



January 12, 2018

NC Division of Water Quality
NPDES Permit Issuing Authority
1617 Mail Service Center
Raleigh, NC 27699-1617

RE: System Performance Annual Report
NPDES Permit Number: NC0062855
Collection System Number: WQCS0004682
Town of Robbins, Moore County, NC

Dear Permitting Authority:

Enclosed is the 2017 Annual Performance Report for the Town of Robbins Wastewater Treatment Plant and Collections System for the time period of January 1, 2017 to December 31 2017. We believe the report to be to be complete and accurate. Our customers will be notified of the availability of the report through the local newspaper, town website or water/sewer bills.

A copy of this report has been forwarded to the Fayetteville Regional office. If you have any questions, or require more information, please contact us.

Sincerely,

Tommy Gibbons
Town of Robbins Public Utilities
wwtp@townofrobbins.com
910-690-5570 (cell)
910-948-3063 (office)

GENERAL INFORMATION

Facility/System Name: Town of Robbins Wastewater Treatment Plant

NPDES Permit Number: NC0062855

Collection System Permit Number: WQCS00124

Responsibility Entity: Town of Robbins

CONTACT INFORMATION:

Permittee: David Lambert
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WWTP BORG: Michael Criscoe
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Collections ORC: Tommy Gibbons
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Collections BORG: Michael Criscoe
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DESCRIPTION OF TREATMENT PROCESS:

All wastewater is conveyed to the Robbins WWTP via a permitted collection system. The collection system consists of approximately 13.97 miles of gravity sewer, 1.58 miles of force main, and three (3) duplex pump stations.

The town of Robbins WWTP is an extended aeration facility. This facility has a design flow capacity of 1.3 MGD. Treatment is initiated at a preliminary treatment unit (headworks), which consists of a grit removal unit, and a manual bar screen. Screened wastewater is pumped to a secondary treatment unit. Dual activated sludge treatment units are equipped with center-feed clarifiers. Mixing and aeration are provided by diffused aeration. Caustic soda is added at the head of the system to add alkalinity. Aluminum Sulfate is added prior to the clarifiers to facilitate settling of solids and to help remove phosphorus. Clarified effluent is disinfected by gas chlorination, and then de-chlorinated with Sulfur Dioxide. Settled sludge is either returned to the system as Return Activated Sludge or wasted into an aerobic digester for further stabilization. Digested sludge is then land applied or dewatered and transported offsite by a contract composting facility. The treated effluent wastewater is discharged into Deep River, in the Cape Fear River Basin.

COMPLIANCE PERFORMANCE:

The Town of Robbins WWTP and Collection System are regulated by the NC Department of Environmental Quality (NCDEQ). The town holds a National Pollutant Elimination System (NPDES) permit that includes water quality limits and sample monitoring requirements. The NPDES permit requires the Town of Robbins WWTP to test 15 effluent characteristics in the treated water. The monitoring frequency for these effluent characteristics are set at various intervals to provide consistent results.

The Town of Robbins WWTP consistently achieves 85% efficiency of removal of BOD and TSS. The following is a summary of testing for effluent characteristics that are assigned Water Quality Standards by the NPDES permit.

<u>Effluent Characteristics</u>	<u># Required tests</u>	<u># Conducted Tests</u>
Flow	Continuous	Continuous
Biochemical Oxygen Demand	52 (weekly)	52
Total Suspended Solids	52 (weekly)	52
Ammonia (NH ₃)	52 (weekly)	52
Dissolved Oxygen	52 (weekly)	>52
pH	52 (weekly)	>52
Temperature	Daily	Daily
<i>(excluding weekends and holidays)</i>		
Fecal Coliform	52 (weekly)	>52
Total Chlorine Residual	104 (2/week)	>104
Conductivity	52 (weekly)	52
Total Nitrogen	4 (quarterly)	>4
Total Phosphorus	52 (weekly)	52
Total Copper	4 (quarterly)	4
Total Mercury	3 (Once 5/years)	3
Chronic Toxicity	4 (quarterly)	4

Please Note: The summary only incorporates monitoring requirements, and does not include daily process control testing. In addition to the required testing, the WWTP conducted in-house control tests to ensure the proper operation of the wastewater treatment plant. Some of the plant control tests are pH, temperature, ammonia (NH₃), alkalinity, Nitrates, dissolved oxygen, settle ability, suspended solids, and oxygen uptake rate.

