SANITARY SEWER OVERFLOWS (SSOs) FY 2004-2005

July 2004		August 2004		September 2004		October 2004		November 2004		December 2004	
0 gallons		*45,550 gallons*		*72,800 gallons*		*0 gallons*		*0 gallons*		*0 gallons*	
LOCATION	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**
NA	NA	916 Tanbarkway Rd.	Structural damage	Little Buffalo Lift Station	I/I- Hurricane Frances	NA	NA	NA	NA	NA	NA
		Little Buffalo Lift station	I/I Rain	Little Buffalo Lift Station	I/I–Hurricane Frances						
		(4) Separate spills at Little Buffalo Lift Station	I/I –Hurricane Gaston	609 Sunset Dr.	I/I- Hurricane Ivan						
		522 Sunset Dr	I/I –Hurricane Gaston								
		(2) Spills at 609 Sunset Dr.	I/I –Hurricane Gaston								

January 2005		February 2005		March 2005		April 2005		May 2005		June 2005	
105,620 gallons		*9,440 gallons*		*150,090 gallons*		*57,655 gallons*		*0 gallons*		*41,830 gallons*	
LOCATION	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**	**LOCATION**	**CAUSE**
(4) Separate spills at Little Buffalo Lift Station	I/I Rain	Little Buffalo Lift Station	I/I Rain	Gulf and Cross St.	Debris in line	609 Sunset Dr.	I/I Rain	NA	NA	(2) Separate spills at Little Buffalo Lift Station	I/I Rain
609 Sunset Dr.	I/I Rain	(5) spills at Amos Bridges Rd. Manholes 4210 4220 4235 4234 4233	I/I Rain	Little Buffalo Lift Station	I/I Rain	522 Sunset Dr.	I/I Rain			Manholes 4234 4235 4210 4220	I/I Rain
				Manholes 4220 4234 4235 4233 129	I/I Rain	Little Buffalo Lift Station	I/I Rain			409 Third St.	Debris in line
				Manholes 1026 904	Pump station equipment failure	Manholes 4220 4210 4235 4233	I/I Rain			609 Sunset Dr.	Debris in line
						Oaks Apartments	Void in channel below pipe				

*I/I = Inflow/Infiltration

System Performance

A sanitary sewer overflow is when wastewater escapes from the sanitary sewer system to the ground. Any wastewater spill in excess of 1,000 gallons or that reaches surface waters must be reported to the Division of Water Quality and revealed in this report to our customers. There are several causes for sanitary sewer spills, such as excessive rainfall that causes overloading of sewer lines, pump station malfunction, tree roots or debris in lines, structural damage, grease, and electrical failures. The chart that follows details the amount, location, and cause of our spills during this reporting period.

Sanford had thirty-seven wastewater spills this past fiscal year. Of the thirty-seven reportable spills, four were due to debris in the lines, two were due to equipment failure and structural damage, and thirty-one were due to excessive rain inflow and infiltration. We experienced a larger number of spills due to excessive rainfall from hurricanes Gaston, Frances, and Ivan. The volume of wastewater spilled was 483,065 gallons.

The wastewater treatment plant treated 1.4 billion gallons of wastewater during the year, so the volume of sanitary sewer overflows comprises 0.03% of the total flow treated. Only one gallon for every 2,898 gallons treated reached a stream. Our largest spill incident was 126,000 gallons on March 16, 2005. This spill occurred at the Little Buffalo Lift Station and was caused by infiltration from a heavy rainfall event.

What can customers do to help?

Do not clog your drain or ours! Wastewater collection systems are designed to handle three things: used water, human waste, and toilet paper. Please do not place anything else in the system.

Keep your drain on a low fat diet! Fats, oils, and grease clog sewer lines just like they clog your arteries. Collect grease in a container and dispose of it in the garbage.

Check before you dig! Do not plant trees, shrubs, and other vegetation or erect fences or other structures on or near sewer lines, easements, or manholes since roots can cause backups, and structures can hinder access to the sewer system.

Dispose of chemicals properly! Do not put hazardous wastes into the sewer system. Please dispose of these according to the package labeling, or take them to a collection site for hazardous waste.

It is illegal to vandalize manholes. Do not put limbs, leaves, objects, or chemicals down manholes. If you see someone vandalizing a manhole, call the Police Department immediately.

A Proactive Approach

Sewer Line Cleaning: We are required to clean at least 10 percent of our lines annually, and this past year we cleaned 47 percent of our lines. Our staff responded to 183 stoppage complaints, and we rodded and jetted eighty-eight miles of sewer main.

Smoke Testing: Smoke testing is an efficient and inexpensive way to identify problems in lines. The pressurized smoke fills the line and escapes wherever there is a leak. Approximately 11.7 miles of sewer pipe were tested this past fiscal year.

Sewer Line Rehabilitation: The Wastewater Construction and Maintenance Division spent $95,000 this past fiscal year on repairs and replacements in the collection system. Additionally, the Engineering Division spent $800,000 on sewer rehabilitation that included derooting 10,000 linear feet of line and installing 28,000 linear feet of cured-in-place lining.

Sewer Lift Stations: We have two new lift stations in the system: Mulato Creek to serve the new high school and future development in that area and Gum Fork Springs installed for the Industrial Park expansion.

Improvement Programs

Easement-clearing Program: All municipalities that provide wastewater services in the State of North Carolina are required to have an easement-clearing program. Utility easements are located where wastewater lines run. It is important that these areas remain accessible to allow a quick response in case of an emergency in the system. Our staff performs inspections and clears and mows these areas. This past fiscal year the staff mowed 31.4 miles of right-of-way, inspected 27.7 miles of priority (aerial) lines, and inspected 85.5 miles of collection lines during the year.

