

Wastewater Treatment Plant

PERFORMANCE ANNUAL REPORT 2017

I. GENERAL INFORMATION

Facility/System Name: City of Thomasville Hamby Creek Wastewater Treatment Plant

Responsibility Entity: City of Thomasville
P.O. Box 368
Thomasville, NC, 27361

Person in Charge/Contact: Morgan Huffman, Utilities Director
P.O. Box 368
Thomasville, NC, 27361
(336) 475-4220

Applicable NPDES Permits: NC00024112 (Wastewater Treatment Plant),
WQCS00057 (Collection System),
NCG110000 COC#NCG110094 (Stormwater-Industrial Site),
WQ0006050 Non-Discharge (Sludge Disposal),
NC0088200 (Alum Lagoon)

CERTIFIED MAIL RETURN RECEIPT NUMBER: **7015 0640 0007 8306 3998**

Description of Collection System:

The Thomasville sanitary sewer collection system is comprised of a system of 227.318 miles, or 1,200,239 linear feet of pipe, and 26 sewage lift stations spread throughout the area.

Description of Treatment Process:

Hamby Creek WWTP is a 6.0MGD capacity grade 4 wastewater treatment facility using the 5-Stage Bardenpho process with post aeration to achieve biological nutrient reduction of both phosphorus and nitrogen. Headworks equipment consists of an automated solids removal bar screen and a grit removal system. Secondary treatment consists of two parallel trains of treatment, each consisting of an anaerobic zone, an anoxic zone, an oxidation ditch, and second anoxic zone, and re-aeration. Removal of activated sludge is accomplished in two circular secondary clarifiers equipped for removal of solids for return to the process or wasting to a digestion system. Effluent from the two circular clarifiers is filtered through 10 micron disk filters and then receives disinfection via a UV system prior to post aeration and discharge into Hamby Creek. A proprietary solids reduction process is also in place via a side stream to reduce the amount of solids that must be removed. Waste activated sludge is belt pressed and landfilled or anaerobically digested to standards for class B sludge as defined by EPA in CFR Part 503 then applied to farm land as a beneficial reuse. No land application of biosolids from Thomasville occurred in 2015.

II. PERFORMANCE

In 2017 Hamby Creek WWTP treated **937.6** Million Gallons of wastewater at an average daily flow of 2.57 MGD. The treatment plant was in compliance for all effluent parameters for all 12 months of the year except for exceedance of the total seasonal phosphorus load for the months of November through March. In the sanitary sewer collection system five sanitary sewer overflows were experienced as summarized in the table below. Only one of the sanitary sewer overflows was more than one-thousand gallons in volume.

Construction projects, described below the table, have been completed and more are planned for the future to address areas where repeated sanitary sewer overflows have been experienced. The Water Sewer Utility Project List can be seen on the City website. Four things that users of the system can do to help prevent overflows are:

- 1) **NEVER** place **GREASE** or **OIL** into the sanitary sewer system. It may be liquid in your pan, but it becomes as hard as concrete in the sewer system. Instead, either place grease and oil wastes in empty containers and place these into the garbage or, preferably, **BRING YOUR USED COOKING OIL TO THE PUBLIC WORKS FACILITY AT 525 TURNER STREET TO HAVE IT RECYCLED**. The city has contracted with a private vendor to recycle citizen's used cooking oil free of charge. You can help the environment in multiple ways by recycling your used cooking oil and helping to prevent sanitary sewer overflows at the same time. Two of the sanitary sewer overflows in 2017 were attributable to grease blocking the lines.
- 2) **NEVER** place down the drain **anything that will not biodegrade in a few days**. Put another way, **if you wouldn't leave it in your front yard and expect it to biodegrade in a few days, then don't put it down the drain**. Two of the sanitary sewer overflows in 2017 were attributable at least in part to debris blocking the lines.
- 3) **Make sure** no trees or shrubs grow on or near any sewer lines that may pass through your yard. Roots will seek out the water being carried in the pipes and penetrate the pipe at the joints, creating a blockage. An aggressive program of removal of vegetation from sanitary sewer easements has helped to bring the number of spills caused by roots down.
- 4) **Make sure** no roof or yard drains are hooked into the sanitary sewer system and that cleanout caps are securely in place. The sanitary sewer system can become overloaded during rainfall events if roof or yard drains are mistakenly connected to the sanitary sewer system. Roof and yard drains should be run off into open areas or a rain garden for absorption into the ground and by plants. One of the sanitary sewer overflows in 2017 was caused by the inflow and infiltration of rainwater during an extreme weather event.

