



**REGION 4**

ATLANTA, GA 30303

July 2, 2024

Dan Barnett  
Board Vice President  
East Sevier County Utility District  
1529 Alpine Dr.  
Sevierville, TN 37876  
D.Barnett@blueridgecos.com

Dear Dan Barnett:

The U.S. Environmental Protection Agency, Region 4 conducted a Compliance Evaluation Inspection (CEI) on the East Sevier County Utility District (ESCUD) Sewage Treatment Plant (STP) on May 20, 2024. The objective of the inspection was to assess ESCUD's compliance with the Clean Water Act and the National Pollutant Discharge Elimination System (NPDES) permit, and to evaluate the general condition of the STP. The inspection results have been summarized in the enclosed CEI Report.

The EPA appreciates ESCUD's cooperation and courtesy. If you have specific questions about the inspection report, please contact Mr. Andrew Gunderson at [Gunderson.Andrew@EPA.gov](mailto:Gunderson.Andrew@EPA.gov). Please verify receipt of this letter and report by emailing Mr. Gunderson at the email address provided.

Sincerely,

**JAIRO  
CASTILLO**

Jairo Castillo, P.E., Chief  
Wastewater Enforcement Section  
Water Enforcement Branch

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ENCLOSURES

East Sevier County Utility District STP CEI Report

cc: Jessica Murphy  
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**United States Environmental Protection Agency Region 4**

Enforcement and Compliance Assurance Division

Water Enforcement Branch

61 Forsyth Street, SW

Atlanta, Georgia 30303



**Compliance Evaluation Inspection Report**

East Sevier County Utility District STP

1529 Alpine Drive,

Sevierville, TN 378876

NPDES Permit Number: TN0060569

**Project No. CV-TN0060569-052024**

**Date of Inspection:**

May 20, 2024

**Inspectors:**

Andrew Gunderson, EPA Region 4

Tristan Odekirk, EPA Region 4

**Inspection Report Prepared by:**

Andrew Gunderson

## Title and Approval Sheet

Title: East Sevier County Utility District (ESCUD) STP Compliance Evaluation Inspection Report  
Project No. CV-TN0060569-052024

### Approving Official:

JAIRO  
CASTILLO

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Jairo Castillo, P.E., Chief  
Wastewater Enforcement Section  
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### Enforcement Officer:

ANDREW  
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Andrew Gunderson, Environmental Scientist  
Wastewater Enforcement Section  
Water Enforcement Branch

**COMPLIANCE EVALUATION INSPECTION REPORT**  
East Sevier County Utility District (ESCUD) STP, Project # CV-TN0060569-052024

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## 1. Introduction

On May 20, 2024, representatives of the United States Environmental Protection Agency, Region 4 and the Tennessee Department of Environment and Conservation (TDEC) conducted a Compliance Evaluation Inspection (CEI) on the East Sevier County Utility District (ESCUD) Sewage Treatment Plant (STP), owned and operated by the East Sevier County Utility District. The inspection was conducted under the authority of Section 308 of the Clean Water Act (CWA), as amended. This report provides a summary of the inspection.

## 2. Participants

| Name             | Organization                         | Contact Information      |
|------------------|--------------------------------------|--------------------------|
| Andrew Gunderson | EPA Region 4 (Lead)                  | Gunderson.Andrew@epa.gov |
| Tristan Odekirk  | EPA Region 4                         | Odekirk.Tristan@epa.gov  |
| Robert Ramsey    | TDEC                                 | Robert.Ramsey@tn.gov     |
| Greg Mize        | TDEC                                 | Greg.Mize@tn.gov         |
| Tim Ham          | TAUD<br>(ESCUD General Manager)      | TimHam@taud.org          |
| Nathaniel Allsup | TAUD<br>(ESCUD - Operations Manager) | NathanielAllsup@taud.org |
| Darrell Baker    | ESCUD<br>(Operator of Record)        | ESCUDBaker@gmail.com     |

## 3. Facility Description

East Sevier County Utility District STP (referred to as the District) is a package plant designed to work utilizing an extended aeration activated sludge process. The District's office is located at 1529 Alpine Drive, Sevierville, TN 378876, and the package plant is located approximately 500 feet south of the office along Lin Creek Drive. No formal address exists for the waste treatment facility, as no permanent building/office structure exists on the site. The facility stores maintenance items in a mobile storage building located across Line Creek Drive. The facility is currently permitted under NPDES permit number TN0060569 to discharge 0.045 million gallons per day (MGD) from outfall 001 to Wilhite Creek. ESCUD began operations of a new package plant in July 2022. The original package plant was installed in 1973 and was abandoned in place (Photo #8). While the new package plant has been in operation since July 2022, no Certificate of Construction has been submitted by a Certified Professional Engineer to the State of Tennessee. The District is currently under penalty order by TDEC due to the uncompleted Certificate of Construction. Additionally, no operations manual has been produced for the facility. Due to the facility not being certified to be operating as designed and the lack of operations manual, facility staff and regulators are required to many inferences into the operations and viability of the facility.