SUMMARY OF EFFLUENT PERMIT VIOLATIONS WWTP:

January 2017	No Violations
February 2017	Ammonia Nitrogen (NH3): 16.36 mg/L Monthly Limit: 6.0
February 7, 2017	Ammonia Nitrogen (NH3): 18.5 mg/L Weekly Limit: 18.0 mg/L
February 28, 2017	Ammonia Nitrogen (NH3): 24.6 mg/L Weekly Limit: 18.0 mg/L
March 2017	Ammonia Nitrogen (NH3): 14.49 mg/L Monthly Limit: 6.0 mg/L
March 7, 2017	Ammonia Nitrogen (NH3): 21.9 mg/L Weekly Limit: 18.0 mg/L
March 14, 2017	Ammonia Nitrogen (NH3): 21.5 mg/L Weekly Limit: 18.0 mg/L
April 2017	No Violations
May 2017	No Violations
June 2017	No Violations
July 2017	No Violations
August 2017	No Violations
September 2017	No Violations
October 2017	Fecal Coliform: 914 colonies/100 ml Weekly Limit: 400 colonies/100 ml
November 2017	No Violations
December 2017	No Violations

Total Residual Chlorine:

The Town of Robbins WWTP has a Daily maximum discharge limit of 28 ug/L Total Residual Chlorine is still considered compliant <50 ug/L. There were 14 instances in 2017 where the Total Residual Chlorine (TCR) was found to be in excess of the Daily Maximum Limit, but all instances were still < 50 ug/L and still considered compliant.

WWTP Violations explanation:

Ammonia (NH3) violations February through March 2017 are due to hydraulic overloading (washout), from heavy rainstorms. The aging sewer system collects and deposits rainwater into the WWTP, overloading the system, and causing normal processes fail. In colder months it can take several weeks for the WWTP to recover.

Fecal Coliform violation 10/24/2017 due to heavy overnight rainfalls. The chlorine contact chamber was overloaded which caused the violation.

Collection System Performance:

There was no (0) reportable collection system spills in 2017.

- For the calendar year 2017. The town has increased the cleaning and inspection for the entire sewer system. Our goal is to continue to be proactive cleaning sewer lines and to greatly reduce Sanitary Sewer Overflows. Needed repairs and improvements are being documented and addressed.
- Town of Robbins Collections System Permit requires that 10% of lines be cleaned each year. This year an estimated 24% or 17,580 ft of sewer line was cleaned.
- The Collection System pump stations are operating on a wireless SCADA telemetry system, and are on continuous monitoring. Weekly physical inspections are performed on all pump stations. Several repairs made in early 2017 have greatly reduced emergency calls.

WWTP Improvements:

- In 2017 the wastewater treatment basin# 1 has had over 1,000 new membrane fine bubble diffusers installed. Basin#1 has been offline for several years and was long overdue for repairs. The new diffusers will add operating capacity and a backup for other needed repairs in the WWTP.

Notification:

- The availability of this report will be placed at Town Hall, 101 N. Middleton Street, Robbins, NC and will be available for review via the town's website at www.townofrobbins.com. Anyone that wishes to obtain a copy at can do so by visiting Robbins Town Hall or can receive a copy by mail upon request.

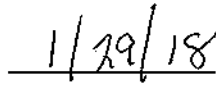
Direct Link:

Certification:

- I certify under penalty of law this report is complete and accurate to the best of knowledge. I further certify this report will be made to all users and/or customers of Town of Robbins Water Pollution Control Plant upon request and advertised as noted above.



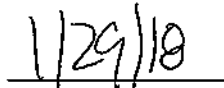
Tommy Gibbons
Public Services Dept.
Wastewater Collection ORC
Wastewater Treatment Plant ORC



Date



David Lambert
Town Manager



Date