

PUBLIC UTILITIES DEPARTMENT

Wastewater Treatment 2021 Annual Performance Report



The Rogerson Wastewater Treatment Facility has a design capacity of 4.5 MGD million gallons per day (MGD) using an Activated Sludge Process to biological treat wastewater and disinfects with chlorine for pathogen reduction. The treated wastewater is permitted for discharge into the Pasquotank River. The biological sludge byproduct is thickened and stabilized with lime to meet EPS Class B requirements then land applied to permitted sites (WQ0002883) for beneficial agricultural use as a soil amendment. The State Lab Division inspected the facility's field lab, which is finalized its recertification this year. The plant's draft discharge permit was

received and finalized. A table of select permit criteria and a table of permit limit exceedances is provided below:

Month	Violation	Comment
January	Effluent Flow exceeded permitted value of 4.5 MGD (4.63 MGD Reported)	INI flow abnormally high. Rain-induced flows placed extreme loads on the facility.
January	Effluent Enterococci exceeded permitted value of 35 MPN (47.06 MPN)	INI flow abnormally high. Rain-induced flows placed extreme loads on the facility.
February	Effluent Flow exceeded permitted value of 4.5 MGD (6.33 MGD Reported)	INI flow abnormally high. Rain-induced flows placed extreme loads on the facility.
February	Effluent Total Suspended Solids exceeded permitted value of 30 mg/L (49.19 mg/L)	INI flow abnormally high. Rain-induced flows placed extreme loads on the facility.
February	Effluent Enterococci exceeded permitted value of 35 MPN (225.90 MPN)	INI flow abnormally high. Rain-induced flows placed extreme loads on the facility.
April	Effluent Ammonia exceeded permitted value of 4.0 mg/L (6.28 mg/L)	INI flow abnormally high. Rain-induced flows placed extreme loads on the facility.
August	Effluent Flow exceeded permitted value of 4.5 MGD (4.55 MGD Reported)	INI flow abnormally high. Rain-induced flows placed extreme loads on the facility.

The City's wastewater collection system serves approximately 6,350 residential properties and 950 commercial properties. The collection system consists of 104 miles of gravity sewer and 15 miles of pressure sewers. There are 61 pump stations in the system, with pumps ranging from 3

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to 75 horsepower. The collection system experienced 2 re-portable spill events this year, one occurred during hurricane Dorian. A summary table of the reportable spills is provided below:

Permit Number NC0025011	Monthly Average Limit	Weekly Average Limit
Flow	4.5 MGD	
TSS	30 mg/L	45 mg/L
Ammonia	35/100 mg/L	276/100 mg/L
April-October	4mg/L	12 mg/L
November-March	8 mg/L	24 mg/L
Chlorine (Daily)	13 µg/L	
Enterococci	35 MPN	276 MPN
pH (Daly)	6.8-8.5 su	

DATE	LOCATION	GALLONS
01/31/2021	Manhole: 1707 W. Ehringhaus St.	800
02/16/2021	Manhole: Rivershover Rd.	800
02/19/2021	Manhole: Rivershore/ Parkview Dr.	1,500
02/19/2021	Manhole: Shepard St./ Walston St.	6,000
06/07/2021	Manhole: Halstead Blvd. near 7/11 Store	2,000
08/04/2021	Manhole: South Dyer St. & West Grice St.	500
08/04/2021	Manhole: Wilson St. & North Hughes Blvd.	300
08/04/2021	Manhole: 700 W. Ehringhaus	800
08/30/2021	Manhole: E. Church St. & S. Poindexter	800
11/24/2021	Manhole: 819 Walkers Ave.	300

Contact Information

System Name: Rogerson Wastewater Treatment Plant
Responsible Entity: City of Elizabeth City
Wastewater Treatment Superintendent: Andrew Edwards
Collection Systems Superintendent: Julius Williams
Address: 410 Pritchard St., Elizabeth City, NC 27909
Telephone: 252-337-6628

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I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify that this report has been made available to the customers of the City of Lizabeth City and that those customers have been notified of its availability.

A handwritten signature in cursive script that reads "Dwan Bell". The signature is written in black ink and is positioned above a solid horizontal line.

Dwan Bell, M.P.A., Public Utilities Director