.01			0.003		0.002				0.005
Final Effluent / Hydrogen Sulfide: H2S - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					< 0.02			< 0.02		< 0.02			<	0.02
Final Effluent / Iron: Fe - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0.118			< 0.007		0.02			<	0.048
Final Effluent / Lead: Pb - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0			0		0				0
Final Effluent / Magnesium: Mg - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					14			15.1		18.9				16
Final Effluent / Potassium: K - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					9.02			7.89		10.8				9.237
Final Effluent / Selenium: Se - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					0			0		0				0
Final Effluent / Silver: Ag - µg/l														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					< 0.05			< 0.05		< 0.05			<	0.05
Final Effluent / Sulphate: SO4 - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					8			49		57				38
Final Effluent / Zinc: Zn - mg/L														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					< 0.002			0.002		0.002			<	0.002
Final Effluent / 4AAP-Phenolics - µg/l														
Count Lab	0	0	0	0	1	0	0	1	0	1	0	0	3	
Mean Lab					< 2			< 2		< 2			<	2

# Appendix B

## Maintenance Summary

Workorder Summary Report

WO #	Asset ID	Asset Description	Location Description	Class	Work Order Description	Status	Schedule	Actual
							Start	Finsh
<a href="#">3156757</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	1/1/23 12:00 AM	1/30/23 10:04 AM
<a href="#">3156762</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	1/1/23 12:00 AM	1/23/23 02:41 PM
<a href="#">3156767</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	1/1/23 12:00 AM	1/24/23 09:44 AM
<a href="#">3156772</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	1/1/23 12:00 AM	1/24/23 09:44 AM
<a href="#">3156964</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Spill Kit Inspect (1y) 6655/5876/5695	CLOSE	1/1/23 12:00 AM	2/27/23 11:49 AM
<a href="#">3157386</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	1/1/23 12:00 AM	1/26/23 11:24 AM
<a href="#">3157405</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	1/1/23 12:00 AM	1/26/23 11:27 AM
<a href="#">3157424</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	1/1/23 12:00 AM	1/23/23 02:43 PM
<a href="#">3177139</a>			6655, Bayfield South Pumping Station	Administrative	Client Reports Bluewater Area (1y) 6655	COMP	1/1/23 12:00 AM	12/21/23 10:41 AM
<a href="#">3180975</a>			6655, Bayfield WWL & CS	Inspection	Wet Well Bar Screens & Floats Cleaning (1y) 6655	COMP	1/1/23 12:00 AM	12/29/23 09:57 AM
<a href="#">3181370</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	1/1/23 12:00 AM	1/27/23 08:50 AM
<a href="#">3185162</a>			6655, Bayfield WWL & CS	Inspection	72 Hour Trending Review (1y) - 6655/5876/5695	COMP	1/1/23 12:00 AM	1/5/24 12:14 PM
<a href="#">3187858</a>			6655, Bayfield WWL & CS	Administrative	Chemical Receiving (1y) 6655/6676/5695	COMP	1/1/23 12:00 AM	1/5/24 12:16 PM
<a href="#">3188022</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	1/1/23 12:00 AM	1/27/23 08:53 AM
<a href="#">3190771</a>			6655, Bayfield Main Pumping Station	Refurbish/Replace/Repair	Sewer Backups (1y) 6655	COMP	1/1/23 12:00 AM	1/5/24 12:18 PM
<a href="#">3203362</a>			6655, Bayfield WWL & CS	Compliance	WSER Quarterly Reporting (3m) 6655	CLOSE	1/12/23 12:00 AM	1/16/23 01:33 PM
<a href="#">3211556</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	2/1/23 12:00 AM	3/1/23 07:32 AM
<a href="#">3211561</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	2/1/23 12:00 AM	2/13/23 10:55 AM
<a href="#">3211566</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	2/1/23 12:00 AM	3/6/23 01:49 PM
<a href="#">3211571</a>	0000156272	PANEL ALARM/DIALER 04	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	2/1/23 12:00 AM	2/27/23 02:54 PM
<a href="#">3212116</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	2/1/23 12:00 AM	2/27/23 11:04 AM
<a href="#">3212135</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	2/1/23 12:00 AM	2/27/23 09:51 AM
<a href="#">3212154</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	2/1/23 12:00 AM	3/17/23 03:02 PM
<a href="#">3228864</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	2/1/23 12:00 AM	3/17/23 03:11 PM
<a href="#">3233738</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	2/1/23 12:00 AM	3/6/23 03:41 PM
<a href="#">3243347</a>			6655, Bayfield WWL & CS	Compliance	RP03 Annual Report ECA (1y) 6655	CLOSE	2/1/23 12:00 AM	3/23/23 11:39 AM
<a href="#">3243480</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Replacing check valve bolts and nuts at Bayfield North SPS	CLOSE		4/24/23 09:32 AM

