

SEWER IMPROVEMENTS

The City rehabilitates manholes and sewer lines every year. In addition, in depth analysis was performed to help identify areas of the system in need of additional attention. As a result, work was started that will decrease the impacts heavy rain events have on our sewer system.

Sewer Collection System Activities

The City of Sanford's Distribution and Collection Division performs routine and preventative maintenance on the collection system daily and are on call for any problems with the system twenty four hours a day. This department consists of twelve highly trained and certified employees.

Routine maintenance:

- Responded to 201 sewer backup or stoppage investigations
- Jetted 33.9 miles of sewer main and inspected collection lines.
- Staff mowed and inspected 58.5 miles of sewer right-of-way, priority (aerial) lines are inspected semi-annually at 109 miles this year.
- Videod .74 miles of line.

FOG PROGRAM

The City of Sanford's "Fats, Oils, and Grease Program" has been in effect for eleven years. The purpose of the program is to prevent the accumulation of fats, oils, and grease in the sanitary sewer system. We have 177 commercial facilities with 186 grease traps participating in the program. Our FOG coordinator inspected 126 grease traps this year and 993,259 gallons of grease-containing fluids were removed through routine maintenance.

Sanford did not experience any reportable sewer overflows this year due to grease.

All of us can work together to protect the environment and maintain the sewer infrastructure.

YOU CAN HELP!

Please follow these guidelines:

- *Collect fat, oils, and grease in a container and dispose of it in the garbage.*
- *Place personal hygiene products and diapers in a waste-basket. Do not flush plastics.*
- *Place food scraps in the trash or start a compost area. Use the garbage disposal as little as possible.*
- *Don't pour hazardous materials, such as pesticides, paint, and herbicides down the drain.*
- *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.*

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.

Information on the Internet:

Visit the City of Sanford's Web site to view and print this report at (www.sanfordnc.net) and for information on all city departments and departmental contacts. Also, the North Carolina Department of Environment and Natural Resources has a Web site (www.denr.state.nc.us) that provides complete and current information on water and wastewater issues in North Carolina.

City of Sanford Public Access Channel

Please view the City of Sanford's Public Access Channel on Charter Cablevision Channel 11 for coverage of Council meetings, sewer and water construction activities, street closings, community announcements, and other information relevant to City activities.

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) 777-1118.

City of Sanford Public Works Center

601 N. Fifth Street, Sanford, NC 27330

Gerald Cox

Operator in Responsible Charge, Collection
Phone (919) 777-1210

Permit #NC0024147/#WQCS00047

Big Buffalo Wastewater Reclamation Facility

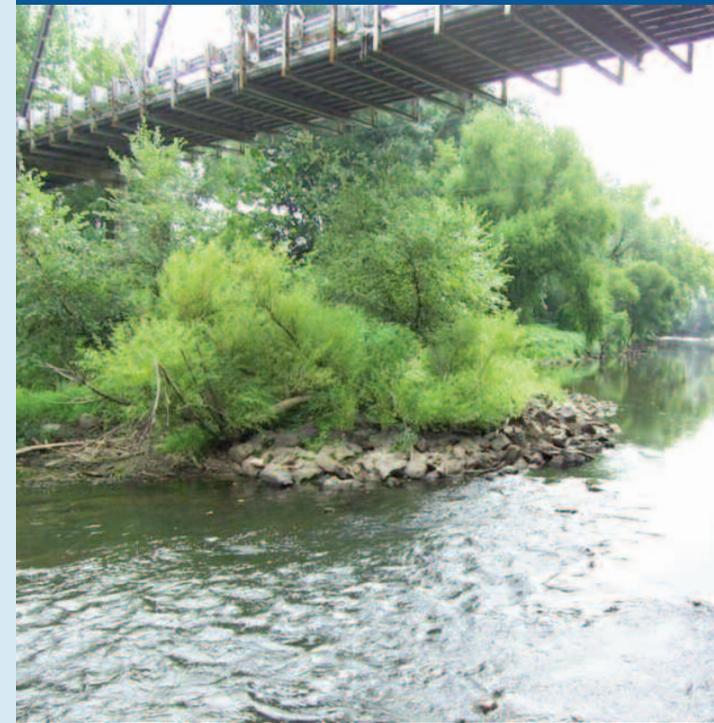
5327 Iron Furnace Road, Sanford, NC 27330

Scott Siletsky

Operator in Responsible Charge,
Wastewater Reclamation Facility
Phone (919) 775-8305

Permit #NC0024147/#WQ0000543

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 Reclamation Facility.



