Performance Annual Report

I. General Information

Facility/System Name: City of New Bern

Responsible Entity: City of New Bern

Person in Charge/Contact: Jordan B. Hughes, P.E., City Engineer

Applicable Permit(s): WQCS00052

I. Description of Collection System or Treatment Process:

Wastewater treatment uses physical, biological and chemical processes to remove pollutants from water so it can safely be returned to the environment. Solid material is removed from various stages of wastewater treatment. The material removed by the preliminary fine screen and grit removal system is not biodegradable. These items are washed and placed in a dumpster for sanitary disposal. The biodegradable solids (sludge) removed from the wastewater clarifiers go to three aerated sludge tanks. The combined volume of the three tanks is 1.0 million gallons. This slurry material or sludge contains only 2% solids. The material is coagulated with polymer and applied to a belt filter press to remove water. Approximately 16.86 million gallons were pressed in 2015. Pasteurization of the sludge is accomplished by quicklime and heat. The final sludge product resembles soil and is used for fertilizer for farmland and home gardens. Approximately 172 tons of sludge was used by local farmers. Approximately 3,181 tons of sludge was hauled to the landfill for ground cover. The City monitors the sludge and its usage in accordance with the North Carolina Division of Water Quality 503 Regulations for Sewage Sludge.

II. Performance:

The Wastewater Treatment Plant treated approximately 1.599 billion gallons of wastewater in 2015. The monthly average flow was 133 million gallons and the daily average was 4.39 million gallons. The plant was compliant for all monitoring permit requirements for the twelve months. The annual removal rate was greater than 98.9 % for oxygen demanding pollutants or 1073 tons for the year. The average biological oxygen demand for the effluent was less than 2.0 parts per million. The annual removal rate was greater than 98.6 % for total suspended solids or 1179 tons for the year. The average annual total suspended solids for the effluent was less than 2.5 part per million. Approximately 369million gallons were discharged to the Water Reclamation Facility for reuse and 1.23 billion gallons were discharged to the river. The annual loading of the river for total nitrogen was 60,062 pounds.

III Discharges of Untreated Wastewater:

For the 2015 reporting period, there were a total of 8 overflows of the New Bern Collection System. Four of these overflows were due to pipe or material failure. Two overflows were due to severe natural causes such as heavy thunderstorms with torrential downpours of rain. There was one overflow due to a pump station equipment failure and one overflow caused by a grease blockage. The total volume of untreated wastewater reaching surface water was approximately 21,005 gallons. Overflows were reported in accordance with State Regulations to North Carolina Division of Water Quality.

This information is required by North Carolina General Statues Article 21 Chapter 143.215.C. For additional information please contact Jordan B. Hughes, P.E., City Engineer at 252-639-7526.

Reportable Spills for 2015

Sanitary Sewer Overflows for 2015

Month	Address	Gallons	Cause
January			
1/17/2015	102 Sierra Drive	50	Cracked 1 1/4" PVC line
February			
2/25/2015	315 Falcon Bridge Drive	300	Galvanized bolts on 4" saddle corroded and broke
March			No Reportable Spills for March
April			
4/2/2015	3424 Belmont Blvd.	0	Grease
May			No Reportable Spills for May
June			
6/4/2015	213 Trappers Trail	2,000	Transducer @ Lift Station 15 quit working
July			
7/23/2015	Lift Station 77 100 Neuse Harbor Blvd	500	Severe Thunderstorms with Torrential Downpours
7/23/2015	Lift Station 76 100 River Bluffs Drive	75	Severe Thunderstorms with Torrential Downpours

August			**No Reportable Spills for August**
September			
9/11/2015	**3625 MLK, Jr. Blvd.**	**18,000**	**Break in 8" PVC Force Main**
October			
10/3/2015	**517 Neuse Harbor Blvd**	**80**	**Break in a 1 1/4" service line on a step system**
November			**No Reportable Spills for November**
December			**No Reportable Spills for December**
Total Volume		**21005**	

II. Notification

A notice will be placed in all water and sewer bills for one billing cycle including information on how to obtain this report. The report will also be posted on the City of New Bern website at www.newbern-nc.org.

IV. Certification

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 users and customers of the City of New Bern Wastewater System and that those users shall be notified of its availability.

2/1/16

Responsible Person: Jordan B. Hughes, P.E. Date
Title: City Engineer
Entity: City of New Bern