

NLTUA Operations Report – May 2023

TO: Chris Holton, NLTUA
Joni Scott, NLTUA

FROM: Mark Huggard, Jacobs

DATE: June 16, 2023

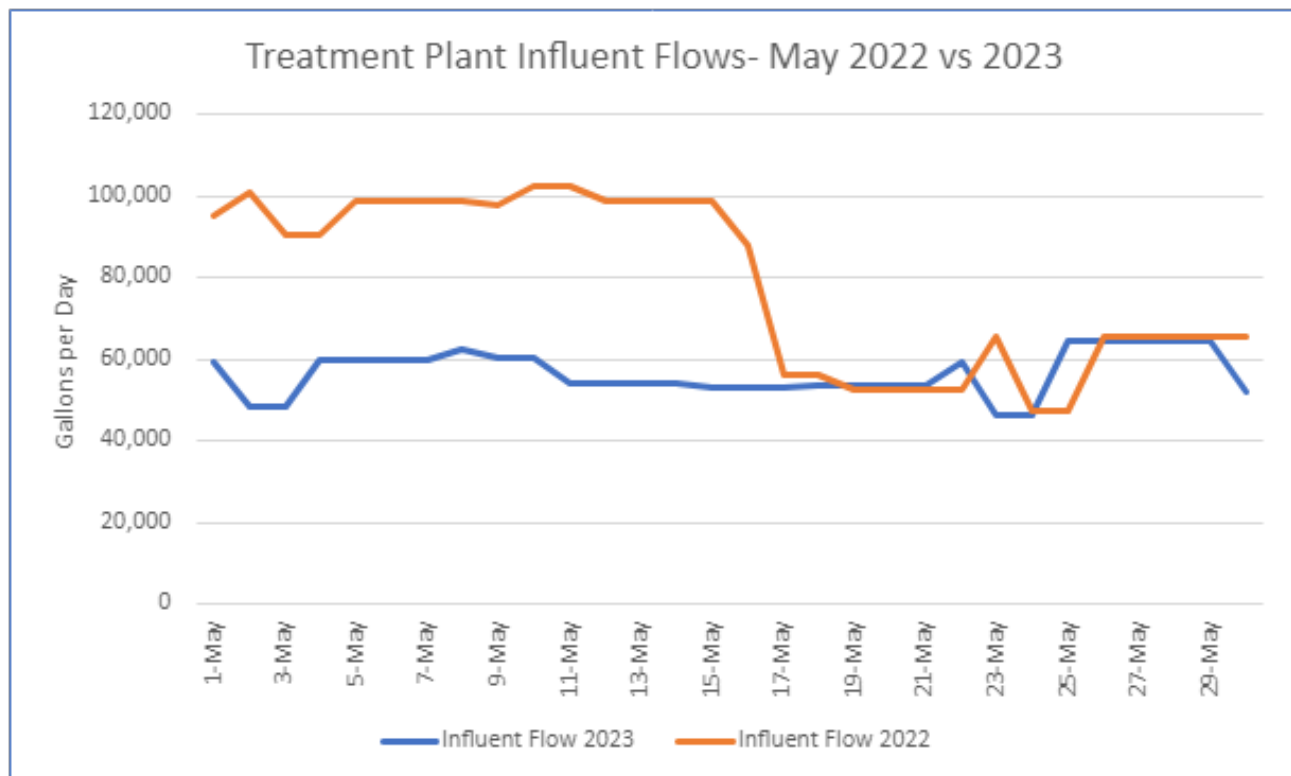
COPY: Nick Lenzi, Jacobs
Andrew Waldron, Jacobs
Justin Straub, Jacobs

This report describes our activities during the month of May 2023. If you require additional information that would make these monthly reports more useful to you, please let us know. Permit compliance report data is submitted to the Department of Environment Great Lakes and Energy (EGLE) electronically.

Treatment Plant

	May	Last Month	Last Year
Influent flow daily average, GPD	68,603	59,676	68,337
Monthly electrical usage, Kw Hrs*	27,977	28,536	29,191

* Note: Wind turbine is permanently out of service.



The above graph compares plant influent flows from May of last year to May of 2023. The dramatic decrease in flow seen last year was a result of addressing an issue with the influent flow meter.

- Quarterly monitoring well sampling was conducted on Tuesday May 9th. All results were submitted to EGLE as part of the monthly DMR submittal. Results were consistent with historical data.
- Northcountry Power Generation (NPG) completed their annual generator service on the following generators.
 - Treatment plant
 - Main lift station
 - Portable generator
- We replaced a failed check valve on reject pump B.
- Daily maximum total phosphorus exceedance: The plant operator conducted rounds on 5/18/23 and the facility was operating in good order. When they arrived at the facility on 5/22/23, they collected samples and conducted rounds as per standard operating procedures. The final effluent sample was collected at 9:42 am. At approximately 10:00am, they discovered that the intake side of the ferric chloride line had broken and was therefore not dosing ferric into the basin. Some ferric spilled into the containment structure from this breakage but was fully contained.

The lag pump was switched on while the repair was completed. Ferric dosage began shortly after 10:00am on 5/22/23.

