

**LAKE COUNTY SOUTHEAST REGIONAL WASTE DISPOSAL FACILITY  
COLLECTION SYSTEM  
COMPLIANCE EVALUATION INSPECTION REPORT**

**Name/Location of Facility Inspected:**  
Lake County Southeast Regional Waste  
Disposal Facility Collection System  
230 North Main Street  
Lakeport, CA 95453

**Inspected By:**  
German Myers<sup>1</sup>, WRCE<sup>2</sup>, SWRCB<sup>3</sup>  
Jamie Johnson, WRCE, SWRCB  
Justin Shen, WRCE, SWRCB  
Kenny Croyle, WRCE, CVRWQCB<sup>4</sup>

**Date:**  
11-08-2023 Field Inspection  
Start: 0852  
End: 1433  
Consent given by Scott Harter at 0856

**Prepared By:**  
German Myers, WRCE



**Reviewed By:**  
Tomas Eggers, Senior WRCE



WDID Number: 5SSO11055  
Water Quality Order No: 2022-0103-DWQ  
Legally Responsible Official (LRO): Scott Harter, Special Districts Administrator

**FACILITY REPRESENTATIVES**

Name:	Title:	Email:
Scott Harter	Administrator	<a href="mailto:scottharter@lakecountyca.gov">scottharter@lakecountyca.gov</a>
Scott Hornung	Deputy Administrator	<a href="mailto:scott.hornung@lakecountyca.gov">scott.hornung@lakecountyca.gov</a>
Steve Phillips	Utility Systems Compliance Coordinator	<a href="mailto:steven.phillips@lakecountyca.gov">steven.phillips@lakecountyca.gov</a>
Phillip Spooner	Superintendent	<a href="mailto:phillip.spooner@lakecountyca.gov">phillip.spooner@lakecountyca.gov</a>
Jesus Salmeron	Deputy Administrator – Fiscal	<a href="mailto:jesus.salmeron@lakecountyca.gov">jesus.salmeron@lakecountyca.gov</a>

**FACILITY DESCRIPTION**

Lake County owns and operates the Southeast Regional Waste Disposal Facility Collection System (hereafter, Southeast CS) which has approximately 95.77 miles of gravity sewers, 16.4 miles of force mains, and 21 pump stations, serving approximately 13,176 customers. All wastewater collected within the Southeast CS is discharged into the Southeast Regional Wastewater Treatment Plant (WWTP) which is also owned and operated by Lake County. The Southeast CS is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (Central Valley Water Board) and operates under State Water Resources Control Board (State Water Board) Water Quality Order

<sup>1</sup> Lead Inspector  
<sup>2</sup> Water Resource Control Engineer

<sup>3</sup> State Water Resources Control Board  
<sup>4</sup> Central Valley Regional Water Quality Control Board

No. 2022-0103-DWQ “Statewide Waste Discharge Requirements, General Order for Sanitary Sewer Systems” (SSS WDRs).

## **PURPOSE OF INSPECTION**

On September 22, 2023, the Office of Enforcement (OE) sent a Notice of Inspection (Notice) to Mr. Scott Harter, Special Districts Administrator for Lake County (**Attachment A – Notice of Inspection**). The Notice informed Lake County that OE staff would be conducting a compliance evaluation inspection (CEI) of the Southeast CS to evaluate overall compliance with SSS WDRs. The Notice also requested Lake County to fill out a Pre-Inspection Questionnaire, which Lake County returned on October 23, 2023 (**Attachment B – Pre-Inspection Questionnaire**). OE reached out to Mr. Harter on October 18, 2023, to schedule a field inspection of the Southeast CS for November 8, 2023.

## **RECORD REVIEW**

Prior to the inspection, OE staff reviewed information uploaded to the California Integrated Water Quality System (CIWQS) database and information provided by Lake County. OE Staff reviewed the documents and information described below and compiled a list of key items noted to prepare for the inspection.

### **Pre-Inspection Questionnaire**

- Lake County has installed 210 manhole barrier lids to address inflow and infiltration (I/I) issues and plans to install 500-700 more.
- Lake County is using the acoustic inspection tool Sewer Line Rapid Assessment Tool (SL-RAT) to inspect pipelines.
- Lake County conducts smoke testing for I/I.
- Pump stations are inspected weekly and cleaned annually.
- Lake County owns and operates four other collection systems.
- There is one pump station that does not have an autodialing or supervisory control and data acquisition (SCADA) system.
- Lake County does not currently use a computerized maintenance management system (CMMS) but are in the process of using CivicSpark to create a geographic information system (GIS) asset management system.
- Service requests are issued from the cost accounting management system and are based on historical knowledge of problem areas.
- There are three “hot spot” locations.
- There is no current method of inspecting air relief valves (ARVs).
- A system-wide closed-circuit television (CCTV) inspection was done in 2019 but 0% was reviewed and ranked.
- There are 30-40 miles of planned inspections and 4-5 miles of planned cleaning for the next fiscal year (FY).
- There are 54 food service establishments (FSEs).
- There were 59 complaints in the previous FY.

