

# SEWER ADMINISTRATORS REPORT LELAND TOWNSHIP SEWER SYSTEM AUGUST 2022

Prepared by Steve Patmore, Sewer Administrator  
for September 2022 Meetings

Influent and Effluent readings for August were normal for this time of year. Effluent flows are being maintained near the maximum allowable level to keep lagoon levels within operational limits. The lagoon level freeboard at the end of August was around 7 feet, which is within normal operational levels for this time of year.

## **HYDROGEN SULFIDE CONTROL PROJECT PILOT STUDY**

- Calcium Nitrate addition rate is continuing at 30 gallons per day.
- Hydrogen Sulfide levels have been noticeably lower downstream, with some fluctuations.
- H<sub>2</sub>S levels at Popp Road tempered by untreated effluent from Lake Leelanau.
- H<sub>2</sub>S levels being monitored by IAI. - Pilot study to continue through October.
- H<sub>2</sub>S levels in Lake Leelanau LS drew complaints a few days. Calcium Nitrate was added manually.
- Looking at alternative oxygen treatments for Lift Stations vs. chemical.

## **HARBOR LIFT STATION**

- Scheduled valve chamber replacement of valves – will be completed in the fall.
- Step-down transformer was installed and tested with our portable generator.
- Researching telemetering options.

## **ON-GOING SCHEDULED PROJECTS / MAINTENANCE / REPAIRS**

- Duck Lake Road Lift Station - pump seat flange installed 8/31/2022.
- Thompson Street – received proposal from IAI to install the pump rails using a steel plate instead of concrete. Will look at modifications to the drop inlet to avoid problems.
- Influent flowmeter – unable to install due to leaky gate valves. Kal Excavating to investigate in Fall.
- Air Release Valves: one was discovered leaking after inspection and was turned off, two need troubleshooting, one scheduled for replacement. Future ARV's need to be epoxy coated or nylon coated.
- Three WWTP lagoon aerators in operation now. The aerator manufacture rep visited the WWTP and is making recommendations.
- Replacement screens for the bio filter arrived – the old screens were less than two years old. Manufacturers Rep sent cleaning instructions. Valves outside the filter building are frozen – not exercised.
- Dosing valves and actuators need to be checked for leakage.
- Influent manhole – will be bid out for construction.

## **SEWER OPERATIONS & CALL-OUTS (IAI report)**

- STEP pump rebuild by IAI at 440 W. Main Street.
- Biofilter was out of service for a couple weeks due to an electrical motor issue. (speed controller)
- The PLC (computer controls) at the WWTP was programmed due to flow totalizer “glitches”.
- Drainfield pipe repairs by IAI.
- Phosphorous effluent tested at over 5 ppm. Goal is 0.5 ppm
- Monitor Wells – phosphorous average = 0.97 ppm, standard is 0.5 ppm.
- Ferric Chloride was delivered.

## **SYSTEM ADMINISTRATION**

- Questions on connections and the sewer system in general, permits & building.
- Miss Dig staking requests steady
- 3-4 houses under constructions being reviewed and measurements.
- Several septic tanks pumped.
- Odor at Fishtown – contractor need to install charcoal filters.
- Sewer permit at 313 E. Oak Street – no septic tank conflict as speculated.
- Several requests for connection information – new construction/additions
- Annual delinquent account list – submitted to Treasurer.
- Meter readings
- Commercial construction at 123 N. St. Joseph – connection fee received.
- Site Plan Review for proposed distillery.

**NOTE:** After a site investigation, it was determined that the septic tank for 237 S. Chandler Street is not located on the adjacent lot. Apparently, the lot owner installed a new tank – which was not shown on any of our records.

The tank on the vacant lot was found to be abandoned – and will be removed and replaced for the new house construction.



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## ***Monthly Operations & Maintenance Report***

**Aug 31, 2022**

**Report for Month:** August 2022  
**Location:** Leland Township  
**Facilities:** Leland Township Wastewater Treatment Plant  
**Certified Operator:** Tom Lutke

### **Emergency Callouts/Customer Complaints**

- 8/7/22 call out to the plant for valve 7 not closing. This valve was out of rotation, closed, and turned off so it shouldn't have caused this alarm. It was taken off the alarm list on the PLC until the issue causing this can be resolved.
- 8/9/22 call out to 1321 N. Manitou Trail. Customer stated the manhole on his neighbor's property was leaking sewage. Williams and Bay were called to pump the man-hole which contained a faulty ARV. ARV was shut off until it can be repaired or replaced.
- 8/15/22 call out to 370 W. Main. Stop float wasn't working properly as it kept turning on and running even without the start float activated. Rewired the existing connections in the junction box to eliminate unnecessary additional connections.
- 8/17/22 call out to 370 W. Main Customer stated it was doing the same thing. Replaced the stop float and that did not correct the issue. So, I pumped down the system and left it off until I could come back in the morning. Returned the following morning and system worked like it's supposed to. I adjusted the floats too keep it from running non-stop due to the amount of water filling back in the chamber and tested it with a hose. After testing it a few times it started acting up again so, I replaced the control module in the panel. System worked properly when I left.
- 8/27/22 call out to 370 W. Main re- installed a check valve that we previously removed. This will keep the chamber from constantly refilling causing the interface t Issue seems to be resolved now.

### **Significant Events:**

- 8/1/22 Narrows man-hole that runs to the lift station was jetted by Williams and Bay. Kal's excavating removed the cap inside the lift chamber to improve flow.
- 8/5/22 lowered the floats at the Thompson St. lift station and separated them to insure proper operation.
- 8/9/22 Called out to a failing ARV on N. Manitou Trail. Pumped and taken out of service.
- 8/11/22 Fixed 2 broken 4-way clean-outs in the drain field.
- 8/16/22 Gear drive motor stopped working. Removed the filters from the bottom of the unit to keep the plant running.
- 8/18/22 Dave Conners a Nuove Filter Rep visited the plant to go over different techniques to improve efficiency with the disk filter and ways to extend its life span.
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- 8/23/22 Met with Windemueller to go over their installation of the transformer to the Marina lift station and ran it off the generator to make sure it works like it supposed to.
- 8/25/22 Windemueller came out to replace the drive in the disk filter upon further diagnosis they realized it was actually the speed controller. They by-passed it for the time being and the speed is controlled manually on the motor.
- 8/31/22 IAI mechanical division repaired pump 1 mount at the Duck Lake lift station.
- 8/26/22 Steve, Gabe, Bob and myself met with Nathan from Hamlett environmental technologies. Discussed ways to improve efficiency in the lagoon to try and reduce duck weed and routine maintenance needed to keep the aerators running smoothly and last longer. We also discussed replacement options for the aerators.

**Preventive Maintenance:**

- Calcium nitrate delivery for the system to improve h2s levels
- Thorough inspections and evaluations of the drain field condition and planning for future repair.
- Air relief valve inspections to find all the locations and plan for future work to promote adequate operation
- Rebuilding bulkheads to keep call outs down and the system operating smoothly
- Routine maintenance and inspections on the lagoon and aerators.

**Facilities Data for the Month**

	July 2022	Aug 2022	Year to Date	Units
Effluent	2.36	2.61	14.53	MG
Influent	3.0	2.92	9.62	MG
Freeboard	-.9(8 ft.)	-1.1(6.5 ft.)	+.1	FT
Ferric Chloride	217.3	102.4	2,511.8	GAL
Electric	6239	97300	97300	KWH