CITY OF GRAHAM
2021-2022

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, 2021 to June 30, 2022.

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 three reportable wastewater overflows.

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 no 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 three 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

August 22, 2021. Recycle line overflow: A reportable overflow of 33,600 gallons (29,452 of which reached Town Branch Creek) untreated sewage spilled near the Digester building. The spill was caused by Inflow and Infiltration from heavy rain in the area. All equipment and alarms worked properly.

August 22, 2021. Sewer Overflow: A reportable sewer overflow of 14,150 gallons of untreated sewage from the Boyd Creek outfall 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.

February 20-26, 2022. NPDES Permit: The Wastewater Plant had a Notice of Violation for its weekly BOD average. The limit is a weekly average of 36.0 milligrams per liter (mg/L) of effluent. The City's average for the week was 44.95 mg/L. A brief upset of the plant was caused by heavy rains during the week. By the end of the week, the plant was back in compliance.

February 20-26, 2022. NPDES Permit: The Wastewater Plant had a Notice of Violation for its weekly TSS average. The limit is a weekly average of 45 mg/L of effluent. The City's average for the week was 89.45 mg/L. A brief upset of the plant was caused by heavy rains during the week. By the end of the week, the plant was back in compliance.

February 2022. NPDES Permit: The Wastewater Plant had a Notice of Violation for its monthly Effluent TSS concentration. The monthly average concentration shall not exceed 15% and the reported concentration was 24.8%. Heavy rainfall on February 24th resulting in high flows for almost 24 hours upset our plant. TSS monthly Effluent concentration was back in compliance by the next month.

April 9, 2022. Sewer Overflow: A reportable sewer overflow of 3,250 gallons of untreated sewage from the Porter Avenue manhole spilled into "Back Creek" and entered the Cape Fear River Basin. The spill was a result of vandalism of a manhole cover. Corrective actions were taken and service was restored.

May 23, 2022. Sewer Overflow: A reportable sewer overflow of 3,500 gallons of untreated sewage 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.

SUMMARY

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

The City of Graham had four reportable sanitary sewer overflows of 1,000 gallons or more during this reporting period. The total gallons of overflow were 54,500.

Total gallons handled by the system were 621,870,000. Percent gallons overflowed are 54,500 divided by 621,870,000 x 100 = 0.009 %. Therefore, the City of Graham achieved a 99.991 % 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 (Date) 7-15-2022

Tonya Mann
Utilities Director
City of Graham