### **2022 Sewer System Management Plan (SSMP)**

- Historically, there has been significant I/I during the winter season.

- Upgrades to the pump stations and efforts to reduce I/I have alleviated stress on the system.
- The Southeast CS operates out of Lake County's Utility Area 1.
- Lake County is developing a GIS to maintain system history and records.
- The fats, oil, and grease (FOG) program is enforced by the sewer use ordinance.
- The operation and maintenance (O/M) program consist of system mapping, preventative O/M, rehabilitation and replacement, training, and contingency equipment and replacement inventory.
- System capacity and funding for capital improvement projects has historically been an issue.
- Short- and long-term improvements projects would be identified once capacity assessments are completed.

### **2022 SSMP Audit**

- Accomplishments in the previous 12 months from the audit were as follows:
- Lake County surveyed 58 miles using the SL-RAT.
- Lake County cleaned 1.2 miles of pipelines.
- Lake County performed three-point repairs.
- Lake County installed 210 manhole lid barriers.
- Lake County inspected 54 manholes.
- Lake County inspected 8 FSEs.
- There were 31 sanitary sewer overflows (SSOs) from 2016-2021, 18 of which were caused by roots or capacity exceedances.
- Lake County has been unable to fill the capacity management operation and maintenance coordinator position.
- Lake County has not performed FOG inspections at the desired interval.
- Lake County has a goal of inspecting all FSEs annually.
- The SSMP updates and audits have not been performed in the past until the most recent update and audit.

### **CIWQS Annual Report**

- The annual report was last updated on September 28, 2022.
- Approximately \$5.7 million is the annual budget for O/M.
- Approximately \$2.8 million is the annual budget for capital expenditures.
- The Southeast CS is 95% residential and 5% commercial.
- Lake County is responsible for lower laterals in the Southeast CS.
- 1 mile of pipeline was cleaned, and 55 miles were inspected in 2021.
- The Southeast CS has a peaking factor of 6.2.
- There are 73 aerial/underground gravity sewer crossings and 24 force main aerial/underground crossings of water bodies.

### **CIWQS SSO Reports, Violations, and No Spill Reports**

- There have been 27 reported SSOs since 2019.
- The last reported SSO was in March 2023.
- Approximately 50% of the SSOs since 2019 were caused by roots or capacity exceedances.
- The No Spill Reports for July and August of 2023 have not been submitted.

- A 600,000-gallon SSO occurred on March 21, 2023, due to a pump station failure.
- Large volume SSOs occurred in 2019 due to natural disasters.

### **FOG Program**

- The FOG Program is implemented by site visits to FSEs, educating the public and FSEs on best management practices (BMPs), coordinating with the building and health department, and tracking compliance and inspections.
- Lake County has BMPs for commercial and residential FOG on their website.<sup>5</sup>
- The ordinance prevents illicit discharges, limits FOG and other debris, and gives Lake County the ability to enforce and inspect FSEs.
- The FOG Program requires grease interceptors for FSEs.

## **PRE-FIELD INSPECTION CONFERENCE**

### **Introduction**

The inspection team arrived at the Southeast WWTP, located at 2485 Old Highway 52, Clearlake, CA 95422, at approximately 0852 and met with the Lake County representatives listed above. I, German Myers, began with introductions and passed around a sign-in sheet (**Attachment C – Sign-In Sheet**). I stated that the purpose of the inspection was to evaluate the Southeast CS and compliance with the SSS WDRs. At 0856, Mr. Harter verbally gave consent to conduct the inspection, which included asking questions, taking notes, and taking photos.

### **Staffing**

I started by asking Lake County about staffing and whether the Southeast CS operates out of Utility Area 1. Mr. Harter confirmed that the Southeast CS operates out of Utility Area 1 and that Lake County has three utility areas located throughout the county. Mr. Harter stated that Lake County owns and operates four other collection systems, which are the Kelseyville, Middletown, Lake County Sanitation District, and Northwest collection systems. Mr. Phillip Spooner, Superintendent for Utility Area 1, stated that there are eight maintenance positions, three electro-mechanical technicians (EMTs), and two treatment plant operators. Mr. Spooner added that they are looking to convert one of the open maintenance positions into another operator position. I asked if Utility Area 1 covers any of the other collection systems. Mr. Spooner stated that Utility Area 1 covers two other collection systems, and that staff and equipment are shared throughout the three systems within Utility Area 1.

I then asked about Lake County's difficulties in obtaining a capacity management operation and maintenance (CMOM) coordinator. Mr. Harter explained that they have not had a CMOM coordinator for about four years and they have posted the position multiple times but have not had any luck in hiring. Mr. Harter stated that he is looking at "re-tooling" the position by getting rid of some requirements and adding others. Mr. Harter added that he hopes to start recruiting for the position in January or February 2024. I then asked what the duties would be for the CMOM coordinator. Mr. Harter explained that they would oversee the collection system duties such as cleaning, CCTV, SL-RAT, and so forth, and would also oversee planning. Mr. Harter stated that currently, planning is shared by management and that hiring a CMOM coordinator would take some strain off existing staff and improve productivity.

