

NLTUA Operations Report – July 2023

TO: Chris Holton, NLTUA
Joni Scott, NLTUA

FROM: Mark Huggard, Jacobs

DATE: August 15, 2023

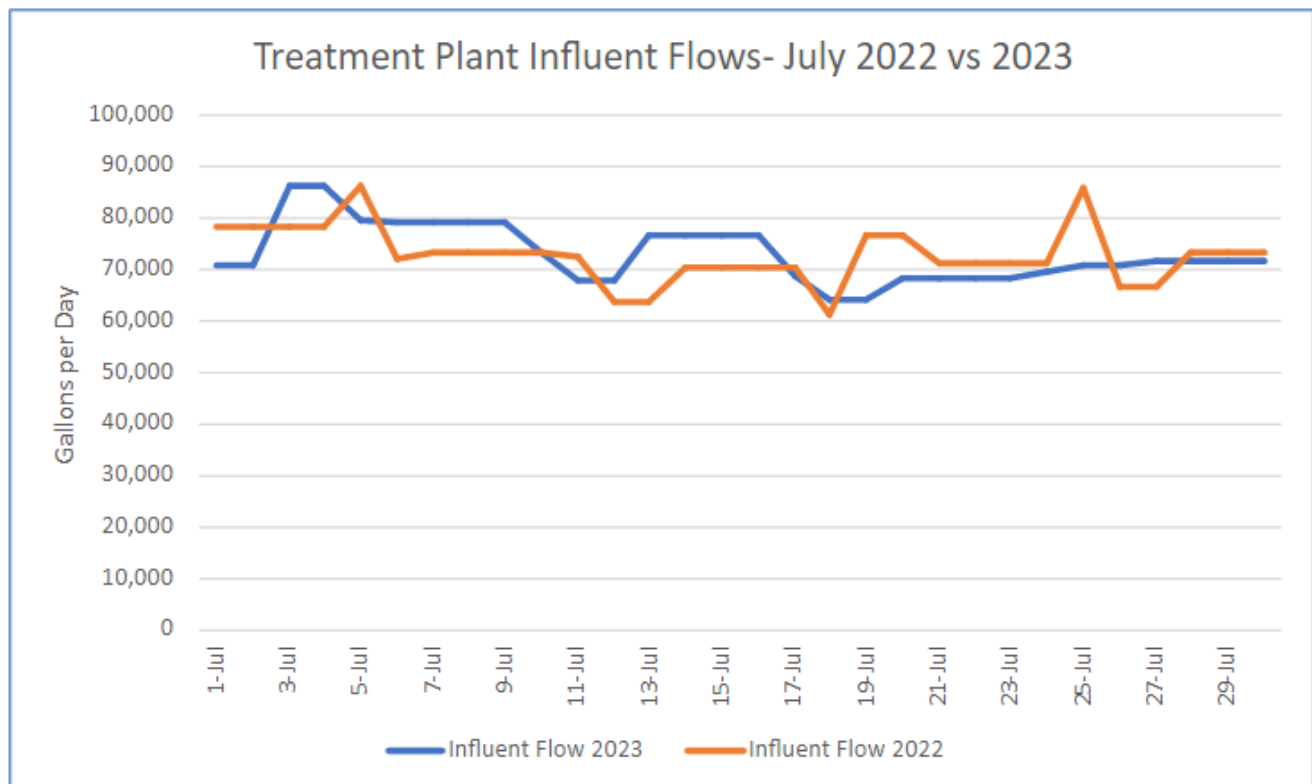
COPY: Nick Lenzi, Jacobs
Andrew Waldron, Jacobs
Justin Straub, Jacobs

This report describes our activities during the month of July 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

	July	Last Month	Last Year
Influent flow daily average, GPD	73,171	56,704	73,052
Monthly electrical usage, Kw Hrs*	26,038	23,944	28,991

* Note: Wind turbine is permanently out of service.



The above graph compares the plant influent flows of July of last year to that of July 2023.

A new variable frequency drive (VFD) has been installed on MBBR mixer #7, replacing the original VFD from 2008 which had malfunctioned. VFDs are employed to enable equipment to function at varying speeds and to facilitate gradual startup, avoiding the stress of immediate full-speed initiation that can be detrimental to the equipment's longevity.

The rapid infiltration beds (RIBs) underwent tilling on July 18th to tackle weed growth and uphold their infiltration capabilities.

