

NLTUA Operations Report January 2022

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DATE: February 14th, 2022

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Andrew Waldron, Jacobs
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This report describes our activities during the month of January 2021. 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

	January	Last Month	Last Year
Influent flow daily average, GPD	47,979	50,831	52,480
Monthly electrical usage, Kw Hrs	35,995	27,584	21,094

The increase in electrical usage can be attributed to the out of service wind turbine awaiting repairs. Repair parts are expected to arrive in April.

The annual valve exercising preventive maintenance (PM) tasks for the Treatment Plant and Lift Stations were completed. These tasks entail exercising each valve that isn't already operated frequently, through a full open and close cycle, then returning it to its normal operating position. All valves are exercised to prevent a buildup of rust in the pipes as a result of corrosion or other mineral deposits that could render the valve inoperable or at a minimum reduce its full functionality. All valves functioned without issue during this exercise.

We completed the annual inspection of the 7th St. station pumps and the Northport Point Rd. pumps. Light debris was found on the impellers of the 7th St. pumps and removed. No significant issues were noted during the inspection. As shown below the Northport Point Rd. pumps exhibited signs of corrosion due to H₂S exposure and a slight buildup of material on the impellers and around the pump base. This material was removed prior to reinstallation. Overall, the pumps are functioning well but a long-term solution to eliminate the corrosive atmosphere at this location should be investigated further and included as a future Capital Improvement Project. The main lift station was not inspected due to its current operating state.

Northport Point Rd. Lift Station Pump



Pump Volute



Pump Volute with debris



The new reject chamber pumps arrived and were installed on January 4th, 2022. Prior to installing we removed all material from the floor of the wet well. We re-configured the systems controls to run both pumps during each pump cycle vs one at a time. This was done to increase velocity within the discharge line, therefore reducing the likelihood of solids buildup within the line that has previously caused flow restrictions. The check valves for each pump were also inspected and replaced due to wear.

Lift Stations / Collection System

The delivery date for the new Main Lift Station replacement pumps was extended due to supply chain issues. The new estimated arrival date is early April 2022. The repaired pump installed in December is continuing to function without issues. Jacobs bypass pump is staged for redundancy and will remain onsite until the new pumps arrive.

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 details our grinder pump responses.

- ✓ 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

Date	Location	Alarm/Issue	Resolution
1-18-22	11251 North Shore Dr.	<ul style="list-style-type: none"> • Discharge flex coupler compromised 	<ul style="list-style-type: none"> • Kal Excavating exposed and replaced coupler.
1-11-22	9787 N. Manitou Tr.	<ul style="list-style-type: none"> • High Level 	<ul style="list-style-type: none"> • Failed run capacitor. Changed both the run and start capacitors.
1-4-22	13170 Paradesia Rd.	<ul style="list-style-type: none"> • Seal Fail Alarm 	<ul style="list-style-type: none"> • Replaced seal fail relay.

On the Horizon

- Aeration blower #2 repair or replacement. NLTUA sent letter to Manufacturer to recoup cost.
- Fine screen brush replacement - 2022
- 7th St. station upgrade - 2022
- Repair utility sink cold water line - 2022
- Ferric Chloride room day tank relocation - 2022
- Hach SC 100 replacement - 2022
- Main lift station re-lining - 2022

- MBBR tank roof coating – 2022
- Settling basin engineering evaluation – 2022
- Capacity evaluation task 1 and 2 – 2022
- Low pressure force main cleaning - 2022

Financial Report

Financial information was not available at the time of report submittal. The January financial report will be included with February's Monthly Operating Report.

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

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