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<sup>5</sup> Lake County's FOG Program can be found on their website at: <https://www.lakecountyca.gov/1015/Fats-Oils-Grease-FOG>

I then asked what the typical duties for the operation and maintenance crew are. Mr. Spooner explained that the crew does weekly checks at the pump stations, uses SL-RAT to determine cleanings, and makes water system repairs. Mr. Spooner added that the treatment plant operators have their own daily routines at the WWTP.

## **Training**

I asked what type of training is done. Mr. Harter explained that they have training on SSOs, equipment, pump stations, and so forth. Mr. Harter stated that he wants to develop a formal standard operator procedure (SOP) for training. Mr. Spooner explained that their operators must obtain their Water Distribution and Treatment Grade II certificates within the first year of being hired and are provided ongoing training to increase their certification level or get continuing education units (CEUs) to recertify. Mr. Spooner added that the maintenance crew must obtain a Water Distribution Grade II certificate to assist with water system repairs.

I then asked about recurrent training versus training for new employees. Mr. Harter explained that when new staff are trained, existing staff can attend the training as a refresher. Mr. Spooner stated that they have training on forklift operations, traffic control, confined space entry, electronics training, and so forth. I then asked how Lake County does their SSO training. Mr. Hornung explained that they do field training for SSOs where they will release a "spill" and then train staff on measurements, containing the SSO, volume estimations, and so forth. Mr. Hornung added that they just updated their Spill Emergency Response Plan (SERP) which has guidelines for estimating spill volumes.

## **Budget, Capital Improvement Plan (CIP), & Capacity**

I then moved onto the next topic and stated that based on my document review, funding had appeared to be an issue in the past. Mr. Harter stated that Lake County has a healthy budget and that there are no current budget issues. Mr. Harter explained that they have a CIP reserve for capital improvement projects. Mr. Harter stated that their rates go up annually to keep up with operating costs but last year's rates and reserves were so healthy that they decided not to implement the rate increase and the last rate increase was in January of 2022. Mr. Jesus Salmeron, Fiscal Deputy Administrator for Lake County, stated that their final budget for this year just wrapped up and they need to analyze the numbers and decide on whether to implement a rate increase for 2024.

I then asked about short- and long-term projects and how they are identified. Mr. Harter stated that they do not have a formal CIP but work with their field staff to identify where there are known or suspected problems. Mr. Harter explained that there is not a lot of new development in Lake County but that if there is a new development that exceeds 20 single family dwelling units, the developer must model the flows and identify potential impacts to the system.

I then asked if there are any current or upcoming projects. Mr. Harter stated that they are looking to do a force main bypass project in a low-lying area to relieve pressure. Mr. Harter also stated that they have slip lining coming up that is Integrated Regional Watershed Management (IRWM) funded. Mr. Harter explained that they secured \$5 million from IRMW grant funding to address I/I. Mr. Harter stated that the system is old, but they have seen around a 40 percent reduction in I/I due to improvements they have made.

I then asked where I/I is still an issue within the system. Mr. Harter stated that the Meadowbrook area still has some problems, but they have done a lot of work there. Mr. Spooner stated that 12-13 years ago they re-piped some areas. Mr. Harter explained that they re-piped Pump Station No. 4 to be routed directly to the WWTP to take some burden off the system. Mr. Steve Phillips, Utility System

Compliance Coordinator for Lake County, stated that the prior superintendent would use SCADA and rain forecasts to be proactive about getting in the field and pumping out manholes during rain events.

### **Operation & Maintenance (O/M)**

I then moved onto O/M and asked whether Lake County uses a CMMS. Mr. Harter stated that they had a license for City Works at one point but never fully implemented it. Mr. Harter explained that they have all the underlying GIS, they just need to issue a request for proposal (RFP) to get a system in place and fully develop the system. I then asked how work orders are generated. Mr. Harter explained that they use their cost accounting management system and historical knowledge of problem areas for service requests.

I then asked about Lake County's rehabilitation and replacement program. Mr. Harter stated that they try to get to things before they become an issue. Mr. Harter explained that they do small projects in-house, such as point repairs, but larger issues are contracted out. I then asked about routine inspections and cleanings. Mr. Spooner stated that they conduct maintenance on rotating basis and that the system is broken into sections. Mr. Spooner explained that they start by using SL-RAT and then do cleaning or CCTV if needed. I asked how long it takes to inspect the entire system. Mr. Spooner stated that they are currently on a three-year cycle but are hoping to reduce that. Mr. Phillips added that they are working with the City of Clearlake (City), since the City is doing a lot of road improvements. He said Lake County gets notified of the City's projects and Lake County will CCTV or SL-RAT prior to the City resurfacing the roads, in order to address any issues. Mr. Spooner stated that they currently have one section that is on a higher cleaning frequency because there is an offset which is letting debris in, but that the section is waiting to be repaired.