<a href="#">3252842</a>			6655, Bayfield WWL & CS	Inspection	Lifting Device Route (1y) 6655	CLOSE	3/1/23 12:00 AM	5/25/23 01:01 PM
<a href="#">3253033</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	3/1/23 12:00 AM	3/28/23 03:04 PM
<a href="#">3253038</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	3/1/23 12:00 AM	3/28/23 03:07 PM
<a href="#">3253043</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	3/1/23 12:00 AM	3/28/23 03:09 PM
<a href="#">3253048</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	3/1/23 12:00 AM	3/28/23 03:17 PM
<a href="#">3253568</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	3/1/23 12:00 AM	3/28/23 03:33 PM
<a href="#">3253587</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	3/1/23 12:00 AM	3/28/23 03:42 PM
<a href="#">3253606</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	3/1/23 12:00 AM	3/28/23 03:43 PM
<a href="#">3271812</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	3/1/23 12:00 AM	6/5/23 01:07 PM
<a href="#">3276573</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	3/1/23 12:00 AM	5/2/23 03:39 PM
<a href="#">3287787</a>	0000156234	PUMP SUBMERSIBLE M1 WET WELL PS3	6655, Bayfield Main Pumping Station	Refurbish/Replace/Repair	Trouble shot Pump#1 Overload fault and soft starter lockout	CLOSE		3/3/23 11:38 AM
<a href="#">3297821</a>	0000156279	FILTER SAND 01	6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Filter Sand 01 Insp/Service (1y) 6655	CLOSE	4/1/23 12:00 AM	4/21/23 12:49 PM
<a href="#">3297824</a>	0000156280	FILTER SAND 02	6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Filter Sand 02 Insp/Service (1y) 6655	CLOSE	4/1/23 12:00 AM	4/21/23 12:50 PM
<a href="#">3297827</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Lagoon 01 Insp/Service (6m) 6655	CLOSE	4/1/23 12:00 AM	4/21/23 12:50 PM
<a href="#">3297838</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Lagoon 02 Insp/Service (6m) 6655	CLOSE	4/1/23 12:00 AM	4/21/23 12:51 PM
<a href="#">3297849</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	4/1/23 12:00 AM	4/24/23 03:55 PM
<a href="#">3297854</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	4/1/23 12:00 AM	4/24/23 03:57 PM
<a href="#">3297859</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	4/1/23 12:00 AM	4/24/23 03:58 PM
<a href="#">3297864</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	4/1/23 12:00 AM	4/18/23 03:43 PM
<a href="#">3297874</a>	0000156240	SAMPLER 01 AUTO COMPOSITE PS3	6655, Bayfield Main Pumping Station	Refurbish/Replace/Repair	Sampler 01 Auto Composite Insp/Service (1y) 6655	CLOSE	4/1/23 12:00 AM	6/7/23 03:53 PM
<a href="#">3297880</a>	0000156258	SAMPLER 02 AUTO COMPOSITE	6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Sampler 02 Auto Composite Insp/Service (1y) 6655	CLOSE	4/1/23 12:00 AM	7/10/23 01:07 PM
<a href="#">3297886</a>	0000156263	TANK 01 ALUM HOLDING	6655, Bayfield WWL & CS	Inspection	Tank 01 Alum Holding Insp/Service (5y) 6655	CLOSE	4/1/23 12:00 AM	6/7/23 03:57 PM
<a href="#">3298439</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	4/1/23 12:00 AM	4/25/23 07:25 AM
<a href="#">3298458</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	4/1/23 12:00 AM	4/24/23 03:59 PM
<a href="#">3298477</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	4/1/23 12:00 AM	4/25/23 07:27 AM
<a href="#">3318648</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	4/1/23 12:00 AM	6/7/23 10:20 AM
<a href="#">3324795</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	4/1/23 12:00 AM	5/2/23 03:41 PM