The District services approximately 838 sewer customers, based on a report provided by the Tennessee Comptroller of the Treasury's Utility Management Review Board in August of 2022. The Utility District was recently under investigation by the Office of the Tennessee Comptroller of the Treasury. This investigation led to the replacement of the ESCUD's Commissioners. Additionally, the organization contracted to operate the facility on behalf of the commission, was replaced by staff from the Tennessee Association of Utility Districts (TAUD). At the time of this inspection, TAUD had been onsite for approximately four months. TAUD is currently managing the operations and maintenance of both the District's drinking water and wastewater systems.

The facility's current wastewater plant operational staff are as follows:

- One Tennessee Wastewater Treatment Grade 4 Operator

- One additional staff member – Position vacant at time of inspection



**Figure 1:** Aerial View of the ESCUD STP dated April 2022.

#### **4. Inspection Procedures.**

The overall objective of this CEI was to evaluate the condition and operational performance of the STP and the District's self-monitoring program and to offer compliance assistance as needed. Specific tasks included conducting an opening conference, interviewing STP staff, reviewing STP records, conducting a site visit throughout the existing STP, and a closing conference.

## 5. Findings & Conclusions

### ***A. Permit Review***

The District's NPDES permit for the STP has an effective date of November 1, 2020, and expires on October 31, 2025. The NPDES permit lists and describes the outfall as Outfall 001 (Municipal Wastewater) to Wilhite Creek mile 4.05. The NPDES permit contains Effluent Limitations and Monitoring Requirements table for Outfall 001 at the STP's current capacity of 0.045 MGD.

### ***B. Records and Reports***

The EPA's Enforcement Compliance History Online (ECHO) shows that the District was in Non-Compliance (NC) or Significant Non-Compliance (SNC) for effluent limit exceedances as listed:

- Total Ammonia-Nitrogen - exceeded the following months; January 2021, March 2021, April 2021, May 2021, June 2021, July 2021, August 2021, September 2021, April 2022, June 2022, and August 2023.
- Dissolved Oxygen (DO) - exceeded the following months; July 2023 and March 2024.
- Carbonaceous Biochemical Oxygen Demand 5-day (CBOD<sub>5</sub>)– exceeded the following months; August 2021, September 2021, October 2021, December 2021, February 2022, March 2022, June 2022, June 2023, and July 2023.
- E. coli – exceeded the following months; May 2021, June 2021, September 2021, March 2022, June 2022, July 2022, August 2022, November 2022, December 2022, February 2023, September 2023, November 2023, and March 2024.
- Total Suspended Solids Percent Removal - exceeded the following months; September 2021, January 2022, June 2022, July 2022, December 2022, February 2023, April 2023, July 2023, August 2023, September 2023, October 2023, February 2024, and March 2024.

While the date of these exceedances is noted from Discharge Monitoring Reports (DMR) reported to the State of Tennessee, all reported values since the start of operations at the new facility were taken via grab samples and not composite samples. The District's permit requires the collection of composite samples for CBOD<sub>5</sub>, Total Suspended Solids, Total Nitrogen, and Total Ammonia-Nitrogen, and grab samples for E. coli, total residual chlorine, and dissolved oxygen.

Many of the reporting elements were not present at the time of the inspection. This included, Operators logbook, daily measurement/bench sheets, calibration records, and five years of biosolids records. A copy of the most recent permit was noted onsite and a notebook containing previous DMR's was also reviewed. During a previous inspection by TDEC in August of 2023, these reports were present onsite in electronic format, however, the new utility operator (TAUD) does not have access to this electronic historical data operated by the previous utility group.

### ***C. Flow Measurement***

The effluent flow meter was attached to the rear wall section of the package plant and displayed a flow rate of 18.93 Gallons per minute (GPM). The calibration sticker noted on the effluent flow meter was no longer legible due to impact from the environment. The district contracts with a local contractor for calibration of the effluent ultrasonic flow meter and was able to produce a recent calibration record for the meter. No staff gauge was present at the v-notch weir located within the plant. A staff gauge appears to have never been installed during the construction of the package plant. Additionally, the facility staff were unsure of the size of the v-notch weir but estimated the weir to be approximately 18 inches. The flow under the effluent flow meter appeared turbulent (Photo #5).

Based on effluent flow records and conversations with facility staff, the treatment system appears to be heavily impacted by inflow/infiltration from rainwater/snow melt intrusion. Beyond the customers currently serviced by the

system, an abandoned development from the 1970's is connected to the treatment facility. This development of approximately 2,500 lots was installed with utility and roadway infrastructure, however no homes were built. The area is now wooded and overgrown. The abandoned sewer lines within the community allow for extensive inflow/infiltration to the facility.