I then asked about Lake County's cleaning productivity and noted that according to the CIWQS Annual Report, only one mile of the system was cleaned but the Pre-Inspection Questionnaire stated that the goal was 40-50 miles a year. Mr. Hornung clarified that the 40-50-mile goal is of inspection using SL-RAT, while CCTV and cleaning is done as needed. Mr. Spooner added that around 10 percent of what they inspect they find to need cleaning. I then asked about how the SL-RAT has performed and how Lake County determines when to SL-RAT or to CCTV. Mr. Spooner stated that they initially use SL-RAT and then use CCTV to verify the results. Mr. Harter added that the initial ground-truthing of the SL-RAT worked very well and that the SL-RAT data integrates into their GIS system.

I then asked about the system-wide CCTV in 2019 and asked why none of the video footage was reviewed and ranked. Mr. Harter explained that the system-wide inspection in 2019 was all CCTV since it was prior to Lake County using SL-RAT. Mr. Harter stated that the CCTV was only reviewed during the actual inspections and the operator noted what was seen when performing the CCTV, it was not reviewed a second time. I then asked if Lake County has a ranking system for defects. Mr. Hornung stated that the National Association of Sewer Service Companies (NASSCO) Pipeline Assessment Certification Program (PACP) ratings are built into their pipeline observation system management (POSM) software. Mr. Spooner stated that a lot of their I/I efforts stemmed from the system-wide 2019 CCTV.

I then asked about Lake County's use of smoke testing for I/I and how Lake County targets locations. Mr. Spooner explained that they have issues with residents wanting to connect gutters to the collection system so every three years they will go out and smoke test to verify cleanouts have caps on them and the gutters are not connected to the collection system. Mr. Spooner stated that if they detect I/I as an issue they will get the issue scheduled for repairs. Mr. Spooner added that they have two point-repairs coming up for an offset and a broken section that were identified with CCTV. Mr.

Harter added that the offset location is inaccessible since there is a pier where the pipe is, so they are contracting the repair out.

I then asked about the three hot spot locations noted in the Pre-Inspection Questionnaire. Mr. Harter stated that one of the hot spots is the offset currently being contracted out for repair. Another is the Meadowbrook area, due to capacity issues. The third used to be an issue on Uhl Avenue, but is no longer an issue. Mr. Spooner stated that for the Meadowbrook area, they usually go out prior to the wet weather season to ensure that area is cleaned.

I then asked Lake County to elaborate on their pump station and force main risk assessments as the Pre-Inspection Questionnaire stated that Lake County did not have any formal assessments. Mr. Harter explained that the assessments are just based on staff being out in the field weekly and staying aware of what issues are developing. I then asked about any SOPs that are used for O/M. Mr. Spooner stated that they do not have SOPs and O/M is more “word of mouth and from experience.” Mr. Spooner added that they are looking to develop SOPs for regular activities, such as cleanings and manhole inspections, and will be doing so this year.

I then asked about the pump stations and why one of the pump stations did not have an autodialing or SCADA system. Mr. Spooner stated that Pump Station No. 20 is a small station developed inside a manhole and only services one street. Mr. Spooner explained that the pump station is still on their weekly checks and that they replaced the pump about two and a half weeks ago. Mr. Spooner added that they do not see any issues at the pump station and because of its location they cannot develop it any more than it is. I then asked about the ARVs and why there currently is no plan to exercise and clean the ARVs. Mr. Spooner stated that he is developing a program to maintain the ARVs. I then asked about the aerial and underground crossings. Mr. Spooner stated that there is only one aerial crossing, and the rest are underground. Mr. Spooner added that they inspected the aerial crossing last year. I then asked if there have been any issues with the aerial and underground crossings. Mr. Spooner stated that there was a force main break under a creek around 20 years ago, but they have not had any issues with the aerial crossing.

I then asked about the 59 complaints they received in the previous FY, as stated in the Pre-Inspection Questionnaire. Mr. Harter stated that a lot of their complaints are driven by laterals. He confirmed that Lake County is responsible for the lower laterals if there is a lower lateral cleanout. Mr. Harter explained that they have a lateral replacement program where property owners can obtain funding for inspections and replacements if there are issues. Mr. Harter stated that the program is listed on their website but that no one takes advantage of the program.

### **Fats, Oils, & Grease (FOG) Program**

I then asked for a general overview of the FOG program. Mr. Harter stated that the CMOM coordinator would normally handle the program but since the position is vacant, they have had to distribute the duties. Mr. Phillips explained that new FSEs need approval for a grease trap and Lake County will help determine the sizing of the grease trap. Mr. Phillips added that FSE inspections consist of inspecting the sinks, venting, and the grease traps. Mr. Phillips stated that once they hire the CMOC coordinator, they will get back into an aggressive inspection program. Mr. Phillips explained that they did some inspections in Kelseyville last year since they were having issues with FOG but have not looked at other areas since they do not have the staff. Mr. Phillips stated that they require FSEs to submit pump out and inspection records and encourage the FSEs to follow the 25 percent rule.

