



Wastewater Treatment 2018 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 biologically 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 EPA Class B requirements then land applied to permitted sites(WQ0002883) for beneficial agricultural use as a soil amendment. Last January, the Greyson winter storm prevented contracted lab samples from getting delivered; these samples included a daily CBOD, a daily ammonia, a monthly Total Nitrogen and monthly Total Phosphorus. A reuse line broke and spilled ~25 gallons of partly treated wastewater to surface waters. An electrical failure in March caused a scum pit to overflow and 45 gallons reached surface waters. That month also saw biosolids treated to reduce pathogens, but not to reduce vector attraction, was land applied. In June effluent and river enterococci samples were read out of holding time. The facility passed the inspection from the Department of Environmental Quality (DEQ), a biennial event. A table of select permit criteria and a table of permit limit exceedances is provided below:

Month	Violation	Comment
March	Partly completed solids treatment	90,000 gallons of thickened solids land applied after partial treatment
June	Late Enterococci	Enterococci samples read out of hold time
September	Below pH limit	Influent pH abnormally low.
October	Below pH limit	Influent pH abnormally low.
December	Below pH Limit, Late Enterococci	Influent pH abnormally low. Enterococci sample read out of hold time

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 to 75 horsepower. The collection system experienced 5 reportable spill events this year. They all occurred during extreme rain events which caused several manholes to surcharge. This year's construction on Parkview will alleviate this issue. A summary table of the reportable spills is provided below:

Permit Number NC0025011	Monthly Average Limit	Weekly Average Limit	DATE	LOCATION	VOLUME (GALLONS)
TSS	30 mg/L	45 mg/L	March 2018	Park View Dr.	4,000 gal.
Enterococci	35/100 mL	276/100 mL	April 2018	Park View Dr.	1,500 gal.
			June 2018	Park View Dr.	1,500 gal.
			July 24 & 30, 2018	Park View Dr. & Park View Dr.	1,600 & 6,000 gal.
AMMONIA			<p style="text-align: center;">CONTACT INFORMATION</p> <p style="text-align: center;">System Name: Rogerson Wastewater Treatment Plant</p> <p style="text-align: center;">Responsible Entity: City of Elizabeth City</p> <p style="text-align: center;">Wastewater Treatment Superintendent: Rebecca Miller</p> <p style="text-align: center;">Collection Systems Superintendent: Julius Williams</p> <p style="text-align: center;">Address: 410 Pritchard St., Elizabeth City, N.C. 27909</p> <p style="text-align: center;">Telephone: 252-337-6628</p>		
April-October	4 mg/L	12 mg/L			
November-March	8 mg/L	24 mg/L			
CHLORINE (Daily)	13 µg/L				
pH (Daily)	6.8-8.5 su				

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 Elizabeth City and that those customers have been notified of its availability.

Amanda Boone, P.E.
Public Utilities Director