<a href="#">3347012</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	5/1/23 12:00 AM	6/7/23 10:23 AM
<a href="#">3347022</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	5/1/23 12:00 AM	6/7/23 10:24 AM
<a href="#">3347032</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	5/1/23 12:00 AM	5/10/23 03:29 PM
<a href="#">3347037</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	5/1/23 12:00 AM	5/10/23 03:30 PM
<a href="#">3347042</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	5/1/23 12:00 AM	5/10/23 03:31 PM
<a href="#">3347047</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	5/1/23 12:00 AM	5/10/23 03:33 PM
<a href="#">3347587</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	5/1/23 12:00 AM	5/10/23 03:43 PM
<a href="#">3347606</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	5/1/23 12:00 AM	5/10/23 03:43 PM
<a href="#">3347625</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	5/1/23 12:00 AM	5/10/23 03:44 PM
<a href="#">3347729</a>			6655, Bayfield WWL & CS	Compliance	Operation SOP Manual Review and Update (2y) 6655	CLOSE	5/1/23 12:00 AM	9/27/23 01:33 PM
<a href="#">3366247</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	5/1/23 12:00 AM	6/7/23 10:26 AM
<a href="#">3370955</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	5/1/23 12:00 AM	5/2/23 03:42 PM
<a href="#">3393000</a>			6655, Bayfield WWL & CS	Calibration	Analyzer Gas Tri Detector Insp/Calib (1y) 6655	CLOSE	6/1/23 12:00 AM	7/10/23 01:04 PM
<a href="#">3393003</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:34 AM
<a href="#">3393013</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:35 AM
<a href="#">3393023</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:36 AM
<a href="#">3393029</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:36 AM
<a href="#">3393034</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:37 AM
<a href="#">3393039</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:37 AM
<a href="#">3393167</a>			6655, Bayfield WWL & CS	Health and Safety	MSDS Review - (6m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:38 AM
<a href="#">3393597</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:43 AM
<a href="#">3393616</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:43 AM
<a href="#">3393635</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	6/1/23 12:00 AM	6/7/23 10:44 AM
<a href="#">3393721</a>			6655, Bayfield WWL & CS	Compliance	OG35 FEP Review (1y) 6655/5695/5876	CLOSE	6/1/23 12:00 AM	9/11/23 02:29 PM
<a href="#">3413519</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	6/1/23 12:00 AM	6/15/23 03:45 PM
<a href="#">3418589</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	6/1/23 12:00 AM	6/15/23 03:34 PM



<a href="#">3434053</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Refurbish/Replac e/Repair	Verbatim phone line not working fixed by TCC	CLOSE		6/16/23 02:00 PM
<a href="#">3435042</a>			Bayfield Wastewater Lagoons and Collection System	Inspection	Measuring alum storage tank Dimensions	CLOSE	6/23/23 09:22 AM	6/23/23 09:22 AM
<a href="#">3441814</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	7/1/23 12:00 AM	8/15/23 12:42 PM
<a href="#">3441824</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	7/1/23 12:00 AM	8/15/23 12:42 PM
<a href="#">3441834</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	7/1/23 12:00 AM	7/24/23 09:32 AM
<a href="#">3441839</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	7/1/23 12:00 AM	7/24/23 09:26 AM
<a href="#">3441844</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	7/1/23 12:00 AM	7/24/23 09:29 AM
<a href="#">3441849</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	7/1/23 12:00 AM	7/25/23 09:22 AM
<a href="#">3442395</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	7/1/23 12:00 AM	7/24/23 09:36 AM
<a href="#">3442414</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	7/1/23 12:00 AM	7/24/23 09:38 AM
<a href="#">3442433</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	7/1/23 12:00 AM	7/24/23 08:41 AM
<a href="#">3461037</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replac e/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	7/1/23 12:00 AM	7/21/23 01:03 PM
<a href="#">3466652</a>			6655, Bayfield WWL & CS	Refurbish/Replac e/Repair	e.Ris Data Collection (1m) 6655	CLOSE	7/1/23 12:00 AM	8/10/23 03:24 PM
<a href="#">3489106</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 12:52 PM
<a href="#">3489116</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 12:53 PM
<a href="#">3489126</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 03:32 PM
<a href="#">3489131</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 08:17 AM
<a href="#">3489136</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	8/1/23 12:00 AM	8/1/23 02:41 PM
<a href="#">3489141</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 08:14 AM
<a href="#">3489720</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 03:30 PM
<a href="#">3489739</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 03:33 PM
<a href="#">3489758</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 08:15 AM
<a href="#">3506621</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replac e/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	8/1/23 12:00 AM	8/28/23 07:25 AM
<a href="#">3511236</a>			6655, Bayfield WWL & CS	Refurbish/Replac e/Repair	e.Ris Data Collection (1m) 6655	CLOSE	8/1/23 12:00 AM	8/15/23 08:21 AM
<a href="#">3533142</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	9/1/23 12:00 AM	9/25/23 01:00 PM
<a href="#">3533152</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	9/1/23 12:00 AM	9/25/23 01:01 PM
<a href="#">3533162</a>	0000156160	PANEL ALARM/DIALER 01	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	9/1/23 12:00 AM	9/13/23 08:00 AM