2018-2019 Annual WASTEWATER REPORT

Wastewater System Performance

The City of Sanford's Annual Wastewater Treatment and Collection System Report

The City of Sanford is pleased to provide an overview detailing the operation, maintenance and performance of your municipal Water Reclamation Facility and Wastewater Collection System. This report gives us the opportunity to keep you informed and to meet our State compliance requirements..

Big Buffalo Wastewater Reclamation Facility

Treatment Process

Sanford's Big Buffalo Wastewater Reclamation Facility is an advanced treatment facility with a permitted capacity of 12 million gallons per day. This past fiscal year we treated over 2.4 billion gallons of wastewater. This is an average of 6.674 million gallons a day. This facility treats waste from eighteen thousand residential customers, fifteen schools and fifteen industries in Sanford. Physical and biological processes at the plant treat wastewater before it is released into the environment.

The reclaimed water is treated by a Biological Nutrient Removal process and safely disinfected further by Ultraviolet Lights prior to being discharged through an outfall pipe into the Deep River under the National Pollutant Discharge Elimination System permit (NPDES) number NC0024147.

Staffing

Critical plant equipment is monitored twenty-four hours a day by thirteen highly trained and certified employees at the Big Buffalo WRF. Employees are certified by the State of North Carolina for proficiency in plant operation, pump station maintenance, laboratory analysis, land application of biosolids, and pretreatment management. City employees are on duty twenty-four hours, seven days per week monitoring all system activity from the plant control room. The Big Buffalo staff together has a combination of 177 years of experience.

Biosolids

The nutrient-rich organic materials resulting from the treatment of domestic sewage at the Big buffalo WRF are called biosolids. Recycling these biosolids is the most environmentally friendly and cost effective method for the City to manage its biosolids. These solids are converted to a dense residue, removed, and reused on permitted land. The City's Land Application program has 433 fields permitted for use, for a total of 828.25 acres available for the application of biosolids. This fiscal year we applied 132.88 dry tons to 4 fields which equals 11.08 acres. The City also disposed of 122,493.31 wet tons of sludge to a permitted landfill.

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. The City is also looking into expanding its reclaimed water usage to industries in an effort to curb overall water usage, free up more capacity in the river, and to extend the life of the wastewater plant. We have asked local industries to examine the feasibility of introducing the use of reclaimed water into their operations.

Pretreatment Program

Pretreatment programs help water reclamation facilities maintain the requirements of water quality before it is returned to the river basin. Big Buffalo WRF is designed to handle domestic waste. Therefore, industries that produce certain amounts of non domestic waste are required to have a permit for disposal. We currently have ten industries in the program. The City issues permits to these industries specifying the parameters of concern and flow limitations. Industrial discharges are monitored to specify the maximum amounts of pollutants that may be discharged into the facility. Staff conducts routine monitoring and inspections of these industries to ensure compliance.

Facility Laboratory Analysis

Sanford's reclamation facility maintains a certified analytical laboratory approved by the State of North Carolina and the EPA. Our lab is certified to perform environmental analysis and report monitoring data to the Division of Water Quality for compliance with NPDES effluent and pretreatment regulations. Technicians observe wastewater discharge at local industries in order to monitor compliance, and laboratory personnel monitor the effluent daily by testing twenty wastewater parameters. All data reported this year was in compliance with the NPDES permit.

Collection System Performance

SANITARY SEWER OVERFLOW (SSO)

On a daily basis approximately 4 million gallons of wastewater moves through the collection system from bathtubs, showers, kitchen sinks, toilets, washing machines, and dishwashers from homes and businesses to the Big Buffalo WRF.

Sanford has a wastewater collection system with a total of approximately 213.43 miles of gravity wastewater lines and 2.34 miles of pressurized force mains ranging in diameter from six inches to thirty-six inches. This system also encompasses nine sewer lift stations and 5,085 manholes.

Sanitary sewer overflows occur when wastewater escapes from the sanitary sewer system to the ground.

Sanitary sewer overflow reasons...

