

THE EATONTOWN SEWERAGE AUTHORITY



MAINTENANCE REPORT

Report for August 2026 Activities

1. GIS pilot trial and CCTV Software Review (Old Orchard Basin)

To evaluate the software without financial risk, we conducted a pilot with SewerAI to process CCTV lines feeding into the Old Orchard Pump Station flow basin to go with our GIS pilot trial. (Sewer AI and arc GIS review)

- **Speed & Accuracy:** AutoCode technology flagged pipe defects automatically at 99%+ accuracy and 6x manual review speed, using our existing camera truck with no extra hardware required.
- **Risk and Asset Management:** The platform calculates Likelihood of Failure based on structural pipe defects and pairs it with Consequence of Failure risk factors.
- **Capital Planning:** Matches observed defects with recommended repair techniques and attaches estimated repair costs. This assists us in generating prioritized, data-driven Capital Improvement Projects and targeted asset management reports for high-risk areas.
- **Operational Impact:** Automating preliminary video reviews drastically cuts desk-bound office hours, allowing staff to verify findings quickly, clear backlogs, and pivot back to field maintenance and pump station operations.

2. Predictive Maintenance and Automated Re-Inspection

SewerAI's analytics go beyond basic defect logging to assist in ongoing maintenance scheduling:

- **Predictive Re-Inspection & Jetting Signals:** The software analyzes historical CCTV defect trends (grease buildup, root intrusion, and structural degradation) to calculate optimal re-cleaning and re-inspection intervals. It automatically flags when a sewer mainline is due for jetting or follow-up CCTV before a blockage or backup occurs.

3. The Bigger Picture: ArcGIS as the Single Master System (GIS, SCADA & Flow Integration)

Transitioning to SewerAI establishes the foundation to unify all authority infrastructure data into ArcGIS as our master database and central operational platform. By connecting SewerAI, our CMMS work order system, iControl SCADA, and flow monitoring meters into ArcGIS via open APIs, all collection system data for both gravity mains, force mains, and pump stations is accessed from a single map—eliminating scattered OneDrive folders, spreadsheets, and paper logs while ensuring complete cloud security (SOC 2 Type II certified).

- **Gravity Sewer Mains & Force Mains:**

Selecting any pipe or manhole on the map opens its complete profile—including pipe material, diameter, installation year, manhole rim elevations, upstream/downstream pipe invert elevations, calculated slope percentages, historical CCTV video links, all logged pipe defects, automated repair recommendations, complete repair records, historical maintenance/jetting logs, and sub-basin flow meter data to correlate rain-induced flow spikes with broken pipe sections.

- **Pump Stations & Lift Stations:**

Selecting any pump station on the map opens its complete mechanical, historical, and real-time operational data—including pump specs (brand, model, HP, serial numbers, impeller type), control panel configurations, full replacement/repair logs, generator service logs, and live/historical iControl SCADA data (Pump hours, real-time force main PSI, pump discharge flow rate, pump starter currents)

Recommendation: I am recommending replacing our current CCTV software to SewerAI to modernize pipe inspection workflows, eliminate fragmented records, and establish a predictive asset management system centered on our ArcGIS map.

4. New Lateral Line Installation – 65 Wyckoff Avenue (Arboretum Bathroom)

- **Scope & Implementation:** A 40-foot lateral line was installed extending from the main line in the center of the road to a cleanout located past the fence line. This line is for the new arboretum bathroom.
- **Compliance & Status:** The installation was fully inspected and confirmed to be in full compliance with all agency rules and regulations.

5. Trenchless Point Repair Demonstration

- **Field Trial Overview:** Attended a field demonstration with Source One Environmental to evaluate their "Pipe Patch" No-Dig point repair system.