SANITARY SEWER OVERFLOWS

During 2017 the City of Thomasville experienced 5 sanitary sewer overflows, 2 of these reached surface waters. There were no known environmental impacts from this sanitary sewer overflow. There were 3 spills that did not reach surface waters. These spills are summarized in the table below and represent only about 0.00345% of the water that was collected in the sanitary sewer collection system. Another way of stating this is that 99.99655% of the water collected made it to the plant and thru the treatment process.

Month	Date	Location	Volume (Gallons)	Cause	Reached Surface Waters of the State?
February	19-Feb-17	Taylor Street	136	Debris in Line	Yes
April	24-Apr-17	Old Emanuel Church Road	32206	Severe Natural Condition	Yes
June	12-Jun-17	Russell Street	20	Grease	No
October	9-Oct-17	Liberty Drive	20	Grease	No
	13-Oct-17	E Guilford Street	20	Debris in Line, Pipe Failure	No

The City of Thomasville continues to address the issue of sanitary sewer overflows through the planning and implementing sanitary sewer infrastructure rehabilitation projects and by increasing the amount of maintenance done to the existing system. Phase II of the North Hamby Creek Outfall line upgrade project has been completed recently. This outfall line is one of the largest and oldest lines that the City has in the collection system. Phase III of the North Hamby Creek Outfall line upgrade project is in the permitting

stage and should finish the work on this outfall collector line when completed within the next two years. Completion of these projects should greatly decrease both the number and volume of large spills experienced in this portion of the collection system. Other planned infrastructure projects include: Upgrades to the Hanks Branch Basin Collection System, continued rehabilitation of manholes on the South Hamby Creek Outfall, and monitoring and evaluation of Inflow/Infiltration issues in both the Hasty Creek and Hunts Fork Creek outfall areas to be addressed in future projects. Numerous smaller pipe replacement and rehabilitation projects are performed every year by contractors hired by the City.

In addition to these projects to address infrastructure issues the City has begun a more aggressive program of Right-of-Way maintenance over the last several years. This program consists largely of the cutting and removal of vegetation that has been allowed to grow within the sanitary sewer rights-of-way or easements. Several local tree services have been employed to help in this effort along with clearing performed by City of Thomasville personnel. In conjunction with this program a private contractor has been hired to chemically treat select sections of the collection system that have experienced problems associated with root intrusion into the lines. The chemicals they use kill back the root growth and prevent re-intrusion for at least three years.

III. NOTIFICATION

Public notification of the availability of this report was made using the city government information channel (cable channel 13), the Facebook social network and the City web site. This report was prepared and issued in compliance with the North Carolina Clean Water Act of 1999. Copies of this report are available at the City of Thomasville Water Department located in City Hall, 10 Salem St., Thomasville, N.C, and on the City web site <http://www.thomasville-nc.gov/>.

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

W. Kelly Craver	Date
Responsible Person	
Title: City Manager	
Entity: City of Thomasville	

Explanation of Acronyms Used:

- BOD:** Biological Oxygen Demand
- NPDES:** National Pollutant Discharge Elimination System
- MGD:** Million Gallons per Day
- TSS:** Total Suspended Solids
- WWTP:** Wastewater Treatment Plant