Mr. Harter stated that they work closely with the County Environmental Health Department and coordinate with them on changes in ownership and businesses. Mr. Harter explained that their Board

adopted a micro-home kitchen ordinance a few years ago that allows small food services out of homes. Mr. Harter added that the small food services must be licensed and coordinate with Lake County to ensure they have appropriately sized grease traps. Mr. Harter explained that it is difficult to get vendors to pump out the grease traps, but Lake County works with the businesses and helps them find vendors.

I then asked who currently does the FSE inspections. Mr. Phillips stated that the technicians do the FSE inspections and use a Sludge Judge to measure the solids content in the grease traps. Mr. Phillips explained that the technicians bring the inspection report to him, and he would write a Notice of Compliance or Notice of Correction and then follow up to ensure the issues are addressed. Mr. Harter added that once they hire the CMOM coordinator, their goal is to inspect all FSEs annually. I then asked what further action can be taken if an FSE fails to address issues following a Notice of Correction. Mr. Harter stated that in theory they could disconnect the FSE from their system, but it has never come to that point and the Notice of Correction is usually sufficient.

Ms. Jamie Johnson then asked if flushable wipes are an issue. Mr. Harter explained that flushable wipes are an issue, and they have a couple pump stations that rag up a lot, so they must pull the pumps out, clear them, and then reinstall the pumps. Mr. Harter stated that they have a pilot project with a direct in-line pumping system that is replacing Pump Station No. 6, eliminating the need for a wet well. Mr. Harter explained that the system will have a lower retention time, reduced odors, and reduced hydrogen sulfide issues. Mr. Harter added that if the pilot project goes well, they will look to implement the system at the other pump stations.

### **Sanitary Sewer Overflows (SSOs)**

I then moved onto discussing SSOs and asked about the 600,000-gallon SSO that occurred in March of 2023. Mr. Harter stated that a coupler between two pipes at Pump Station No. 1 was dislodged and staff had noticed water at the pump station. Mr. Harter explained that they had dug into the ground and identified the leak and ordered the replacement part prior to the large SSO occurring, but that the part did not arrive in time to prevent the 600,000-gallon SSO. I then asked about the 200,000-gallon spill that occurred in March of 2023. Mr. Harter explained that there was an illegal dumping in a mobile home park where locals had popped open the manholes and dumped large amounts of debris into the manhole. Mr. Harter stated that he is in the process of writing a Notice of Violation to the mobile home park.

I then asked about Lake County's root control program as a lot of the SSOs seem to be caused by roots. Mr. Harter stated that they use mechanical tools such as hydro jetters, flails, nozzles, and so forth for root control. Mr. Spooner explained that if roots are found in a mainline, then they will go in and remove the roots and make repairs to the pipe. Mr. Spooner added that if the roots are found in the laterals, they will still perform mechanical rodding. I then asked how Lake County targets locations for root control. Mr. Spooner stated that when roots are found to be an issue, they will remove the roots and put the section of pipe on a 30-day to one-year cycle depending on the root growth.

I then asked about the SSOs caused by natural disasters in 2019. Mr. Spooner stated that the SSOs were caused by the fires in 2019. Mr. Spooner explained that many homes were destroyed during the fires and that the loss of homes created open holes in the collection system causing rain to infiltrate into the system. Mr. Harter added that they are now proactive during fires and will go out and cap the laterals. I then mentioned that the No Spill Reports were not certified for July and August of 2023. Mr. Phillips stated that they have had a couple of Category 4 SSOs and acknowledged that he is behind on the reporting requirements. I reminded Lake County that the SSS WDRs require the No Spill Reports and Category 4 Spills to be certified within 30 calendar days. I then noted that one of the

SSOs from March of 2023 is still in its draft form and has not been certified yet and reminded Lake County of the reporting requirements to certify the SSO within 15 calendar days and make any amendments within 90 calendar days.

I then went over what assets the inspection team would like to look at and ended the pre-field inspection conference at approximately 1025.

## FIELD INSPECTION

### Location 1: Pump Station No. 1

The first location we traveled to was Pump Station No. 1, located on Burns Valley Road near Turner Avenue, where we arrived at approximately 1059. We were joined by one of the field crew members, Paul Higdon. I observed emergency signage on the fence surrounding the pump station (**Photo 1**). Mr. Phillips explained that this pump station was the location of the failed coupler on the 16-inch pipe that caused the 600,000-gallon SSO in March of 2023. Mr. Harter stated that they were able to redirect the flows through the 8- and 10-inch pipes, in addition to using pumper trucks, to handle the flows during the SSO.

The wet well on the south side of the pump station had a minor FOG mat, minimal corrosion, a coated barrel, and some rags on the components (**Photo 2**). The wet well on the north side of the pump station had minimal FOG and a lot of rags on the components (**Photo 3**). Both dry wells were not covered, had minimal debris, and some chipping on the painted components (**Photos 4 & 5**). A logbook was kept on site and showed that a monthly load test and maintenance was done the day prior on November 7, 2023 (**Photo 6**).