- **Scope & Implementation:** The demonstration involved installing a quick-curing resin sleeve over a section of missing pipe on Park Avenue, successfully rehabilitating the line without requiring open-cut excavation or flow bypass pumping.
- **Technical Evaluation:** The application was successful, effectively spot-lining a 3-foot pipe section containing three distinct voids.
- **Operational Considerations:** Equipment costs are approximately \$4,000 for the kit, with individual resin sleeves running \$245 each. Setup and cure times were notable factors, requiring approximately 2 hours for setup and 3 hours for resin curing. For mainline applications, mechanical systems like Quick-Lock offer greater efficiency by eliminating curing time and reducing setup labor.
- **Recommendation:** The Source One lateral patch kit (\$2,500) presents high operational value for 4-inch lateral spot repairs, where mechanical options do not exist. Acquiring this kit for inventory is recommended.

6. Storm Drain Municipal Assistance

- **Parker Road Resurfacing Preparation:** The Borough is preparing an engineering proposal for drainage replacement and roadway resurfacing along Parker Road (covering approximately 4,000 linear feet from Wall Street to the municipal boundary). At the Borough's request, authority staff jetted and televised the entire storm drainage line to identify necessary repairs or replacements prior to paving.
- **Emergency Assistance:** Responded to an urgent request for storm drain assistance on Stirrup Lane and Tess Court, using the combination jet/vacuum truck to clear and jet blocked lines.

7. Plan Reviews & Inspection Approvals

- **29–31 Tinton Avenue:** This duplex was demolished and new single-family residential house is planned. The existing lateral line was disconnected, capped, and inspected. The installation passed inspection, and formal approval was transmitted to the Building Department.

8. Pump Station Updates, Repairs & Emergency Response

- **Old Deal Road Pump Station:** Pump #2 tripped after becoming clogged with rags. Staff pulled and cleared the unit to restore operation. Given the age and recurring issues with this pump, monitoring has been increased, and replacement is being prioritized for consideration next month.
- **Wampum Pump Station:** Received a generator failure alarm caused by an Automatic Transfer Switch (ATS) failing to transfer power automatically. Staff performed a manual transfer to resolve the immediate issue. As this station is scheduled for full replacement in the near future, no major capital repairs are recommended for the ATS at this time.

- **Maxwell Pump Station:**
 - **Pump #1 Failure:** Executed emergency response for a repeat failure on Pump #1 (third incident within a short window). Due to the age and mechanical degradation of the unit, rebuilding is no longer cost-effective. A replacement pump has been ordered and is awaiting delivery.
 - **Generator Maintenance:** Replaced the generator start battery to ensure emergency power reliability.
- **Mainline Blockage (25 Maxwell):** Responded to and cleared a mainline blockage at 25 Maxwell. Follow-up CCTV inspection work is underway today to evaluate structural integrity and determine if pipe repair or replacement is required.

Monthly Jetting and CCTV inspections records

Street name	Manholes inspected	Linear footage of line
Redfern way	520,519,512, 513, 513-A, 514	1,070 FT
Holly glen way	516,515	600 FT
Princess Lane	518, 517, 529, 530, 531	470 FT
Stirrup Lane	526, 525, 527	795 FT
Lark spur drive	528, 523, 524, 522	652 FT
Parker road (storm drains)	All storm drains on parker Road	4.000 FT
Pilot area lateral lines	All houses on Redfern, Holly Glen, Princess, Stirrup. Lark spur	1,350 FT
Total	20	8,937 FT

Routine & Preventive Maintenance Completed

- Completed monthly vehicle inspections on all fleet trucks.
- Advanced the annual grease trap inspection and compliance program (currently in progress).
- Performed routine wet well degreasing and vacuum truck cleaning to remove grease, rags, and floating debris.

- Completed monthly safety inspections and preventative maintenance on standby generators, station utility cranes, and fixed access ladders.
- Conducted twice-weekly routine station inspections, drawdown testing, and maintenance across all pump stations.
- Completed monthly force main corridor walking inspections.
- Sustained ongoing Sanitary Sewer Overflow (SSO) prevention initiatives, including targeted root cutting, hydro-jetting, and vacuum cleaning.
- Continued execution of the ongoing manhole and lateral chemical root treatment program.

Safety & Public Agency Coordination

- Completed 162 New Jersey One Call mark-outs.
- Updated our confined space policy

Overtime calls	5
Emergency Mark outs	1
Lateral inspection	1
Pump stations	3
Blockage calls	0