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Jacobs Engineering
606 Hannah Ave.
Traverse City, MI 49686
T 231-922-4922

January 8, 2024

Attn: Joni Scott
Clerk
Northport Leelanau Township Utility Authority, NLTUA

Project name: Northport
Project no: 378107CH

Subject: Monthly Operations Report

Dear Mrs. Joni Scott

This report covers our operations and maintenance activities for the month of December 2023.

Yours sincerely,

Mark J Huggard

Mark Huggard
Project Manager

231-313-5592
Mark.huggard@jacobs.com

Copies to: NLTUA Board
Jacobs Staff

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Executive Summary

This month's operations report highlights several key activities at the NLTUA facility.

- Submitted November's DMR, meeting all compliance requirements.
- Completed the annual cleaning of the MBBR solids basin.
- Completed one residential grinder pump repair.

Upcoming activities include:

- February quarterly monitoring well sampling.
- Submittal of December 2023 DMR.

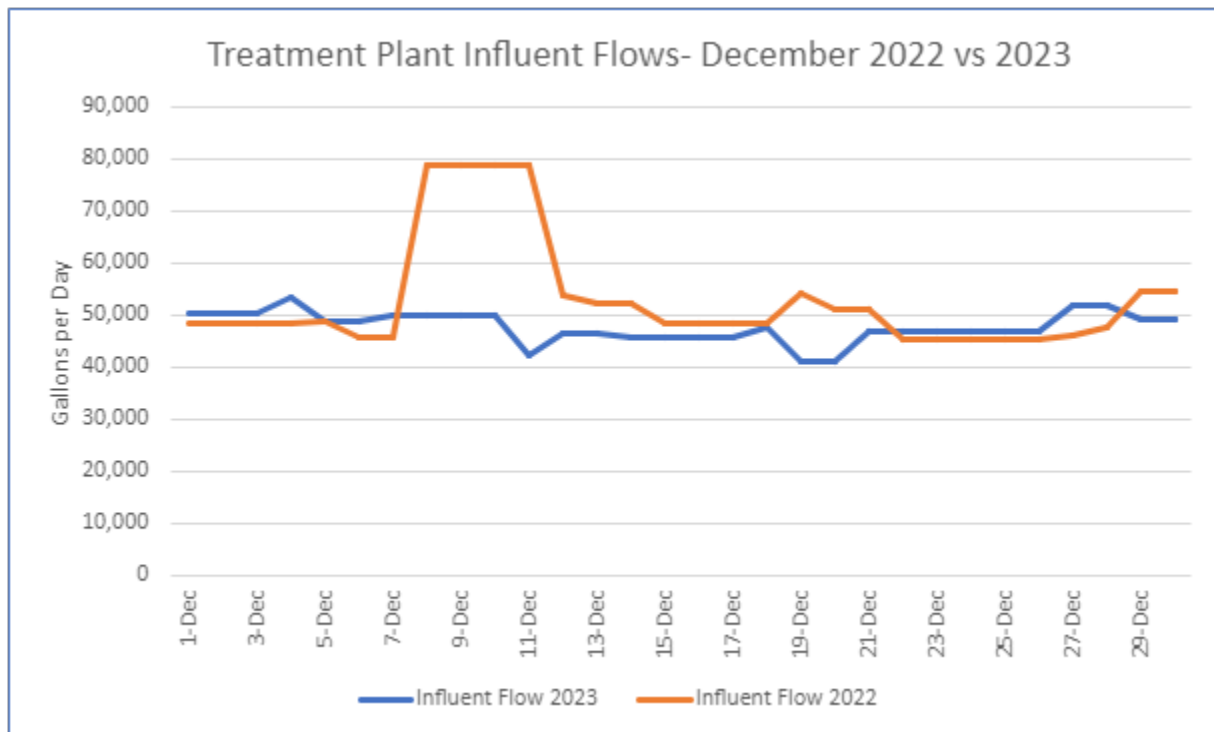
If there is anything you would like to see added to the monthly reports, please feel free to let us know.