		PS1						
<a href="#">3533167</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	9/1/23 12:00 AM	9/13/23 08:01 AM
<a href="#">3533172</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	9/1/23 12:00 AM	9/13/23 08:04 AM
<a href="#">3533177</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	9/1/23 12:00 AM	9/13/23 08:05 AM
<a href="#">3533880</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	9/1/23 12:00 AM	9/13/23 08:07 AM
<a href="#">3533899</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Refurbish/Replace/Repair	Engine Diesel Bayfield South PS Insp/Service (1y) 6655	CLOSE	9/1/23 12:00 AM	10/25/23 03:35 PM
<a href="#">3533938</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	9/1/23 12:00 AM	9/13/23 08:08 AM
<a href="#">3533957</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Refurbish/Replace/Repair	Engine Diesel North Lift PS Insp/Service (1y) 6655	CLOSE	9/1/23 12:00 AM	10/25/23 03:36 PM
<a href="#">3533996</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	9/1/23 12:00 AM	9/13/23 08:09 AM
<a href="#">3534015</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Refurbish/Replace/Repair	Engine Diesel Bayfield Main PS Insp/Service (1y) 6655	CLOSE	9/1/23 12:00 AM	10/25/23 03:36 PM
<a href="#">3540158</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Backflow Preventer Inspection (1y) 6655	CLOSE	9/1/23 12:00 AM	11/3/23 09:15 AM
<a href="#">3544715</a>	0000249217	METER FLOW EFFLUENT BAYFIELD LAGOON	6655, Bayfield WWL & CS	Calibration	Meter Level Effluent Bayfield Lagoon Insp/Service (1y) 6655	CLOSE	9/1/23 12:00 AM	11/10/23 10:53 AM
<a href="#">3544721</a>	0000249216	METER LEVEL 04 ALUM	6655, Bayfield WWL & CS	Calibration	Meter Level 04 Alum Insp/Service (1y) 6655	CLOSE	9/1/23 12:00 AM	11/10/23 10:56 AM
<a href="#">3552405</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	9/1/23 12:00 AM	9/29/23 10:26 AM
<a href="#">3557621</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	9/1/23 12:00 AM	9/1/23 01:51 PM
<a href="#">3571697</a>	0000156233	METER LEVEL 01 WET WELL PS3	6655, Bayfield Main Pumping Station	Refurbish/Replace/Repair	Replaced missing low level float 6655	CLOSE		9/8/23 07:40 AM
<a href="#">3574283</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Sewer Cleaning / Filter Bed Piping Cleaning 6655	CLOSE		9/20/23 02:22 PM
<a href="#">3581833</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	10/1/23 12:00 AM	10/11/23 09:38 AM
<a href="#">3581843</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	10/1/23 12:00 AM	10/11/23 09:39 AM
<a href="#">3581853</a>	0000156154	METER LEVEL 01 WET WELL PS1	6655, Bayfield South Pumping Station	Inspection	Meter Level 01 Wet Well Ps1 Insp/Service (1y) 6655	CLOSE	10/1/23 12:00 AM	11/10/23 11:16 AM
<a href="#">3581855</a>	0000156233	METER LEVEL 01 WET WELL PS3	6655, Bayfield Main Pumping Station	Inspection	Meter Level 01 Wet Well Ps3 Insp/Service (1y) 6655	CLOSE	10/1/23 12:00 AM	11/10/23 11:17 AM
<a href="#">3581857</a>	0000156177	METER LEVEL 02 WET WELL PS2	6655, Bayfield North Pumping Station	Inspection	Meter Level 02 Wet Well Ps2 Insp/Service (1y) 6655	CLOSE	10/1/23 12:00 AM	11/10/23 11:18 AM
<a href="#">3581859</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	10/1/23 12:00 AM	10/25/23 03:47 PM
<a href="#">3581864</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	10/1/23 12:00 AM	10/25/23 03:48 PM
<a href="#">3581869</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	10/1/23 12:00 AM	10/25/23 03:48 PM
<a href="#">3581874</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	10/1/23 12:00 AM	10/27/23 08:24 PM