I then asked if the alarms could be tripped. Mr. Higdon tripped an alarm, and an audible alarm was heard. I asked if there were any visible alarms and Mr. Spooner stated that there were no visible alarms at any of the pump stations. Mr. Spooner explained that a third-party company gets the alarm and will then call and inform the standby operator that an alarm was triggered. Mr. Spooner received the call that an alarm was triggered at the pump station. I then asked what is typically done during the weekly checks. Mr. Higdon stated that they trigger alarms, check the batteries, regulators, oil, coolant and so forth, weekly, and put the pump station under a load test once a month. I then asked about the onsite generator. Mr. Spooner stated that all the big pump stations have a backup generator, but they also have portable generators that they can use at the other pump stations. The generator's fuel level was just over half full at the time of the inspection (**Photo 7**). I asked how often the fuel gets filled. Mr. Spooner stated that they refill the fuel as needed but will fill the tank before the wet weather season. Mr. Higdon explained that under normal circumstances, the generators can last three to four days and during high flow they can last one to two days. Mr. Higdon added that they typically schedule fuel deliveries when the fuel level gets to half full.

I then asked about odor control. Mr. Harter stated that there is an elderly home and apartments nearby, so they sometimes receive odor complaints. Mr. Spooner explained that they use a carbon filter for odor control and are looking to upgrade the system (**Photo 8**). Mr. Spooner added that they use carbon filters for odor control at all their big pump stations.



Photo 1: A photo of emergency signage posted at Pump Station No. 1.



Photo 2: A photo of the wet well on the south side of Pump Station No. 1 with minor FOG, rags, and corrosion.



Photo 3: A photo of the wet well on the north side of Pump Station No. 1 with rags, minor FOG, and minor corrosion.



Photo 4: A photo of the one of the uncovered dry wells with minimal debris and paint chippings.



Photo 5: A photo of the one of the uncovered dry wells with minimal debris and paint chippings.

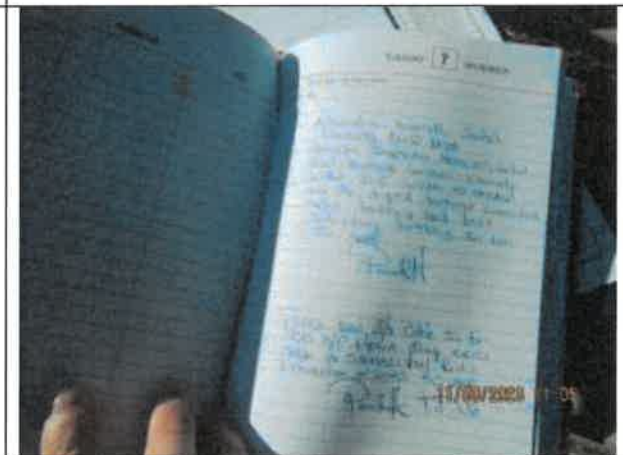


Photo 6: A photo of the logbook at Pump Station No. 1 showing maintenance and a monthly load test was done on November 7, 2023.



Photo 7: A photo of the fuel level of the generator at Pump Station No. 1 showing over 50 percent full.



Photo 8: A photo of the carbon filter system at Pump Station No. 1 for odor control.

## Location 2: Pump Station No. 2

We then traveled to Pump Station No. 2, located at the intersection of Lakeshore Drive and Division Avenue, where we arrived at approximately 1131. Emergency signage was not on the fence surrounding the pump station but was located on the building inside the fence (**Photo 9**). I asked why the sign was not on the outside of the fence and Mr. Spooner stated that the sign was previously on the outside of the fence but that it had been stolen, so they put the sign on the inside to prevent further vandalism. Mr. Harter added that residents will typically call the sheriff's office if they see issues, and the sheriff's office will then call Lake County.

The dry well on the south side of the pump station was uncovered, contained debris, and was missing a cap on one of the connections (**Photo 10**). The dry well on the north side was uncovered and had debris and minor trash in it (**Photo 11**). Mr. Spooner stated that they need to order a new cap and would think about installing a mesh covering over the dry wells to prevent debris and trash from getting in.

The wet well on the south side of the pump station had a disconnected pipe, staining on the walls, and minor FOG and debris (**Photo 12**). Mr. Higdon stated that the disconnect is currently being repaired and they had just replaced the coupler on the other pipe as seen in the photo. The wet well on the north side of the pump station had minor corrosion, debris, and staining on the walls (**Photo 13**). The logbook for the pump station showed that staff was there two days prior, on November 6, 2023, and Lake County is currently getting quotes for a variable frequency drive (VFD) control board to repair the interface screen (**Photo 14**). A check sheet for pump station maintenance was filled out on November 6, 2023 (**Photo 15**).

I then asked if an alarm could be triggered. Mr. Higdon triggered an alarm, and an audible alarm was heard. Mr. Spooner explained that the alarm-answering, third-party company is staffed 24/7 and has a list of people to call. Mr. Spooner received the call that an alarm was triggered approximately five minutes after the alarm. Mr. Spooner stated that they typically receive the alarm call within five to ten minutes but that it previously had been up to two hours. Mr. Spooner added that they are looking into a better backup alarm system that will call Lake County directly. I checked the generators fuel level which showed the fuel level to be a little over half full (**Photo 16**).

