

LELAND SEWER SYSTEM

2023 ANNUAL REPORT

FOR MARCH 30, 2024 LELAND TOWNSHIP ANNUAL MEETING

PREPARED BY STEVE PATMORE, SEWER ADMINISTRATOR

MARCH 30, 2024

I. OVERVIEW:

- This past year was another busy year for the Leland Township Sewer System.
- The system is now over 30 years old, and many of the components of the system are being gradually evaluated, and upgraded or replaced.
- In 2023, we worked closely with our system operators, IAI, Inc., the Sewer Commission, Township Board, Township Treasurer, Township Clerk, Michigan EGLE, and various outside contractors, vendors, and agencies to ensure that the sewer system operates in an efficient manner.
- In 2024, we are in the process of re-organizing the sewer operations, which will improve the capabilities and costs of maintaining the sewer system.

II. SEWER FLOWS, LAGOON LEVELS AND MONITORING WELLS:

- Sewer effluent flow discharged by the system to the drain fields in 2023 totaled 26.14 million gallons, (71,600 gallons per day average). Our Wastewater Discharge Permit from the State of Michigan allows for an annual discharge of 33 million gallons. The effluent discharge is controlled by maintaining the wastewater lagoon levels.
- A better indication of sewer flows in the sewer system is the amount of sewage influent that is being collected and sent to the WWTP by users. In 2023, influent flows to the plant from the community was estimated at 23.21 million gallons, and accounts for 70% of our rated capacity. A new influent flow meter was installed in 2023.
- The Sewer Commission receives an annual analysis of sewer flows and available capacity, including looking at the averages from past years, and has confirmed that our system is operating safely below capacity. Based upon this review, the system could potentially serve the anticipated growth within the sewer district.
- The wastewater lagoon levels have been maintained within the normal operational levels.
- The average phosphorous content in four of our monitor wells is down to just over 0.7 parts per million, which is still slightly above the target of 0.5, however, is a significant improvement over levels from past years. Since 2014, we have been treating the effluent for phosphorous, and have had a significant decline in the phosphorous levels in the monitoring wells.

III. PROJECTS COMPLETED LAST YEAR

- Hydrogen Sulfide Control: In 2023 we continued the pilot study of chemical treatment (calcium nitrate) for hydrogen sulfide (H₂S) removal, and continued to measure it at key points in the system. This trial continued to show a significant reduction in H₂S, however, it has been relatively labor intensive and the materials are becoming more expensive, so we are also looking at other biological and mechanical treatments for H₂S. We are also working with Michigan EGLE on getting permission to make the calcium nitrate additive a permanent solution.
- The influent flow meter on Popp Road was replaced.
- Thompson Street Lift Station – guide rails were replaced.

- The forcemain on Popp Road was repaired after a small leak was detected.
- A few more individual home pump stations (STEP Pumps) were re-built in the past year.
- Three of the four lagoon aerators were replaced and a maintenance program has been set-up.
- Drainbeds were evaluated and flushed.
- The WWTP Clarifier, Biofilter, and sludge pump systems have all had issues of sending out nuisance alarms, and are being evaluated for efficiency.
- Electrical Safety work at lift stations.

IV. SEWER PROJECTS PLANNED FOR 2024

The following projects are planned for 2024:

- Continuation of Hydrogen Sulfide treatment project.
- Continue evaluation and flushing of drainfields.
- Replacement of a few dosing valves in the WWTP.
- Continue STEP System upgrades at selected residential pumps.
- Rehabilitate WWTP Influent Manhole.
- Rehabilitate 2-3 force main air relief valves.

V. ADMINISTRATION

- In late 2023, our contracted sewer system operator, Infrastructure Alternatives, Inc, (IAI) informed us that they would be terminating the operations contract with Leland Township, with the option of a new contract for an additional \$70,000 per year.
- We spent considerable time evaluating our alternatives, and after discussions with the Sewer Commission and Township Board, the decision was made to bring the operation of the sewer system in-house by hiring employees of the township. Wastewater Technician Mitchell Gawrysiak, a former employee of IAI, was hired to be the senior operator of the system, and supervised by the Sewer Administrator. A new truck was purchased for use on the system.
- Last year continued to be a busy year for new construction on the system. Several new homes are being constructed. Lots of questions, budgeting, billing, water meters, Miss Dig system requests.
- Several commercial projects reviewed.
- Septic tank pumping for 2024 – more inspections due to costs.
- Charcoal filters for individual house vents are available at no cost – homeowner must install.

VI. FUTURE PLANNING

- We are updating the ten-year Capital Improvement Plan to identify where funds will be needed, using the Sewer System Assessment as a guide. This Plan is used to plan budgets and evaluate sewer rates now and in the future.
- Asset Management Software

VII. FINANCIAL

- Sewer rates were adjusted in 2023, they not been adjusted since 2017.
- The 2024 Sewer Budget contemplates a cost-of-living increase to the Sewer Improvement Fund.
- The Connection Fee for new users will also be reviewed in 2024.

VIII. Thank-you to the Township Board, Sewer Commission, Operators, Engineers, and Contractors.

IX. Contact the Leland Township Sewer Administrator, Steve Patmore, at sewer@lelandtownship.com or (231) 866-0799 with questions.