<a href="#">3581884</a>	0000207003	PUMP SUBMERSIBLE 01 HARBOUR PS	6655, Bayfield North Pumping Station	Refurbish/Replace/Repair	Pump Subm 01 Marina PS Insp/Service (1y) 6655	COMP	10/1/23 12:00 AM	3/19/24 09:22 AM
<a href="#">3581893</a>	0000207002	PUMP SUBMERSIBLE 02 HARBOUR PS	6655, Bayfield North Pumping Station	Refurbish/Replace/Repair	Pump Subm 02 Marina PS Insp/Service (1y) 6655	COMP	10/1/23 12:00 AM	3/19/24 09:24 AM
<a href="#">3582576</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	10/1/23 12:00 AM	10/31/23 05:39 PM
<a href="#">3582595</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	10/1/23 12:00 AM	10/31/23 05:43 PM
<a href="#">3582614</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	10/1/23 12:00 AM	10/31/23 05:46 PM
<a href="#">3598575</a>			6655, Bayfield Main Pumping Station	Inspection	Tank Alum Insp/Service (5y) 6655	COMP	10/1/23 12:00 AM	2/14/24 10:18 AM
<a href="#">3601619</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	10/1/23 12:00 AM	10/19/23 09:32 AM
<a href="#">3606942</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	10/1/23 12:00 AM	10/12/23 02:27 PM
<a href="#">3629924</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	MCC Route Lagoon and Pumping Str'n's Insp/Service (3y) 6655	COMP	11/1/23 12:00 AM	1/5/24 08:51 AM
<a href="#">3630081</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	11/1/23 12:00 AM	11/10/23 11:43 AM
<a href="#">3630091</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	11/1/23 12:00 AM	11/10/23 11:43 AM
<a href="#">3630101</a>	0000156160	PANEL ALARM/DIALER 01 PS1	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	11/1/23 12:00 AM	11/30/23 09:01 PM
<a href="#">3630106</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	11/1/23 12:00 AM	11/30/23 09:02 PM
<a href="#">3630111</a>	0000156186	PANEL ALARM/DIALER 02 PS2	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	11/1/23 12:00 AM	11/24/23 08:39 AM
<a href="#">3630116</a>	0000156272	PANEL ALARM/DIALER 04 FILTER BLDG	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	11/1/23 12:00 AM	11/30/23 09:04 PM
<a href="#">3630126</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	Tank Wet Well Insp/Service (1y) 6655	CLOSE	11/1/23 12:00 AM	12/11/23 11:04 AM
<a href="#">3630762</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	11/1/23 12:00 AM	11/30/23 09:05 PM
<a href="#">3630781</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	11/1/23 12:00 AM	11/30/23 09:06 PM
<a href="#">3630800</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	11/1/23 12:00 AM	11/30/23 09:41 PM
<a href="#">3646693</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	CLOSE	11/1/23 12:00 AM	11/17/23 02:11 PM
<a href="#">3651046</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	11/1/23 12:00 AM	11/2/23 03:42 PM
<a href="#">3664146</a>			6655, Bayfield North Pumping Station	Inspection	Clean Check Valves 1 and 2 at North Lift	CLOSE		11/10/23 03:49 PM
<a href="#">3664998</a>			6655, Bayfield Main Pumping Station	Refurbish/Replace/Repair	Bayfield Main SPS -new roof required	COMP		2/5/24 01:33 PM
<a href="#">3665021</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	6655 Bayfield Main SPS Roof replacement November 2023	COMP		2/5/24 01:05 PM
<a href="#">3665452</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	6655 Bayfield Main and South SPS Roof replacements *November 2023	COMP		1/16/24 02:20 PM
<a href="#">3671243</a>	0000156277	LAGOON CELL 01	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 01 Inspection/Service (1m/6m/1y) 6655	CLOSE	12/1/23 12:00 AM	12/12/23 01:03 PM