At approximately 1150, we broke for lunch.



Photo 9: A photo of emergency signage located on the building inside the fence of Pump Station No. 2.



Photo 10: A photo of the uncovered south dry well at Pump Station No. 2 showing debris and a missing cap on one of the connections.



Photo 11: A photo of the uncovered north dry well at Pump Station No. 2 showing debris and minor trash.



Photo 12: A photo of the south wet well at Pump Station No. 2 showing minor debris, FOG, and staining on the walls. The disconnected pipe in the photo is currently under repairs.



Photo 13: A photo of the north wet well at Pump Station No. 2 showing minor debris, trash, and staining on the walls.

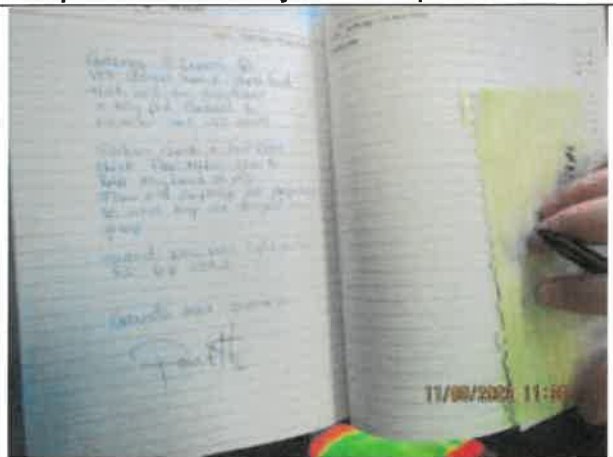


Photo 14: A photo of the logbook at Pump Station No. 2.



Photo 15: A photo of the November 6, 2023 maintenance check sheet at Pump Station No. 2.



Photo 16: A photo of the fuel level of the generator at Pump Station No. 2 showing the fuel level to be over half full.

### Location 3: Pump Station No. 3

After lunch, the inspection team traveled to Pump Station No. 3, located near the end of Wayland Avenue, where we arrived at approximately 1258. We were joined by field crew members Vince Myrick and Donald Beets. The wet well had a FOG mat, rags on the pipes, corrosion, and staining on the walls (**Photo 17**). There was a storm drain with a grate over the drain that ran directly through the pump station. Mr. Harter stated that the storm drain is owned by the City. I asked if there is odor control at the pump station and Mr. Spooner stated that carbon is used (**Photo 18**). The pumps and piping were located above ground and appeared to be freshly painted (**Photo 19**). The logbook and maintenance check sheet were on site and showed that staff had been there two days prior on November 6, 2023 (**Photo 20**). The onsite generator's fuel level was at approximately 75 percent full. Mr. Myrick stated that they run the generator under full load for one hour once a month.



Photo 17: A photo of the wet well at Pump Station No. 3 showing a FOG mat, rags on the pipes, corrosion, and staining on the walls.



Photo 18: A photo of the carbon odor control system at Pump Station No. 3.



Photo 19: A photo of the recently painted aboveground pumps and piping system at Pump Station No. 3.

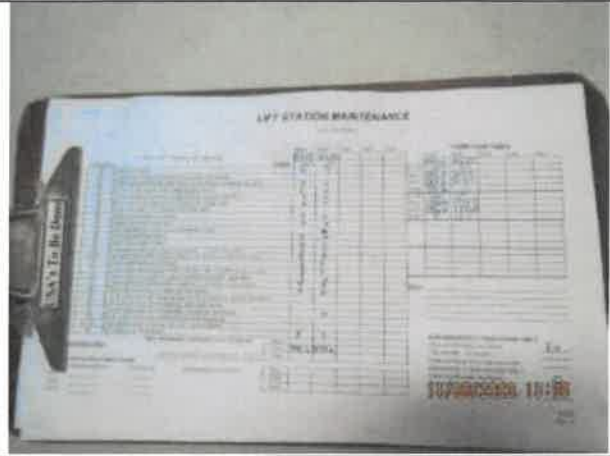


Photo 20: A photo of the November 6, 2023, maintenance check sheet at Pump Station No. 3.

**Location 4: “Hot Spot” Location at the Intersection of Bay Street and Lakeview Way**

We then traveled to one of the hot spot locations, located at the intersection of Bay Street and Lakeview Way, where we arrived at approximately 1312. The manhole had a manhole barrier lid, to protect from I/I, and had fast flow through the manhole channel (**Photo 21**). The manhole rim had corrosion around the rim and staining in the barrel (**Photo 22**). Mr. Spooner stated that this location was cleaned approximately one and a half weeks ago, and they clean the area prior to a storm event.



Photo 21: A photo on the manhole located at the intersection of Bay Street and Lakeview Way with fast flow.



Photo 22: A photo on the manhole located at the intersection of Bay Street and Lakeview Way with corrosion around the rim and staining in the barrel.

