

CITY OF GRAHAM 2020-2021

ANNUAL PERFORMANCE REPORT OF WASTEWATER TREATMENT OPERATION AND COLLECTION

GENERAL INFORMATION

Facility/System Name: City of Graham Wastewater Treatment Plant

Responsible Entity: City of Graham

Person in Charge/Contact:

Tonya Mann, Utilities Director, at 336.570.6721

Cris Routh, Wastewater Plant Superintendent, at 336.570.6721

Ladd Nall, Distribution & Collection Superintendent, at 336.570.6721

Applicable Permit(s): NPDES Permit:	NC0021211
Non-Discharge Permit:	WQ0003824
Collection System Permit:	WQCS00065

Description of Collection System and Treatment Process

The City of Graham operates a Public Owned Treatment Works consisting of a North Carolina Grade II Collection System and a North Carolina Grade IV Wastewater Treatment Plant.

The collection system operates under a North Carolina Division of Water Quality Collection System Permit and contains approximately 89 miles of piping and seven lift stations. The lift stations are named Back Creek No. 1, Back Creek No. 2, Boyd Creek, Cherry Lane, Haw River, Old Fields, and Pyrtle Drive.

The wastewater treatment facility has a permitted flow of 3.5 million gallons per day (MGD). This facility consists of bar screens, grit collectors, primary clarification, extended aeration, final clarifiers, chlorination, post chlorination basin, de-chlorination, digestion, lime stabilization, sludge disposal, and laboratory. Effluent is discharged to the Haw River designated as Nutrient Sensitive Waters (NSW), which is part of the Cape Fear River Basin.

Performance

Text Summary of the System Performance for the Period of July 1, 2020 to June 30, 2021.

Collection System: The City of Graham collection system is a combination of gravity and forced mains. The city is proactive in monitoring and utilizing various methods to maintain the wastewater collection system. An education program is in place to inform water customers about the impact of improper disposal of Fats, Oils and Grease (FOG). Over 10% of the collection system is hydraulically cleaned annually. Chemical treatment, closed circuit inspection and rehab projects are just a few methods we implement to reduce and eliminate service outages and overflows. During the past fiscal year the collection experienced one reportable wastewater overflow.

Lift Stations: The City of Graham operates seven lift stations that are maintained by Collection and Distribution personnel. During this reporting period, the lift stations had three reportable sewer overflows.

Wastewater Treatment Plant: The City of Graham Wastewater Treatment Plant's permit has limits on Flow, Biological Oxygen Demand, Total Suspended Solids, Ammonia, Dissolved Oxygen, Fecal Coliform, Chronic Toxicity, and Total Phosphorus. Additional testing is performed for Total Residual Chlorine, Temperature, Conductivity, Copper, Mercury, and Zinc. Each month this data is reported to the state thru the electronic Discharge Monitoring Report (eDMR). The City is a member of The Upper Cape Fear River Basin Dischargers Coalition that performs monitoring upstream and downstream of our discharge point on the Haw River as well as other locations on the Haw and Deep Rivers. The Wastewater Treatment Plant had one reportable sewer overflow and no violations of its NPDES permit.

Non-Discharge Permit: The City of Graham land applies biosolids to agricultural land under regulations of the Environmental Protection Agency and the State of North Carolina. The City of Graham had no violations in the past year.

Violations of permit conditions or other environmental regulations relating to water quality from the above areas

September 21, 2020. Sewer Overflow: A reportable sewer overflow of 450 gallons of untreated sewage from the Boyd Creek Liftstation spilled into "Bowden Branch" and entered the Cape Fear River Basin. The spill was caused by construction of new wet well at the station. All equipment and alarms worked properly.

November 12, 2020. Sewer Overflow: A reportable sewer overflow of 13,800 gallons of untreated sewage from the Boyd Creek Liftstation spilled into “Bowden Branch” and entered the Cape Fear River Basin. The spill was caused by Inflow and Infiltration from heavy rain in the area. All equipment and alarms worked properly.

March 25, 2021. Sewer Overflow: A reportable sewer overflow of 1,100 gallons of untreated sewage from the Boyd Creek Liftstation spilled into “Bowden Branch” and entered the Cape Fear River Basin. The spill was caused by Inflow and Infiltration from heavy rain in the area. All equipment and alarms worked properly.

April 9, 2021. Sewer Overflow: A reportable sewer overflow of 1,200 gallons of untreated sewage from the Boyd Creek Liftstation spilled into “Bowden Branch” and entered the Cape Fear River Basin. The spill was caused by Inflow and Infiltration from heavy rain in the area. All equipment and alarms worked properly.

April 21, 2021. Sewer Overflow: A reportable sewer overflow of 7,200 gallons of untreated sewage spilled into “Haw River” and entered the Cape Fear River Basin.” The spill was the result of debris in a manhole. The blockage was cleared and service was restored.

April 30, 2021. Recycle line overflow: A reportable overflow of 32,805 gallons (28,755 of which reached Town Branch Creek) untreated sewage spilled near Digester building. The spill was the result of a back-up due to Raw Wastewater pumps tripped out. Alarms did not work properly due to a communication failure within the SCADA system. The pumps were reset, service was restored and lime was applied to areas around the spill. Issue within the SCADA system was addressed.

SUMMARY

During this 12-month period, there were zero NPDES permit violations out of more than 2,400 sample results.

The City of Graham had five reportable sanitary sewer overflows of 1,000 gallons or more during this reporting period. The total gallons of overflow were 56,105.

Total gallons handled by the system were 698,410,000. Percent gallons overflowed are 56,105 divided by 698,410,000 x 100 = 0.008 %. Therefore, the City of Graham achieved a 99.992 % collection rate of all gallons discharged into the system, excluding any spills that were less than 1,000 gallons.

All sludge was land applied per Land Application Permit regulations with no permit violations.

Notification

A Public Notice was placed in a local newspaper informing the public that a copy of this report can be obtained at the City of Graham, City Hall located at 201 South Main Street, Graham, NC. Additionally, this report is also, available on the Internet at <http://www.cityofgraham.com/>

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 or customers of the named system and that those users have been notified of its availability.



Tonya Mann
Utilities Director
City of Graham

(Date) 8-9-2021