<a href="#">3671253</a>	0000156278	LAGOON CELL 02	6655, Bayfield WWL & CS	Inspection	Lagoon Cell 02 Inspection/Service (1m/6m/1y) 6655	CLOSE	12/1/23 12:00 AM	12/12/23 01:04 PM
<a href="#">3671263</a>	0000156160	PANEL ALARM/DIALER 01	6655, Bayfield South Pumping Station	Inspection	Alarm Dialer 01 South Lift PS1 Testing (1m) 6655	CLOSE	12/1/23 12:00 AM	12/7/23 02:09 PM
<a href="#">3671268</a>	0000156242	PANEL ALARM/DIALER 01 PS3	6655, Bayfield Main Pumping Station	Inspection	Alarm Dialer 01 Main Lift PS3 Testing (1m) 6655	CLOSE	12/1/23 12:00 AM	12/7/23 02:11 PM
<a href="#">3671273</a>	0000156186	PANEL ALARM/DIALER 02	6655, Bayfield North Pumping Station	Inspection	Alarm Dialer 02 North Lift PS2 Testing (1m) 6655	CLOSE	12/1/23 12:00 AM	12/7/23 02:08 PM
<a href="#">3671278</a>	0000156272	PANEL ALARM/DIALER 04	6655, Bayfield WWL & CS	Inspection	Alarm Dialer 04 Bayfield Lagoon Testing (1m) 6655	CLOSE	12/1/23 12:00 AM	12/4/23 03:10 PM
<a href="#">3671420</a>			6655, Bayfield WWL & CS	Health and Safety	MSDS Review - (6m) 6655	COMP	12/1/23 12:00 AM	12/27/23 09:58 AM
<a href="#">3671428</a>			6655, Bayfield WWL & CS	Inspection	Do Probe Calibration (1y) 6655/5876/5695	COMP	12/1/23 12:00 AM	2/12/24 11:56 AM
<a href="#">3671893</a>	0000156159	ENGINE DIESEL 01 GENSET PS1	6655, Bayfield South Pumping Station	Inspection	Engine Diesel Bayfield South PS Insp/Test (1m) 6655	CLOSE	12/1/23 12:00 AM	12/7/23 02:06 PM
<a href="#">3671912</a>	0000156182	ENGINE DIESEL 02 STANDBY PS2	6655, Bayfield North Pumping Station	Inspection	Engine Diesel North Lift PS Insp/Test (1m) 6655	CLOSE	12/1/23 12:00 AM	12/7/23 02:07 PM
<a href="#">3671931</a>	0000156238	ENGINE DIESEL 03 STANDBY PS3	6655, Bayfield Main Pumping Station	Inspection	Engine Diesel Bayfield Main PS Insp/Test (1m) 6655	CLOSE	12/1/23 12:00 AM	12/7/23 02:10 PM
<a href="#">3688156</a>			Bayfield Wastewater Lagoons and Collection System	Refurbish/Replace/Repair	Data Logger Insp/Service - Campgrounds (1m) 6655	COMP	12/1/23 12:00 AM	1/31/24 08:13 AM
<a href="#">3692553</a>			6655, Bayfield WWL & CS	Refurbish/Replace/Repair	e.Ris Data Collection (1m) 6655	CLOSE	12/1/23 12:00 AM	12/13/23 11:57 AM
<a href="#">3705626</a>			6655, Bayfield WWL & CS	Compliance	Sampling Calendar Review (1y) 6655/5695/5876	COMP	12/15/23 12:00 AM	12/22/23 11:29 AM

# Appendix C

## 2023 Calibration Report



Pierce Services  
& Solutions Inc.

519.820.4853 Fax 519.824.9402

## Instrument Verification Sheet

Client Name: Ontario Clean Water Agency

Date: March 23 2023

Equipment Description: Level Sensor

Assigned Number: Wet Well Level

Area Located: Bayfield Main Lift Station

Inventory Number: 156233

### Instrument Data

Manufacturer: Milltronics

Model Number: MultiRanger Plus

Type: Ultrasonic

Serial Number: N/A

Range: 0 - 3.300 m

Accuracy: +/- 5%

Method Of Calibration: Standard Measurement

Application: Waste Water

### Calibration Data

Input %	Input	As Found	As Left	Pass/Fail
	10.05 mA	1.134 m	1.134 m	Pass

Confirmed Run Mode:

Placed back in service:

Comments:



Checked By: Greg Pierce CCST

Signature: 



Pierce Services  
& Solutions Inc.