**Location 5: Manhole in Front of 6825 Meadowbrook Drive**

We then traveled to a manhole in the Meadowbrook area, located in front of 6825 Meadowbrook Drive, where we arrived at approximately 1319. The manhole had corrosion around the rim (**Photo 23**), low flow, and FOG on the sides of the channel (**Photo 24**). I asked about the inspections versus cleanings and Mr. Spooner stated that they aim to inspect 30 percent of the system annually and typically 10 percent of what is inspected will need cleaning or repairs. Ms. Johnson asked if the

manholes are labeled, and Mr. Spooner stated that they have the manhole numbers on the master map. Mr. Harter added that they are looking into acquiring tablets for mobile GIS while out in the field.



Photo 23: A photo on the manhole located in front of 6825 Meadowbrook Drive with corrosion around the rim.



Photo 24: A photo on the manhole located in front of 6825 Meadowbrook Drive low flow and FOG on the sides of the manhole channel.

### Location 6: Manhole in Front of 6925 Meadowbrook Drive

We then traveled to another manhole in the Meadowbrook area, located in front of 6925 Meadowbrook Drive, where we arrived at approximately 1328. The manhole had a manhole barrier lid and cracks in the concrete around the manhole (Photo 25). The manhole had a vertical crack in the barrel, no flow, and standing water in the channel (Photo 26).



Photo 25: A photo on the manhole located in front of 6925 Meadowbrook Drive with a manhole barrier lid and cracking in the concrete around the manhole.



Photo 26: A photo on the manhole located in front of 6925 Meadowbrook Drive with a vertical crack in the manhole barrier and no flow in the channel.

### Location 7: Manhole in Canal on Stonybrook Drive

We then traveled to the manhole in the canal on Stonybrook Drive and arrived at approximately 1335. The canal was dry the day of the inspection and the manhole was elevated above the top of the canal (Photo 27). Mr. Spooner stated that all the manholes in canals and creeks are above the banks so that flood water does not enter the manholes.



Photo 27: A photo of the manhole in the canal on Stonybrook Drive.

### Location 8: Pump Station No. 6

We then traveled to Pump Station No. 6, located at the east end of Lower Lakeshore Drive, and arrived at approximately 1348. The pump station was under construction as the direct in-line pumping system was currently being put into place (Photo 28). A portable bypass system was set up while construction was occurring (Photo 29). One of the Hudson Mechanical Inc. crew members installing the system stated that the system should be up and running next week. Mr. Spooner stated that the system would be fully sealed and contained and Mr. Harter explained that they are also setting up the system with a bypass on the inlet and outlet side so they can bypass the system if needed. Mr. Harter added that they would be doing the pilot project for six months to one year and if all goes well, they will look at implementing the direct in-line pumping systems at their other pump stations.



Photo 28: A photo of the direct in-line pumping system being put into place at Pump Station No. 6.



Photo 29: A photo of the portable bypass system being used while Pump Station No. 6 is under construction.

### Location 9: Aerial Crossing at Intersection of Rumsey Road and Pamela Lane

We then traveled to the aerial crossing over Burns Valley Creek, located at the intersection of Rumsey Road and Pamela Lane, and arrived at approximately 1406 (Photo 30). Mr. Harter stated that the aerial crossing is a force main and does not have any secondary encasement. The lock on the ARV was broken and was replaced by Mr. Spooner at the time of the inspection. Mr. Spooner

opened the encasement around the ARV and the ARV had a lot of cobwebs around it (Photo 31). There was no emergency signage for the aerial crossing or the ARV.



Photo 30: A photo of the force main aerial crossing located at the intersection of Rusmey Road and Pamela Lane with no secondary encasement.



Photo 31: A photo of the ARV located at the aerial crossing with cobwebs around the ARV.

### Location 10: Utility Yard

We then traveled to the last location, the utility yard, located at the Southeast WWTP, where we arrived at approximately 1419. Mr. Spooner showed us where they keep spare parts, including manhole barrier lids, couplers, pipes, and so forth, portable generators, bypass equipment, and SSO equipment, including waddles and absorption pads (Photos 32-35).

The inspection ended at approximately 1433.



Photo 32: A photo of spare parts at the utility yard.



Photo 33: A photo of the portable generators at the utility yard.



Photo 34: A photo of spare manhole barrier lids at the utility yard.



Photo 35: A photo of waddles for SSO response at the utility yard.

## FINDINGS

The review of all requested documents as well as the inspection itself resulted in the following areas of concern:

- Lake County does not currently use a CMMS and relies on historical knowledge of problem areas.
- Lake County does not currently have a method in place to inspect and maintain ARVs.
- Lake County only reviews CCTV footage during the CCTV inspections and does not re-review or rank issues.
- Lake County has had difficulties obtaining a CMOM coordinator which has strained resources, especially when implementing the FOG program.
- Lake County does not have a formal CIP.
- Lake County does not have formal SOPs for training and O/M.
- Lake County does not have emergency signage for aerial crossings or ARVs.
- Lake County has failed to submit and certify some No Spill Reports, Category 4 Spill Reports, and SSO reports.
- Alarm notification from the third-party company has taken up to two hours.