

TO: Chris Holton, NLTUA
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FROM: Mark Huggard, Jacobs

DATE: December 19th, 2022

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

This report describes our activities during the month of November 2022. 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

	November	Last Month	Last Year
Influent flow daily average, GPD	53,938	60,986	55,101
Monthly electrical usage, Kw Hrs	32,675	33,334	23,121

Semi-Annual Landia Mixer oil changes and inspections were completed on November 17th.

Windemuller Electric was onsite on November 9th and 10th completing the installation of the new decant pump conduit and biosolids basin alarming.

Quarterly monitoring well sampling was completed on November 8th.

Lift Stations / Collection System

During our annual manhole inspections, we noted a flow restriction on a portion of the gravity main along Northshore Drive. A contractor was brought onsite to jet/ clean the line but was unable to proceed past an unknown restriction. The main was then televised to identify the issue, which resulted in the discovery of corrosion within the pipe and the discovery that approximately 700’ of 8” gravity sewer pipe is comprised of concrete lined ductile iron pipe (CDIP) as opposed to PVC pipe. CDIP is susceptible to corrosion when exposed to low pH conditions, as in our case the low pH is created by the presence of hydrogen sulfide (H2S) gas. Currently, we believe the H2S has caused a failure of the concrete lining within the pipe, allowing the concrete to break loose and collect at one or more points, creating a flow restriction. The NLTUA is working with contractors to identify the most cost-effective and long-term solution to relining the pipe.

NLTUA Operations Report – November 2022

We responded to a loss of power at the Northport Point Road lift station on Saturday November 5th at 7:00 pm. The portable generator was set up and provided power to the station until line power was restored on Sunday November 6th at approximately 11:00 am.

Annual lift station inspection summary:

Date	Location / Description	Findings
11-29-22	Northport Point Rd Station	<ul style="list-style-type: none"> Pumps were in overall good condition Pump #1 impeller was found chipped. Purchase a spare in 2023.
12-1-22	Main Lift Station	<ul style="list-style-type: none"> Pumps were in overall good condition Removed accumulated debris from top of pump. Pump is new and was in good condition.
12-1-22	7 th St. Pump Station	<ul style="list-style-type: none"> Pumps were in overall good condition. Removed debris buildup from pumps. Impellers showing wear. Due to age (15 years) we recommend purchase of one spare for this location.

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
11-30-22	13300 Circle Dr.	<ul style="list-style-type: none"> High level alarm 	<ul style="list-style-type: none"> Removed rags from impeller of pump Removed quite a bit of rags and grease from the well

On the Horizon

Task	Update	Estimated time of completion
Aeration blower #2 repair or replacement	NLTUA to issue PO to Air Components Inc.	Fall 2022
Main lift station controller replacement	Provided NLTUA cost for approval.	Fall 2022
Hach SC 100 replacement	Install scheduled	January 2023
7th St. station controller replacement	No updates	2023
Main lift station re-lining	No updates	2023
Force main cleaning from main lift station to plant	Develop cleaning plan	2023
Settling basin engineering evaluation	No updates	2023
Ferric chloride room day tank relocation	No updates	2023

Financial Report

Current Reporting Month	Nov-22	Comments
Repairs Spending Treatment Plant Current Month	\$ 254.37	\$254.37 = Grinder pump repair parts for repairs at 302 W. Street.
Repairs Spending Treatment Plant Year to Date	\$ 11,447.01	
Repairs Spending Residential Grinder Pumps Current Month	\$ 5,044.18	\$4,543.58 = Milan Supply - purchased two new grinder pumps to replace spent inventory. \$500.60 = Purchased grinder pump repair parts.
Repairs Spending Residential Grinder Pumps Year to Date	\$ 15,947.14	
Repair Spending Collection System (lift stations/sewer) Current Month	\$ -	
Repair Spending Collection System (lift stations/sewer) Year to Date	\$ 5,979.19	
Repairs Hours Treatment Plant Current Month	-	
Repairs Hours Treatment Plant Year to Date	239.75	
Repairs Hours Residential Grinder Pumps Current Month	10.00	
Repairs Hours Residential Grinder Pumps Year to Date	209.75	
Repair Hours Collection System (lift stations/sewer) Current Month	29.00	
Repair Hours Collection System (lift stations/sewer) Year to Date	184.00	
Total Repair Hours Current Month	39.00	
Total Repair Spending Current Month	\$ 5,298.55	
Total Repair Hours Year to Date	633.50	
Repairs Hours Budget Remaining (Limit 300 Hrs)	(333.50)	Repair labor hours over 300 hour limit
Total Repair Spending Year to Date	\$ 33,373.34	
Repair Spending Budget Remaining (Limit \$8,000)	\$ (25,373.34)	Repairs over \$8,000.00 limit
Total Repair Hours 2021	826.45	
Total Repair Spending 2021	\$ 16,154.42	

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

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