Facility staff indicated the treatment plant exceeds the original design flow of 0.045 MGD during specific events. This issue may have been noted in the use of the original package plant however, the new facility was designed with the same flow capacity of the original package plant.

#### ***D. Sampling/Laboratory***

The District does not have an onsite laboratory facility, however, the wastewater staff analyze samples for the following parameters: pH, Dissolved Oxygen (DO), Chlorine Total Residual (TCR), and Settleable solids. The District contracts with Microbac Laboratories Incorporated to analyze CBOD<sub>5</sub>, E. coli, Total Ammonia-Nitrogen, TSS, Total Nitrogen, and Total Phosphorus.

The District's current NPDES permit states that TSS, Total Nitrogen, Total Phosphorus, Total Ammonia-Nitrogen, and CBOD<sub>5</sub> should be measured and reported via a composite sample. The District does not own or operate a composite sampler. All samples are currently collected via a grab method. A composite sampler was noted on site but appeared non-operational and was located at the decommissioned wastewater package plant.

Equipment utilized in the collection of wastewater samples for permit parameters could not be located. Staff checked multiple areas around the facility and office but could not locate the pH meter, DO meter, or chlorine meter. Additionally, recent calibration records for meters could not be located. A calibration sheet from March 2023 was found within the records, however this calibration record stated the pH meter tested did not meet calibration specifications and was given a non-passing recommendation.

Daily laboratory sample logs (bench sheet) were requested during the inspection. These sheets could not be produced. Due to the recent employee termination at the facility, the District was requested to send photographs of sampling meters, copies of recent meter calibration records, and copies of laboratory records to the EPA Region 4 office once located. As of the writing of this inspection report, no photographs or records were received.

#### ***E. Site Visit (Operation and Maintenance)***

The facility walkthrough started at the headworks and then traveled along the package plant. The site visit ended at the discharge point located along the bank of Wilhite Creek. The following components were observed:

- Manual bar screen appeared clean and operational.
- Open hole in metal wall of the wasting area of plant results in improper movement of waste within the treatment train. Operator stated that several holes exist around the facility prior to install and required to be patched or plugged (Photo #1).
- The section of the plant which appeared to be utilized for clarification had significant sludge buildup with vegetation growing within the sludge (Photo #2).
- The weirs in the clarification section of the plant appeared to be covered in algae and sludge due to reduced wastewater flow from clogged inlet section (Photos #3 and #4).
- The mixer in the anoxic zone of the facility was offline and nonoperational.
- The walking area utilized to access outfall at creek bank was overgrown and reduced access and visibility to outfall 001.
- A section of fence line around facility was damaged by a falling tree with a large portion of the tree remained overhanging the facility.
- The chlorination and dichlorination storage area was open and exposed to elements (Photo #6).

- Chemical drums were left outside exposed to the elements resulting in labeling being illegible (Photo #7).
- A staff gauge was not installed at v-notch weir.

#### ***F. Sludge Handling***

Sludge is removed from the treatment facility by Power Pumping LLC, with records showing the last removal of sludge was on January 4<sup>th</sup>, 2024. Sludge is hauled to the City of Sevierville (McCroskey Island) Sewage Treatment Plant. Only one year worth of Biosolids records could be located at the District office and no records of the amount of solids hauled from the site was found. The District's NPDES permit requires five years of records be kept onsite for Biosolids handling. It was noted by ESCUD and TAUD employees that many of the site's records had potentially been removed from the site when the previous contracted utility group left after the contract ended.

#### ***G. Effluent/Receiving Water***

The effluent from Outfall 001 appeared to be clear and void of solids. The receiving waterbody (Wilhite Creek) was accessible via a locked section of fence line at the rear of the facility. The creek was flowing with no evidence of foam or sheen originating from the outfall. As required by the State of Tennessee, all required signage was visible around outfall location.

### **6. Discussion**

The District's wastewater treatment plant has not been certified by a professional engineer, even though the new plant began operations in July 2022. Parts of the facility appear to be under stress as several components of the system are missing, nonoperational, or not operating as designed. The facility also has issues with meeting sampling and operation and maintenance permit requirements as no laboratory equipment or composite samplers were noted onsite.

Appendix A: Photographic Log



Photo 1: Hole located in wall of wasting tank section causing flow to move improperly through the facility.



Photo 2: Vegetation and clog within clarifier.



Photo 3: Algae and vegetation on weirs within clarifier.



Photo 4: Sludge backup in clarifier.



Photo 5: Turbulent flow under ultrasonic flow meter



Photo 6: Open storage for chlorination/dechlorination chemicals.



Photo 7: Exposed chemical drums with faded labels.



Photo 8: Decommissioned original package plant

**END OF REPORT**