



Carolina Water Service
of North Carolina™

Wastewater Treatment and Collection Performance Annual Reports

Sugar Mountain

NPDES Permit: NC0022900

Collection Permit: WQCS00174

January 1, 2025 - December 31, 2025

P.O. Box 240908
Charlotte, NC 28224

Phone: 800-525-7990

<https://www.myutility.us/carolinawaterservicenc>

I. General Information

Service Area:

All areas within Village of Sugar Mountain boundaries.

Applicable Permits:

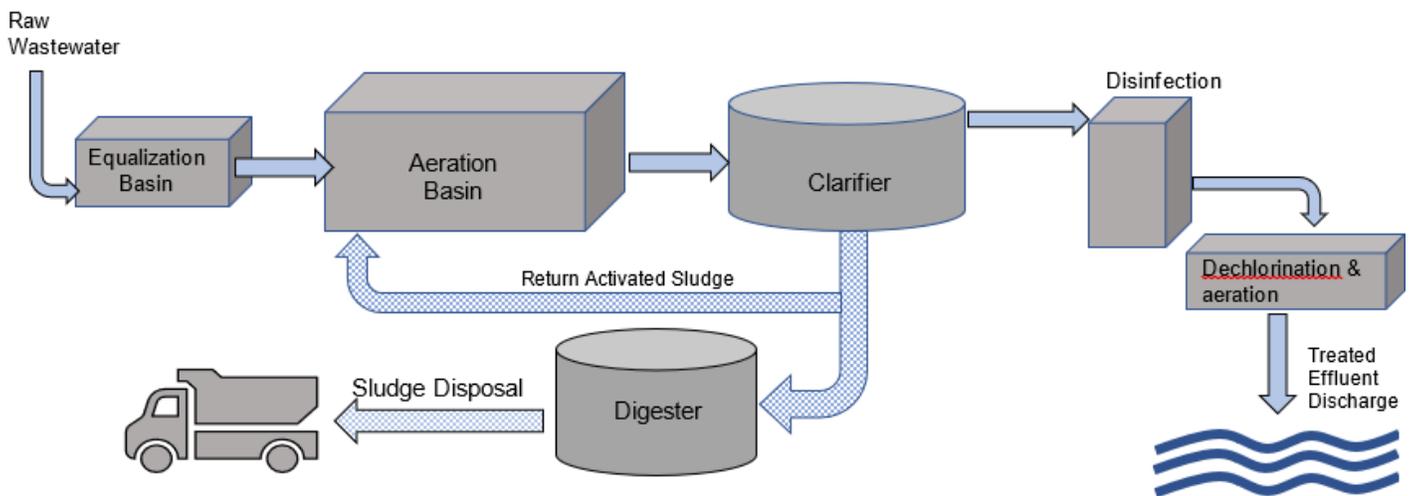
Type	NPDES Permit Number
Wastewater Treatment Facility	NC0022900
Collection System	WQCS00174

Description of Collection and Treatment Systems:

Operation and maintenance of the wastewater collection system consisting of, at the time of permit issuance, approximately 49,237 linear feet of gravity sewer, approximately 13,823 linear feet of force main, and 9 duplex stations serving 1,132 customer connections.

The operation of a 0.5 million gallons per day (MGD) wastewater treatment plant consisting of an extended aeration plant, one common equalization basin, three separate plants operating in parallel (1) 0.3 MGD plant and (2) 0.1 MGD plants. Each plant consists of an aeration basin, clarifier, sludge holding tank, disinfection, dechlorination equipment, and post aeration.

Treatment Process Flow Chart



1. Equalization Basin — Allows for a steady and consistent flow of wastewater into the aeration basin to maximize treatment.
2. Aeration Basin — Air is circulated, and bacteria removes dissolved solids, pollutants, Phosphorus and Nitrogen.
3. Clarifier — Solids are separated from the liquid and piped back to the aeration basins via the return activated sludge piping.
4. Disinfection — Effluent is disinfected by sodium hypochlorite to remove pathogenic organisms.
5. Dechlorination & Aeration – Removes residual chlorine and introduces oxygen before effluent is discharged into receiving stream.
6. Digester — Treats the solids that are removed from the wastewater to allow safe and economical disposal.

Summary of Collection System Performance:

During 2025, we collected and treated over 79 million gallons of wastewater. During that time period, there was one sanitary sewer overflow and no NPDES Permit exceedances.

Key Performance:

- 5000 linear feet of the sewer collection system pipe was cleaned in 2025.
- There are 9 duplex Lift Stations serving the Village of Sugar Mountain Subdivision. Each lift station is checked three times a week with maintenance conducted as needed as well as emergency generator testing, wet well cleanings, and emergency/routine repairs being conducted periodically.
- All 9 duplex lift stations are continuously monitored using a telemetry missions' system that will notify our staff of any issues 24/7.
- Annually each Lift Station is inspected using our 56 Point safety checklist.
- Our staff throughout the year manually conducts manhole inspections, documents deterioration (if any) due to corrosive atmospheric conditions.
- We have instituted an infiltration and inflow (I&I) program. The purpose of the I&I program is to keep unwanted storm water from entering the collection system. Infiltration and inflow is a clear indicator that there could be broken pipes, uncovered sewer laterals, or someone illegally connected to the collection system.
- As a proactive measure, we educate our customers of our concerns of Fats, Oil, and Grease. Your help in what is put down the drain greatly prevents clogs due to grease buildups and improves our overall collection system. These grease buildups can result in SSO's.
- Our staff is continually monitoring and clearing rights of way (ROW's). These ROW's normally are in low lying creeks and wooded areas. ROW's need to be cleared to ensure easy access during emergency situations.

Summary of Wastewater Facility Performance:

It is our goal and standard at Carolina Water Service of North Carolina to meet 100% of our NPDES permit discharge limits. We evaluate our treatment processes daily to ensure that goal is obtained. Our permit requires us to continually monitor the effluent to determine if the treatment processes are working effectively. This monitoring consists of sampling at various points in the treatment process. These samples include: Flow measurement of how much wastewater enters and then is discharged from our plant, Biochemical Oxygen Demand (BOD), Total Suspended Solids, Fecal Coliform, Total Ammonia, Total Residual Chlorine, Temperature, Total Nitrogen, pH, Total Phosphorous, Dissolved Oxygen, and Chronic Toxicity.

Annually, we collect and analyze over 1,400 compliance samples and in 2025. Our staff is committed to a standard of excellence by ensuring a safe and clean facility while maintaining regulatory compliance. No known adverse effects have been noted on the environment or receiving streams.

II. 2025 Violation Summary

January	No violations/deficiencies.
February	No violations/deficiencies.
March	No violations/deficiencies.
April	No violations/deficiencies.
May	No violations/deficiencies.
June	No violations/deficiencies.
July	No violations/deficiencies.
August	No violations/deficiencies.
September	No violations/deficiencies.
October	No violations/deficiencies.
November	No violations/deficiencies.
December	SSO

III. Notification

Customers will be notified of the availability of this report with a message on their bills and copies will be provided upon request.

IV. Certification

I hereby certify that the information contained in this report is accurate and complete to the best of my knowledge.

Signature:

Date: 3/19/2026

Name: Dana Hill

Title: Special Projects Manager