WASTEWATER SPILLS JULY 1, 2005 - JUNE 30, 2006

DATE	CAUSE	GAL. SPILLED	GAL. TO STREAM	LOCATION
7/7/05	Inflow and Infiltration- Hurricane Cindy	25,860	19,935	Little Buffalo Creek Lift Station and Manholes 4210, 4220, 4234, 4235
7/20/05	Debris in line	10,500	10,500	Manhole 189, near 2024 Boone Trail Road
7/22/05	Inflow and Infiltration	1,380	0	Little Buffalo Creek Lift Station and Manholes 4210, 4220, 4234, 4235
7/28/05	Inflow and Infiltration - Severe Thunderstorms	3,150	3,150	522 Sunset Drive, Manhole # 1833 609 Sunset Drive, Manhole # 4192
7/29/05	Power Outage Inflow and Infiltration - Heavy Rain	1,530	0	Jackson Heights pump station Little Buffalo Creek Lift Station and Manholes 4210, 4220, 4234, 4235
7/31/05	Inflow and Infiltration - Heavy Rain	21,000	12,750	Little Buffalo Creek Lift Station and Manholes 4210, 4220, 4234, 4235
10/31/05	Structural damage at connection of manhole drop	4,200	4,000	Manhole 189 near 2024 Boone Trail Road
12/15/05	Inflow and Infiltration	36,000	30,000	Little Buffalo Creek Lift Station and Manholes 4210, 4220, 4234, 4235
2/4/06	Inflow and Infiltration - Roots	13,980	4,000	Little Buffalo Creek Lift Station and Manholes 4234,4235, 4210, 4220
3/14/06	Debris in line	1,200	1,200	Manhole 2142, Third St. and Alcott
4/27/06	Inflow and Infiltration	6,525	2,700	Little Buffalo Creek Lift Station and Manholes 129,4233, 4234, 4233, 4220, 4210, 4235
5/14/06	Severe Natural Condition -Electrical failure, Lightining	36,000	36,000	Carr Creek Lift Station, Manhole 3717
6/14/06	Severe Natural Condition- Hurricane Alberto	176,400	176,400	Little Buffalo Creek Lift Station and Manholes 4210, 4234, 4235, 4233, 129, 4220 Hickory and Market Streets, Manhole 1877 Northview Lift Station, Manhole 33 West Lake Downs Lift Station, Manhole 856 2107 Lee Ave., Manhole 4433 Carr Creek Lift Station, Wet Well & Manhole 3717 528 Summit, Manhole 1703 Cameron Dr., Manhole 3753 305 E. Rose, Manhole 3753 602 W. Chisholm St.,Sewer line in front of residence Jenkins & Maple, Manhole 1793 2nd and Sycamore, Manhole 1912 544 Sunset, Manhole 1764 616 Sunset, Manhole 1765 522 Sunset, Manhole 1833 West Rose between Hall & Pinehurst, Manhole 2743 2117 Lee Ave., Manhole 3075 218 Gulf Street, Manhole 1639
6/23/06	Inflow and Infiltration	960	0	424 Amos Bridges Rd., Manhole's 4235,4234,4210,4220
6/25/06	Inflow and Infiltration	3960	0	Little Buffalo Lift Station, Manhole's 4235,4234,4210,4220
	TOTAL SPILLED	342,645	300,635	

Notes:
*Spills are reportable if any amount reaches the surface waters or the spill amount is greater than 1,000 gallons.

How do sewer overflows happen?

A sanitary sewer overflow occurs 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 adjacent chart details the amount, location, and cause of our spills during this reporting period.