FOG Program: The City of Sanford's "Fats, Oils, and Grease Program" went into effect July 2003. The purpose of the program is to enable the City to comply with applicable federal and state laws and to prevent the accumulation of fats, oils, and grease in the sanitary sewer system from industrial or commercial establishments, particularly food preparation and serving facilities. A copy of the ordinance may be obtained at City Hall or the Public Works Center. This year 199 facilities were evaluated, five grease traps were replaced, seventy new traps were installed, sixty-two grease traps were inspected, thirty warning notices were issued for overdue maintenance, and 586,157 gallons of grease containing fluids were removed through routine maintenance.

Future Plans

The City of Sanford's system is older than most systems in North Carolina that are our size. An aging system means it is important to invest our financial resources in an effort to continually replace or rehabilitate older lines. Our future plans for sewer rehabilitation include derooting, point repairs, manhole rehabilitation and replacement, installation of cured-in-place pipe lining, and replacement of lines.

Closed circuit television cameras can be used to detect the exact location of these leaks so they can be repaired. We will purchase a closed circuit video inspection unit next year to help with maintenance and evaluation needs. Our focus for spill reduction will remain in the Little Buffalo Creek area of town.

We will continue to find the most efficient way to locate and repair infrastructure problems and to keep spills to a minimum. Our next budget year includes $750,000 in our capital reserve and utility fund to perform sewer rehabilitation. Our goal is to protect the environment and to maximize the effectiveness of our system.

IMPORTANT

PHONE NUMBERS

Public Works Service Center ..(919)775-8351

Water Billing Department .....(919)775-8216

Police Emergencies 911

Fire Emergencies.....911

Police Dept. (non-emergencies)(919)775-8266

Fire Dept. (non-emergencies) ....(919)775-8313

We certify that this report is accurate to the best of our knowledge. It is being mailed to The NC Division of Water Quality and to all City of Sanford wastewater customers. The report is also available at City Hall, the Public Works Center, and the Wastewater Treatment Plant.

City of Sanford Public Works Center

601 N. Fifth Street

Sanford, NC 27330

Fedd Walker

ORC, Collections

Phone (919) 775-8336

Permit #NC0024147/#WQCS00047

Big Buffalo

Wastewater Treatment Plant

5327 Iron Furnace Road

Sanford, NC 27330

Jay Grainger

ORC, Wastewater Treatment Plant

Phone (919) 775-8305

Permit #NC0024147/#WQ0000543

WASTEWATER ANNUAL REPORT

July 1, 2004 – June 30, 2005

THE CITY OF SANFORD'S ANNUAL WASTEWATER REPORT

Once again we proudly present our annual wastewater report. The City of Sanford is pleased to provide an overview of programs detailing the operation, maintenance and performance of its wastewater collection system. We use this opportunity each year to keep citizens informed and to maintain our State compliance requirements.

System Overview

The City currently operates and maintains 186.7 miles of gravity wastewater lines, seventeen miles of pressurized force mains, 3,800 manholes, and eleven wastewater lift stations. The system serves a residential population of approximately 20,148 residents, as well as 1,510 commercial and industrial customers.

There are two divisions responsible for wastewater collection and treatment for the Public Works Department. The Wastewater Treatment Plant maintains the treatment facilities, and the Wastewater Construction and Maintenance Division maintains the collection system.

Community Participation

You are invited to participate in our public forum and voice your concerns about wastewater treatment. The City of Sanford Council meets the first and third Tuesday of each month beginning at 7 P.M. at City Hall, 225 East Weatherspoon Street, Sanford, NC.

For more information about this report, additional copies, or any questions relating to the wastewater treatment system, please call Laura Spivey, Public Works Administrator, at (919) 775-8299, or visit our web site at ***www.sanfordnc.net.***

Working Hard for You and the Environment

City employees are on duty twenty-four hours, seven days per week, monitoring all system activity from the plant control room. Technicians observe wastewater discharge at local industries in order to monitor compliance, and laboratory personnel monitor the effluent daily by testing twenty wastewater parameters. Sanford's reuse program decreases the amount of nutrients discharged into the river. Highly treated wastewater is used to irrigate the local municipal golf course. Also, solids are converted to a dense residue, removed, and reused on permitted land in Lee, Chatham, and Montgomery Counties. This past year we applied six million gallons of biosolids to permitted land.

Down the drain! Where does it go?

Wastewater disappears through many underground pipes that carry it away from homes, businesses, schools, hospitals, and industries to ultimately end up at the Big Buffalo Wastewater Treatment Plant. The waste flows by gravity to lift stations located in strategic areas around the City. Pumps lift the wastewater to a higher elevation where it can continue to flow by gravity to the plant.

Treatment Process

The Big Buffalo Wastewater Treatment Plant is an advanced treatment facility with a permitted capacity of 6.8 million gallons per day. Physical, biological, and chemical processes at the plant treat wastewater before it is released into the environment. Wastewater flows into the plant from pipes paralleling Big Buffalo Creek. First, it passes through a bar screen and then through a grit chamber where debris is removed prior to reaching the influent pumps that pump it to the aeration basins.

Microorganisms in the aeration basin are used to convert organic matter to a solid residue. The aeration basins discharge the wastewater to the clarifiers where solids are broken down further. Clear water in the clarifiers then travels to the filters. The wastewater is disinfected by a chlorination process and safely dechlorinated prior to being discharged through an outfall pipe into the Deep River.