519.820.4853 Fax 519.824.9402

## Instrument Verification Sheet

Client Name: Ontario Clean Water Agency

Date: March 23, 2023

Equipment Description: Level Sensor

Assigned Number: LIT 101

Area Located: North Lift Bayfield

Inventory Number: 1556177

### Instrument Data

Manufacturer: Milltronics

Model Number: MultiRanger Plus

Type: Ultrasonic

Serial Number: N/A

Range: 0 - 3.750 m

Accuracy: +/- 5%

Method Of Calibration: Standard Measurement

Application: Waste Water

### Calibration Data

Input %	Input	As Found	As Left	Pass/Fail
	9.605 mA	1.209 m	1.209 m	Pass

Confirmed Run Mode:

Placed back in service:

Comments:



Checked By: Greg Pierce CCST

Signature: \_\_\_\_\_



Pierce Services  
& Solutions Inc.

519.820.4853 Fax 519.824.9402

## Instrument Verification Sheet

Client Name: Ontario Clean Water Agency

Date: March 23, 2023

Equipment Description: Level Sensor

Assigned Number: Wet Well Level

Area Located: Bayfield South Lift Station

Inventory Number: 156154

### Instrument Data

Manufacturer: Milltronics

Model Number: MultiRanger 100

Type: Ultrasonic

Serial Number: PBD/E5150044

Range: 0 - 5.000 m

Accuracy: +/- 5%

Method Of Calibration: Standard Measurement

Application: Waste Water

### Calibration Data

Input %	Input	As Found	As Left	Pass/Fail
26.62%	8.36 mA	1.25 m	1.25 m	Pass

Confirmed Run Mode:

Placed back in service:

Comments:



Checked By: Greg Pierce CCST

Signature: 





Pierce Services  
& Solutions Inc.

45 Wilton Road  
Guelph, ON N1E 7L6

Phone: 519.820.4853  
Fax: 519.824.9402

## Flowmeter Report

Verification:  X

Calibration:

Client: OCWA Bluewater  
Description: Mag Flow Meter  
Manufacturer: Krohne  
Model: Aquaflex  
Inventory No.: 249218

Location: Bayfield Lagoons  
Date: 23-Mar-23  
Checked By: Greg Pierce  
Serial No.: 1047692

Volocity	Input	As Found	As Left	Pass/Fail
0 m/s	0.00 l/s	0.00 l/s	0.00 l/s	Pass
1.23 m/s	59.94 l/s	59.94 l/s	59.94 l/s	Pass
2.54 m/s	125.00 l/s	125.00 l/s	125.00 l/s	Pass
3.98 m/S	58.2 l/s	61.6 l/s		

Confirmed Run Mode: X

Returned to service:  X

### Service Comments:

#### Flowmeter Information

Flow Unit: l/s  
Meter Size: 250 mm  
Pipe Material: Cast Steel  
Liner Material: PU  
Range: 0-125 l/s  
Tag Number: FIT 100



#### Comments:

Verification of original calibration

Coil Temp - 365.7 F  
Electrode Temp - 98.3 F  
Conductivity - 502.7 uS/cm  
Coil Resistance - 94.1 Ω

Signature: 

Greg Pierce, CCST



**Pierce Services  
& Solutions Inc.**

45 Wilton Road  
Guelph, ON N1E 7L6

Phone: 519.820.4853  
Fax: 519.824.9402

## Flowmeter Report

Verification:  X

Calibration:

Client: OCWA Bluewater  
Description: Mag Flow Meter  
Manufacturer: ABB  
Model: Watermaster  
Inventory No.: 249197

Location: Bayfield Lagoons  
Date: 23-Mar-23  
Checked By: Greg Pierce  
Serial No.: 3K620000215245

Volocity	Input	As Found	As Left	Pass/Fail
0 m/s	0.00 l/s	0.00 l/s	0.00 l/s	Pass
1.99 m/s	3.9 l/s	3.92 l/s	3.92 l/s	
3.05 m/s	6.00 l/s	6.00 l/s	6.00 l/s	

Confirmed Run Mode: X

Returned to service:  X

**Service Comments:**

Flowmeter Information

Flow Unit: l/s  
Meter Size: 50 mm  
Pipe Material: Cast Steel  
Liner Material: PU  
Range: 0-6 l/s  
Tag Number: Park Flow



Comments:  
Verification of original calibration  
No Alarms

E1 - 1.13 kΩ  
E2 - 1.17 kΩ  
E1 - 0.055 V  
E2 - 1.009 V  
E12 - -0.046 V  
CDI - 179.93 mA  
CDR - 25.71 Ω

Signature: \_\_\_\_\_

Greg Pierce, CCST



Pierce Services  
& Solutions Inc.