The final effluent sample (monitoring location EQ-1) was analyzed for Total Phosphorous on 5/26/23, and a permit exceedance was noted at 0.56 mg/l (rounded to 0.6 mg/l as per the permit's significant figures). This exceeds the daily maximum concentration of 0.5 mg/l. Discharge from Thursday (5/18) through Monday (5/22) was to rapid infiltration basin (RIB) 1. The discharge on Monday (5/22) was to RIB 3a and RIB 3b. The analysis passed all applicable QA/QC criteria. A brief email was sent to EGLE on 5/26/23 to provide initial notification of the exceedance.

A sample collected the next day was back within permit limits at 0.25 mg/l and all other permit parameters were within permit limits for the month of May.

- Williams and Bay pumping was onsite on May 23rd to pump out solids/grit buildup from the reject chamber. We have this pumped out occasionally to remove this material and prolong pump life.
- MBBR cell #6's Landia mixer has a failed variable frequency drive (VFD). The VFD was 15 years old. We're currently acquiring replacement quotes.

Lift Stations / Collection System

We completed the semiannual low pressure force main flushing's with the assistance of the Leelanau Township Fire Department. Flushing these lines clears buildup from the system that could result in a blockage and costly repairs. The following locations were included in this round of flushing.

- Northport Point Rd.
- East Circle Dr. / Paradesia Point Rd.
- Indian Trl. / Southshore Dr.

Residential Grinder pumps

As part of our due diligence to reduce repeat call outs to residential grinders we perform the following checks before leaving the site. Table 1 below summarizes our grinder pump responses. More details can be provided upon request.

- ✓ Tighten all control connections within control cabinet.
- ✓ Remove grease and debris from grinder tank.
- ✓ Remove all grease buildup from float switches.
- ✓ Verify all float switches operate properly and are positioned properly.
- ✓ Confirm proper pump operation.
- ✓ Verify alarm light is operational and audible alarm, if applicable.
- ✓ Inspect wet well components.
- ✓ Replace both the start and run capacitor.
- ✓ Inform homeowner of findings and what not to put in their sewer.

Table 1: Grinder Pump Responses

Date	Location	Alarm/Issue	Resolution
5-9-23	13420 Paradesia Pt. Rd.	<ul style="list-style-type: none"> • Broken control box post 	<ul style="list-style-type: none"> • Remounted panel to new post. • Replaced broken conduit • Replaced start and run capacitors
5-10-23	310 3 rd St.	<ul style="list-style-type: none"> • High well alarm 	<ul style="list-style-type: none"> • Replaced start capacitor
5-17-23	344 Nagonaba St.	<ul style="list-style-type: none"> • High well alarm 	<ul style="list-style-type: none"> • Removed large hair clump from impeller
5-24-23	603 South Shore Dr.	<ul style="list-style-type: none"> • Alarm light on 	<ul style="list-style-type: none"> • Replaced failed start capacitor and wires

On the Horizon

Task	Update	Estimated time of completion
Aeration blower #2 repair or replacement	PO issued to Contractor. Anticipated July 2023	2023
Main lift station controller replacement	Complete and commissioned April 2023.	Complete
7th St. station controller replacement	NLTUA approved upgrade on May 16 th . PO to Contractor	2023
Force main cleaning from main lift station to plant	Jacobs developing proposal	2023
Settling basin engineering evaluation	NLTUA to consult their engineer	2023
Ferric chloride room day tank relocation	NLTUA to consult their engineer	2023
Quarterly Monitoring Well Sampling	Scheduled for May	2023
Replace failed VFD on mixer 7	Acquiring quotes	2023

Financial Report

Current Reporting Month	May-23	Comments
Repairs Spending Treatment Plant Current Month	\$ -	
Repairs Spending Treatment Plant Year to Date	\$ 1,289.07	
Repairs Spending Residential Grinder Pumps Current Month	\$ -	
Repairs Spending Residential Grinder Pumps Year to Date	\$ 9,739.70	
Repair Spending Collection System (lift stations/sewer) Current Month	\$ -	
Repair Spending Collection System (lift stations/sewer) Year to Date	\$ -	
Repairs Hours Treatment Plant Current Month	-	
Repairs Hours Treatment Plant Year to Date	-	
Repairs Hours Treatment Plant Current Month	4.00	
Repairs Hours Treatment Plant Year to Date	104.00	
Repairs Hours Residential Grinder Pumps Current Month	18.25	
Repairs Hours Residential Grinder Pumps Year to Date	56.75	
Repair Hours Collection System (lift stations/sewer) Current Month	5.00	
Repair Hours Collection System (lift stations/sewer) Year to Date	59.00	
Total Repair Hours Current Month	23.25	
Total Repair Spending Current Month	\$ -	
Total Repair Hours Year to Date	115.75	
Repairs Hours Budget Remaining (Limit 300 Hrs)	184.25	
Total Repair Spending Year to Date	\$ 11,028.77	
Repair Spending Budget Remaining (Limit \$8,000)	\$ (3,028.77)	Amount over limit
Total Repair Hours 2022	679.50	
Total Repair Spending 2022	\$ 45,783.13	

If you have any questions or concerns, please feel free to contact us.

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