

Wastewater Treatment Plant

PERFORMANCE ANNUAL REPORT 2014

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, Public Services 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: 7014 0510 0000 4255 0628

Description of Collection System:

The Thomasville sanitary sewer collection system is comprised of a system of 227.148 miles, or 1,199,341 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 2014.

II. PERFORMANCE

In 2014 Hamby Creek WWTP treated **904.6** Million Gallons of wastewater at an average daily flow of 2.48 MGD. The treatment plant was in compliance for all effluent parameters for all 12 months of the year; however 25 sanitary sewer overflows were experienced as summarized in the table below. Eighteen of the twenty-five sanitary sewer overflows were less than one-thousand gallons in volume. Several projects, described below the table, have been completed and 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. Seven of the sanitary sewer overflows in 2014 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.** Ten of the sanitary sewer overflows in 2014 were attributable 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. One of the sanitary sewer overflows in 2014 was attributable to roots blocking the lines.

- 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.

SANITARY SEWER OVERFLOWS

During 2014 the City of Thomasville experienced 25 sanitary sewer overflows, 17 of these reached surface waters. There were no known environmental impacts from these sanitary sewer overflows. There were 8 spills that did not reach surface waters. These spills are summarized in the table below. As can be seen in the table, the three largest spills occurred as part of the aftermath of the severe ice storm that struck Thomasville on March 7th and 8th 2014. Backup power generators have since been installed at these locations as part of previously planned projects to help ensure reliability of power and continuity of operation should power from the grid be lost again.

Month	Date	Location	Volume (Gallons)	Cause	Reached Surface Waters of the State?
January	11-Jan-14	Old Emanuel Church Road	54,000	Inflow/Infiltration, Severe Natural Condition	Yes
	14-Jan-14	Julian and Liberty Streets	Zero (after clean up)	Grease	No
March	02-Mar-14	Church Street	5	Debris in Line, Grease	Yes
	04-Mar-14	Concord Street	500	Roots	Yes
	04-Mar-14	Evans Avenue	40	Grease	Yes
	07-Mar-14	High Meadows Drive	565,292	Power Outage, Severe Natural Condition	Yes
	07-Mar-14	Old Emanuel Church Road	242,004	Power Outage, Inflow/Infiltration, Severe Natural Condition	Yes
	07-Mar-14	West Cooksey Drive	493,848	Power Outage, Severe Natural Condition	Yes
April	07-Apr-14	Old Emanuel Church Road	12,500	Inflow/Infiltration	Yes
	07-Apr-14	Warner Street	5	Debris in Line, Grease	Yes
	15-Apr-14	Old Emanuel Church Road	4,509	Inflow/Infiltration	Yes
	16-Apr-14	Baptist Children's Home	3,250	Inflow/Infiltration	Yes
	16-Apr-14	Concord Street	4,803	Debris in Line	Yes
	17-Apr-14	National Highway	4	Debris in Line	No
May	07-May-14	Fairview Street	30	Debris in Line	No
	17-May-14	Russell Street	30	Grease	No
June	11-Jun-14	Baptist Children's Home	500	Debris in Line, Pipe Failure	No
October	02-Oct-14	Fisher Ferry Street	50	Debris in Line	No
	08-Oct-14	Fairway Avenue	80	Debris in Line	Yes
	10-Oct-14	Second Avenue	10	Debris in Line	Yes
	13-Oct-14	Taylor Street	30	Pipe Failure	Yes
	28-Oct-14	East Main Street	50	Other	No
December	03-Dec-14	Hasty Hill Road	150	Debris in Line	No
	04-Dec-14	Culbreth Avenue	90	Grease, Pipe Failure	Yes
	27-Dec-14	Culbreth Avenue	200	Grease	Yes

In 2014 the City of Thomasville undertook multiple sanitary sewer infrastructure rehabilitation projects to address the issue of sanitary sewer overflows and there are more projects planned for the future. Two major pump station upgrades (Northside and East Davidson) were completed this year as well as the majority of Phase I of the upgrade of the North Hamby Creek Outfall line. This outfall line is one of the largest and oldest lines that the City has in the collection system. Completion of these projects should greatly decrease both the number and volume of large spills experienced. Future planned large

infrastructure projects include: Completion of the remainder of the North Hamby Creek Outfall project in multiple phases, Upgrades to the Hanks Branch Basin Collection System, and continued Rehabilitation of Man Holes on the South Hamby Creek Outfall. Numerous smaller pipe replacement 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) 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:

NPDES: National Pollutant Discharge Elimination System

MGD: Million Gallons per Day

WWTP: Wastewater Treatment Plant