Lift Stations / Collection System

The control panel upgrades for the 7th St. pump station were successfully finalized during the week of July 17th. These enhancements have effectively reinstated the station's control and monitoring functions to meet the original design specifications.

Residential Grinder pumps

To enhance our efforts in minimizing recurring service requests for residential grinders, we conduct the following checks prior to concluding our work on-site. The grinder pump responses are summarized in Table 1 below. Additionally, Jacobs holds a stock of repair parts for residential grinder pumps, encompassing control components, float control switches, and pumps themselves. In the event of a malfunctioning pump, it is transported to a nearby repair facility, where a determination is made regarding the feasibility of repair versus replacement. Opting for a repair proves to be more cost-effective compared to acquiring a new pump. Further specifics can be furnished upon inquiry.

- ✓ 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
7-5-23	12161 Indian Beach Road	• High level	• Replaced start capacitor
7-5-23	10915 Northshore Dr.	• No power to panel	• Determined the underground power supply wire was bad and instructed homeowner to contact electrician to repair.
7-5-23	12833 Northport Point Rd.	• High level	• Pump failed. Replaced with a new grinder pump.
7-14-23	107 Park Dr.	• High level	• Replaced start and run capacitors. • Replaced grinder pump
7-14-23	13589 Northport Point Rd.	• High level	• Replaced grinder pump • Replaced start capacitor

Date	Location	Alarm/Issue	Resolution
7-31-23	12161 Indian Beach Rd.	<ul style="list-style-type: none"> High level 	<ul style="list-style-type: none"> Found significant corrosion in panel. Confirmed inlet wiring is sealed from wet well. Replaced grinder pump. Replaced run float switch. Start and stop capacitors. Repaired wiring connections Replaced potential relay.
7-27-23	359 W. 3 rd St.	<ul style="list-style-type: none"> High level 	<ul style="list-style-type: none"> Found flushable wipe jammed in pump. Removed and returned to service.
7-27-23	716 Ransom St.	<ul style="list-style-type: none"> Pump seal fail 	<ul style="list-style-type: none"> Pump seal failure resolved.

On the Horizon

Task	Update	Estimated time of completion
Aeration blower #2 repair or replacement	PO issued to Contractor. Scheduled for install week of August 27 th .	2023
Force main cleaning from main lift station to plant	Jacobs provided proposal for consideration	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	Next sampling scheduled for August	August 2023
Northport WWTP Annual Public Open House	Providing plant tours to the public	September 12 th , 2023
Annual settling basin cleaning	Scheduling for Fall	October 2023
Main lift station controller replacement	Complete and commissioned April 2023.	Complete
7th St. station controller replacement	Complete and commissioned July 2023.	Complete
Replace failed VFD on mixer 7	Completed July 2023	Complete

Financial Report

Current Reporting Month	Jul-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	\$ 5,002.78	Purchased spare grinder pumps to replenish inventory.
Repairs Spending Residential Grinder Pumps Year to Date	\$ 14,742.48	
Repair Spending Collection System (lift stations/sewer) Current Month	\$ 20.46	
Repair Spending Collection System (lift stations/sewer) Year to Date	\$ 1,273.36	
Repairs Hours Treatment Plant Current Month	-	
Repairs Hours Treatment Plant Year to Date	-	
Repairs Hours Treatment Plant Current Month	13.50	
Repairs Hours Treatment Plant Year to Date	125.50	
Repairs Hours Residential Grinder Pumps Current Month	36.75	
Repairs Hours Residential Grinder Pumps Year to Date	104.00	
Repair Hours Collection System (lift stations/sewer) Current Month	4.00	
Repair Hours Collection System (lift stations/sewer) Year to Date	63.00	
Total Repair Hours Current Month	40.75	
Total Repair Spending Current Month	\$ 5,023.24	
Total Repair Hours Year to Date	167.00	
Repairs Hours Budget Remaining (Limit 300 Hrs)	133.00	Amount remaining
Total Repair Spending Year to Date	\$ 17,304.91	
Repair Spending Budget Remaining (Limit \$8,000)	\$ (9,304.91)	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.

Mark Huggard | [Jacobs](#) | Project Manager
 O: 231.922.4922 | M: 231.313.5592 | mark.huggard@jacobs.com
 606 Hannah Ave. | Traverse City, MI 49686 | United States