Treatment Plant Operations and Maintenance

	January 24	Last Month	Last Year
Influent flow daily average, GPD	48,068	48,429	53,205
Monthly electrical usage, Kw Hrs*	28,908	31,125	37,226

We submitted the monthly Discharge Monitoring Report (DMR) for November 2023. The facility was in compliance with all permit parameters.

The following graph compares the plant influent flows of the reporting month last year to that of 2023. The temporary spike in influent flow volumes shown for December 2022 were due to the cleaning and televising of the Northshore sewer piping.



Annually, we redirect influent flow to basin #2 (storage basin) for the cleaning of the influent anoxic basin and the effluent solids basin. The cleaning for this year started on December 11th and concluded on December 14th. The yearly cleaning of the settling basin is indispensable to remove accumulated solids that, if left unattended, could negatively impact the facility's effluent quality.

Given the numerous safety hazards associated with this task and the substantial labor required, we have recognized the need for an engineering study in the facility's Capital Improvement Plan (CIP). The primary objective of this study is to explore cost-effective modifications to the solids removal process. The goal is to eliminate the necessity for performing this labor-intensive task annually, while also aiming to reduce the cost of ferric chloride and minimize the risk to the quality of the facility's effluent.



Left photo: During the cleaning or inspection of the influent anoxic basin, it is necessary to lower the water level in both basins on either side of the Moving Bed Biofilm Reactor (MBBR) structure. While the majority of the cleaning activities are focused on the settling basin side, the design limitations of the divider wall on the south side of the MBBR necessitate lowering the water level on both sides.

The divider wall is specifically designed to handle equal loads on each side, which influences the operational requirements during cleaning or inspection activities.

Below photo: File photo of settling basin during cleaning/inspection.



Collection System Operations and Maintenance

Collection System

No issues or updates this month.

Lift Stations

Lift stations operating well no issues.

Grinder Pump Responses

As part of our due diligence to reduce repeat call out repairs to residential grinders, we perform the following checks at each visit.

- ✓ 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.

The following table summarizes our grinder pump responses. More details can be provided upon request.

Date	Location	Alarm/Issue	Resolution
12-20-23	12678 E. Woolsey Lake Rd	<ul style="list-style-type: none">• High level	<ul style="list-style-type: none">• Replaced pump start capacitor

On The Horizon

Task	Update	Estimated time of completion
Annual manhole inspections	Completed 50% remaining 50% to be completed spring 2024.	Spring 2024
Monitoring well 7S repair/replacement	Complete	Complete
Settling basin engineering evaluation	NLTUA to consult their engineer	2024
Ferric chloride room day tank relocation	NLTUA to consult their engineer	2024
Quarterly Monitoring Well Sampling	1st quarter 2024	February 2024
Annual settling basin cleaning	Completed in December 2023	Fall 2024
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
Aeration blower #2 repair or replacement	Commissioned by contractor and in service	Complete

Financial Report

Location	December 2023	Comments
Repairs Spending Treatment Plant Current Month	-	
Repairs Spending Treatment Plant Year to Date	\$3,081.27	
Repairs Spending Residential Grinder Pumps Current Month	-	
Repairs Spending Residential Grinder Pumps Year to Date	\$26,370.11	
Repair Spending Collection System (lift stations/sewer) Current Month	-	
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	238.50	
Repairs Hours Residential Grinder Pumps Current Month	(12.00)	
Repairs Hours Residential Grinder Pumps Year to Date	186.25	
Repair Hours Collection System (lift stations/sewer) Current Month	-	
Repair Hours Collection System (lift stations/sewer) Year to Date	77.25	
Total Repair Hours Current Month	(12.0)	Corrected Labor Hours
Total Repair Spending Current Month	-	
Total Repair Hours Year to Date	502.00	
Repairs Hours Budget Remaining (Limit 300 Hrs)	(202.00)	
Total Repair Spending Year to Date	\$30,724.74	
Repair Spending Budget Remaining (Limit \$8,000)	(\$22,724.74)	
Total Repair Hours 2022	679.50	
Total Repair Spending 2022	\$45,783.13	