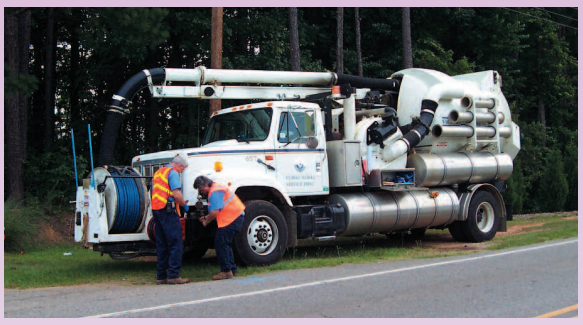
System Performance

Sanford had forty-two wastewater spills this past fiscal year. Of the forty-two spills, three were due to debris and roots in the lines, three were due to equipment failure and structural damage, and thirty-six were due to excessive rain inflow and infiltration. The total volume of wastewater spilled was 342,645 gallons. The volume that reached a stream was 300,635 gallons.

The wastewater treatment plant treated 1.46 billion gallons of wastewater during the year, so the volume of sanitary sewer overflows comprises 0.02 percent of the total flow. Only one gallon was spilled for every 4,856 gallons treated. Our largest spill incident was 176,400 gallons on June 14, 2006. These spills occurred throughout the City and were caused by heavy rains from hurricane Alberto.

Planning for the Future

Approximately seventy miles of the City's sewer lines are fifty years or older, and some are a hundred years old. In recent years we have rehabbed ten of the seventy miles with cured-in-place pipe lining. It costs approximately $200,000-$250,000 per mile to rehab sewer line with cured-in-place pipe lining. We plan to spend $3,000,000 to rehab our sewer lines in 2006-2007 to get ahead of any potential wastewater spills from these older lines.



Why is this project so important?

-To reduce the amount spilled and the frequency of spills that result from inflow and infiltration.

-To increase the life of the lines by an additional 50 years. Cured-in-place lining will make these lines almost like new, at a lower cost.

-To reduce the amount of water coming into the sewer plant. This will prolong the life of the plant and delay the need to expand.

Within the next seven to ten years, we hope to have all the lines 50 years and older rehabbed. We will continue to find the most efficient way to locate and repair infrastructure problems and to keep spills to a minimum. Our goal is to protect the environment and to maximize the effectiveness of our system.

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 and other structures on or near sewer lines, easements, or manholes. 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 into manholes. If you see someone vandalizing a manhole, call the Police Department immediately.

A Proactive Approach

Sewer Line Cleaning:
This past year we cleaned 43 percent of our lines. Our staff responded to 184 stoppage complaints, and we rodded and jetted 81 miles of sewer main.

Smoke Testing and "TV-ing" lines:
Smoke testing is an efficient and inexpensive way to identify problems in lines. The pressurized smoke fills the line and escapes wherever there is an opening. Approximately .26 miles of sewer pipe were smoke tested this past fiscal year. We videoed 6.12 miles of line with our closed circuit video inspection unit purchased last year.

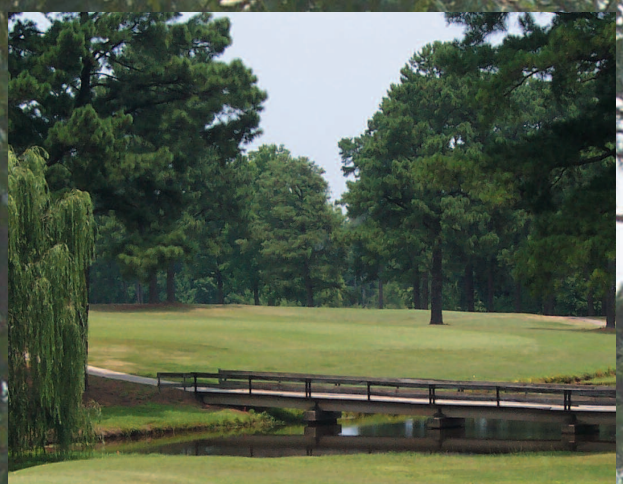
Sewer Line Rehabilitation:
The Wastewater Construction and Maintenance Division spent $100,500 this past fiscal year on repairs and replacements in the collection system. Additionally, the Engineering Division spent $430,000 on sewer rehabilitation that included the installation of 7,026 linear feet of cured-in-place pipe lining.