- Heavy rainfall accumulation
- Pump station malfunction
- Tree roots
- Debris in lines
- Structural damage
- Vandalism
- Grease
- Electrical failures

WASTEWATER SPILLS JULY 1, 2018 - JUNE 30, 2019

| Date | Duration | Cause | Gal. to Stream | Location |
|----------|----------------|--------------------------|----------------|------------------------------|
| 8/3/18 | 2 hrs. | Severe Natural Condition | 240 | 544 Sunset - MH 1764 |
| 8/3/18 | 3 hrs. 30 min. | Severe Natural Condition | 0 | Rose & Fourth - MH 2247 |
| 8/3/18 | 2 hrs. | Severe Natural Condition | 240 | 616 Sunset - MH 1765 |
| 8/3/18 | 2 hrs. | Severe Natural Condition | 600 | 522 Sunset - MH 1764 |
| 9/15/18 | 52 hrs. | Severe Natural Condition | 6,240 | MH 2274 at 305 Rose |
| 9/15/18 | 46 hrs. | Severe Natural Condition | 2,700 | 2nd & Sycamore - MH 1912 |
| 9/15/18 | 54 hrs. | Severe Natural Condition | 6,480 | Market & Hickory - MH 1887 |
| 9/15/18 | 3 hrs. | Severe Natural Condition | 180 | 522 Sunset - MH 1833 |
| 9/16/18 | 12 hrs. | Severe Natural Condition | 1,440 | 1926 Knollwood - MH 1380 |
| 9/16/18 | 12 hrs. | Severe Natural Condition | 1,440 | 2002 Shoreline - MH 1420 |
| 9/16/18 | 12 hrs. | Severe Natural Condition | 1,440 | 522 Sunset - MH 1833 |
| 9/27/18 | 4 hrs. | Pipe Failure (Break) | 1,200 | 1 Harts Drive - MH 3704 |
| 9/28/18 | 5 hrs. 30 min. | Pipe Failure (Break) | 0 | 5327 Iron Furnace - MH 57 |
| 10/11/18 | 1 hr. 50 min. | Severe Natural Condition | 90 | 305 E. Rose - MH 2274 |
| 10/11/18 | 3 hrs. 30 min. | Severe Natural Condition | 1,050 | Market & Hickory - MH 1887 |
| 10/11/18 | 2 hrs. 30 min. | Severe Natural Condition | 450 | 2nd & Sycamore - MH 1912 |
| 10/11/18 | 2 hrs. | Severe Natural Condition | 600 | 522 Sunset - MH 1833 |
| 11/12/18 | 7 hrs. | Severe Natural Condition | 420 | 305 E. Rose - MH 2274 |
| 11/13/18 | 5 hrs. | Severe Natural Condition | 600 | Market & Hickory - MH 1887 |
| 11/13/18 | 4 hrs. | Severe Natural Condition | 240 | Patterson Creek ROW - MH 856 |
| 11/13/18 | 1 hr. 30 min. | Severe Natural Condition | 90 | 522 Sunset - MH 1833 |
| 11/15/18 | 4 hrs. | Severe Natural Condition | 480 | 305 E. Rose - MH 2274 |
| 11/15/18 | 7 hrs. | Severe Natural Condition | 840 | Market & Hickory - MH 1887 |
| 11/15/18 | 4 hrs. 30 min. | Severe Natural Condition | 270 | Patterson Creek ROW - MH 856 |
| 11/15/18 | 5 hrs. | Severe Natural Condition | 600 | 2nd & Sycamore - MH 1912 |
| | | | 27,930 | |

| Fiscal Year | Total Spills | GAL. TO STREAM |
|-------------|--------------|----------------|
| 09/10 | 19 | 6,775 |
| 10/11 | 1 | 200 |
| 11/12 | 1 | 0 |
| 12/13 | 10 | 6,900 |
| 13/14 | 19 | 15,120 |
| 14/15 | 1 | 90 |
| 15/16 | 29 | 28,587 |
| 16/17 | 15 | 73,216 |
| 17/18 | 6 | 2,055 |
| 18/19 | 27 | 27,930 |

Notes *Spill is not reportable to State if 1,000 gallons or less & does not reach surface waters.

**Spill is reportable to State if over 1,000 gallons, or if any amount reaches surface waters.

***Annual Wastewater Report only requires spills over 1,000 gallons reaching surface waters to be listed.