Carolina Water Service
of North Carolina™

Wastewater Treatment and Collection

Performance Annual Report

Fairfield Harbour

NPDES: NC0033111
Collection System: WQCS00162

January 1, 2025 - December 31, 2025

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I. General Information

Service Area:

Fairfield Harbour

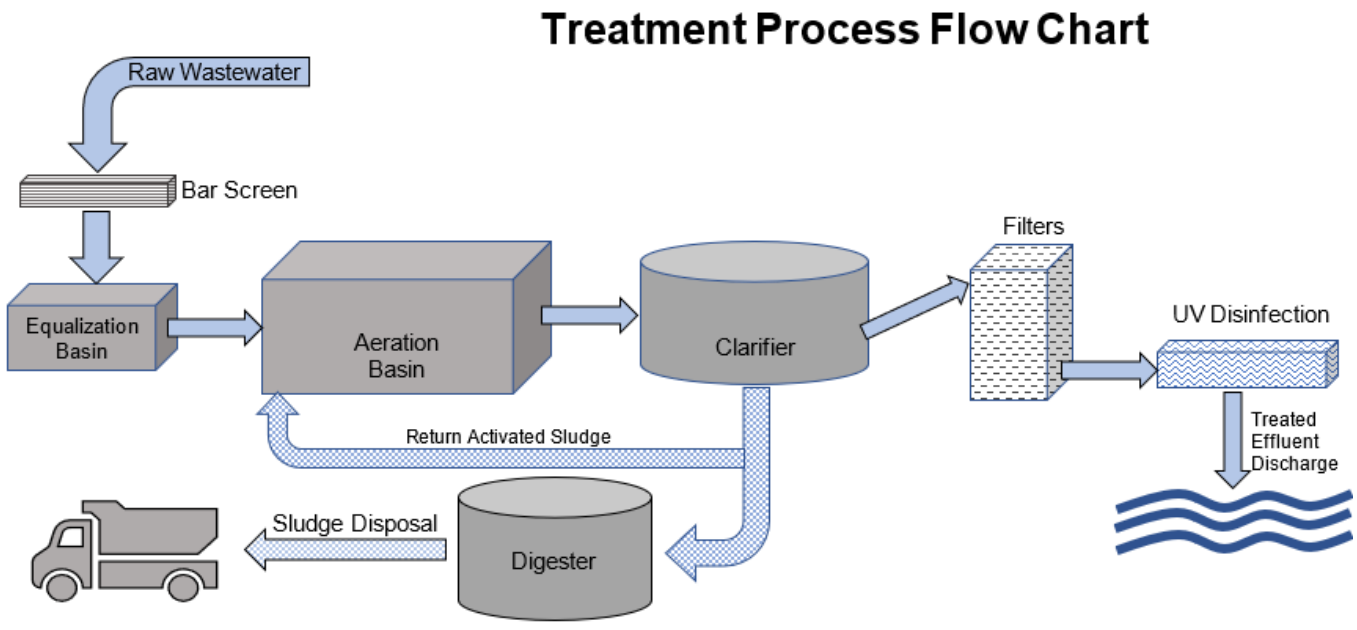
Applicable Permits:

Type	NPDES Permit Number
Wastewater Treatment Facility	NC0033111
Collection System	WQCS00162

Description of Treatment and Collection Systems:

Operation of a 0.600 Million Gallons per Day (MGD) domestic wastewater treatment facility consisting of parallel extended aeration type treatment plants with the following components: static bar screen, flow equalization tank, splitter box, extended air, clarifiers, ultraviolet disinfection with liquid chlorination back-up, chlorine contact chamber, effluent holding tank with pumps, aerated digesters, cloth filters, chemical-feed phosphorus removal, dissolved oxygen sensors and controllers for each aeration basin for total nitrogen reduction, blowers, effluent flow meter, and auxiliary power.

Operation and maintenance of a wastewater collection system consisting of approximately 138,372 linear feet of gravity sewer, 33,638 linear feet of force main and 26 duplex lift stations.



1. Bar Screen – Removes larger debris, such as rocks and sticks, that could potentially damage equipment.
2. Equalization Basin — Allows for a steady and consistent flow of wastewater into the aeration basin to maximize treatment.
3. Aeration Basin — Air is circulated, and microorganisms remove dissolved solids, pollutants, Phosphorus and Nitrogen.
4. Clarifier — Solids are separated from the liquid and piped back to the aeration basins via the return activated sludge piping.
5. Filters – Liquid is filtered to remove any remaining fine particles.
6. Disinfection — Effluent is disinfected by Ultraviolet light to inactivate pathogenic organisms.
7. Solids Handling — Treats the solids removed from the wastewater to allow safe and economical disposal.

Summary of Collection System Performance:

During 2020, we collected and treated over 110 million gallons of wastewater. The system experienced no sanitary sewer overflows (SSO) during the 2025 calendar year.

One of our main goals is to ensure we protect the public and environment by safely transporting and treating wastewater before discharge.

Key Performance:

- 14,588 linear feet of sewer pipe was cleaned in 2025.
- There are 26 duplex Lift Stations serving the Fairfield Harbour Subdivision. Each lift station is checked once a week with maintenance conducted as needed, emergency generator testing, wet well cleanings, and emergency/routine repairs.
- All 26 duplex stations are continuously monitored using installed telemetry 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 and 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 rights of way normally are in low lying creeks and wooded areas. Rights of way 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 process is 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 Chlorine Residual, Enterococci, Total Ammonia, Total Nitrogen, pH, Total Phosphorus, Total Suspended Solids, Dissolved Oxygen, Temperature, TKN, and Nitrates/Nitrites.

Over 1800 compliance samples were analyzed throughout the 2020 calendar year with one permit exceedance.

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 stream.

II. Violation Summary - 2020

January	No violations/deficiencies.
February	No violations/deficiencies.
March	No violations/deficiencies.
April	Exceeded daily enterococci limit
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	No violations/deficiencies.

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: Dana Hill Digitally signed by Dana Hill DN: OU=Carolina Water Service, O=Nexus Water Group, CN=Dana Hill, E=dana.hill@nexuswg.com Reason: I am the author of this document Location: Date: 2026.03.20 08:51:56-04'00' Foxit PDF Editor Version: 13.1.6 **Date: 3/19/2026**

Name: Dana Hill **Title: Special Projects Manager**