Improvement Programs

Easement-clearing Program:
Wastewater lines are located along utility easements. Our staff performs inspections of the lines and mows the easements. This past fiscal year the staff mowed 37 miles of right-of-way, inspected 38.6 miles of priority (aerial) lines, and inspected 74 miles of collection lines.

FOG Program:
The City of Sanford's "Fats, Oils, and Grease Program" has been in effect for three years. The purpose of the program is to prevent the accumulation of fats, oils, and grease in the sanitary sewer system. We have 201 commercial facilities participating in the program. Two grease traps were replaced, seven new traps were installed, 98 grease traps were inspected, 17 first warning notices were issued for overdue maintenance, and 864,448 gallons of grease-containing fluids were removed through routine maintenance.

Reuse Program:
Sanford's reuse program decreases the amount of nutrients and flow discharged into the river. Treated wastewater in recent years has been 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 6 million gallons of biosolids to permitted land.



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.

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

City of Sanford Public Works Center

601 N. Fifth Street

Sanford, NC 27330

Fedd Walker

Operator in Responsible Charge, Collection

Phone (919) 775-8336

Permit #NC0024147/#WQCS00047

ANNUAL WASTEWATER REPORT

Big Buffalo

Wastewater Treatment Plant

5327 Iron Furnace Road

Sanford, NC 27330

Jay Grainger

Operator in Responsible Charge,

Wastewater Treatment Plant

Phone (919) 775-8305

Permit #NC0024147/#WQ0000543

Wastewater System Performance 2005-2006

THE CITY OF SANFORD'S 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.

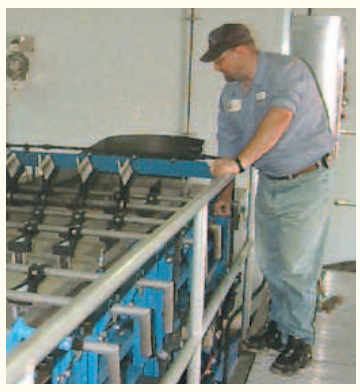
Did you know?

The City currently operates and maintains 186.7 miles of gravity wastewater line; seventeen miles of pressurized force main; 3,800 manholes; and eleven wastewater lift stations. The system serves a residential population of approximately 20,000 residents, as well as, 1,500 commercial and industrial customers.

Working Hard for You

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.

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.



Community Participation

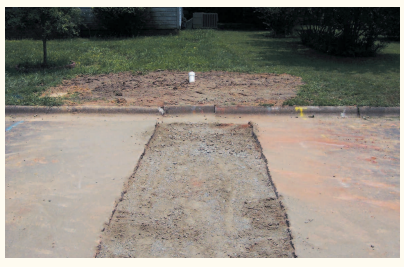
You are invited to participate in our public forum and voice your concerns about wastewater treatment. The City of Sanford Council meets the first and third Tuesdays of each month beginning at 7 p.m. at City Hall, 225 East Weatherspoon Street, Sanford, NC.

For more information about this report, 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.

New Sewer Ordinance

Under our City sewer ordinance, sewer laterals are the responsibility of the property owner from the home to the sewer main in the street. Sometimes a problem will occur with the owner's sewer lateral in the street right-of-way. In this case the homeowner is responsible for a new sewer lateral or "retap" for $750.

In March the City passed a new ordinance that will allow the City to take responsibility for the portion of the sewer lateral in the street, when the property owner has installed a cleanout at the right-of-way line. A cleanout is a pipe that sticks from the ground that allows access to your sewer lateral. All new homes with a sewer connection are required to have cleanouts at the right-of-way to pass inspection.



Citizens, who do not have a cleanout on their sewer lateral, may want to consider having a plumber install a cleanout at the right-of-way to take advantage of this new ordinance.

Where does wastewater go?

Wastewater travels through many underground pipes that carry the wastewater away from homes, businesses, schools, hospitals, and industries. 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 Big Buffalo Wastewater Treatment 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. 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.