519.820.4853 Fax 519.824.9402

## Instrument Verification Sheet

Client Name: Ontario Clean Water Agency

Date: March 23, 2023

Equipment Description: Level Sensor

Assigned Number: Alum Tank Level

Area Located: Bayfield Lagoons

Inventory Number: N/A

### Instrument Data

Manufacturer: Milltronics

Model Number: MultiRanger Plus

Type: Ultrasonic

Serial Number: N/A

Range: 0 - 3.700 m

Accuracy: +/- 5%

Method Of Calibration: Standard Measurement

Application: Waste Water

### Calibration Data

Input %	Input	As Found	As Left	% Error
	5.157 mA	0.267 m	0.267 m	

Confirmed Run Mode:

Placed back in service:

Comments:



Checked By: Greg Pierce CCST

Signature: \_\_\_\_\_



Client Name: Ontario Clean Water Agency

Date: March 23, 2023

Equipment Description: Flow Transmitter

Assigned Number: Lagoon Filter Flow

Area Located: Bayfield Lagoons

Inventory Number: 114632

**Instrument Data**

Manufacturer: Krohne

Model Number: AquaFlux

Type: Magmeter

Serial Number: A00 12009

Range: 0-300 l/s

Accuracy: +/- 5%

Method Of Calibration: Standard Verification

Application: Wastewater

Meter Size: 300mm

PASS/FAIL: Pass

**Calibration Data**

Input	Input	Theoretical	As Found	Pass/Fail
	0.00 l/s	0.00 l/s	0.00 l/s	Pass
	135.96 l/s	135.96 l/s	135.96 l/s	Pass

Confirmed Run Mode:

Placed back in service:

Comments:  
Verification of original calibration only.



Checked By: Greg Pierce CCST

Signature:



Pierce Services  
& Solutions Inc.

519.820.4853 Fax 519.824.9402

## Instrument Verification Sheet

Client Name: Ontario Clean Water Agency

Date: March 23, 2023

Equipment Description: Level Sensor

Assigned Number: LIT 103

Area Located: Bayfield Lagoons Chamber

Inventory Number: 114630

### Instrument Data

Manufacturer: Milltronics

Model Number: MultiRanger Plus

Type: Ultrasonic

Serial Number: N/A

Range: 0 - 3.500 m

Accuracy: +/- 5%

Method Of Calibration: Standard Measurement

Application: Waste Water

### Calibration Data

Input %	Input	As Found	As Left	Pass/Fail
	14.69 mA	2.138 m	2.138 m	Pass

Confirmed Run Mode:

Placed back in service:

Comments:



Transducer Erratic Recommend Replacement

Checked By: Greg Pierce CCST

Signature: 



**Pierce Services  
& Solutions Inc.**

45 Wilton Road  
Guelph, ON N1E 7L6

Phone: 519.820.4853  
Fax: 519.824.9402

## Flowmeter Report

Verification: <input checked="" type="checkbox"/>	Calibration: <input type="checkbox"/>
Client: <u>OCWA Bluewater</u>	Location: <u>Bayfield Lagoons</u>
Description: <u>Ultrasonic</u>	Date: <u>23-Mar-23</u>
Manufacturer: <u>Milltronics</u>	Checked By: <u>Greg Pierce</u>
Model: <u>OCM III</u>	Serial No.: _____
Inventory No.: <u>249100</u>	

Volocity	Input	Theroretical	As Left	Pass/Fail
	0 cm	0.00 l/s	0.00 l/s	Pass
	10 cm	4.364 l/s	4.3652 l/s	Pass
	20 cm	24.69 l/s	24.69334 l/s	Pass
	30 cm	68.03 l/s	68.04685 l/s	Pass
	42 cm	157.8 l/s	157.8 l/s	Pass

Confirmed Run Mode:  Returned to service:

Service Comments:

Flowmeter Information

Flow Unit:	<u>l/s</u>
Meter Size:	<u>200 mm</u>
Pipe Material:	<u>Stainless Steel</u>
Flume Type	<u>90° V Notch Weir</u>
Range:	<u>0-157.8 l/s</u>
Tag Number:	<u>FIT 101</u>



Comments:

Verified with ISCO Open Channel Flow Book

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signature: \_\_\_\_\_

Greg Pierce, CCST