

This report is published in accordance with the requirements of the North Carolina Clean Water Act of 1999 and provides information on the publicly operated treatment works and collection system operated by the Winston-Salem/Forsyth County Utility Commission. It covers the period from July 1, 2008 through June 30, 2009. This report is published and released to our customers annually.

If you have questions regarding the commission's programs or need additional information regarding this report, please call (336) 727-8000. Copies of this report may be obtained by calling the Utilities Administration office at (336) 727-8000. This report is also available at all branches of the Forsyth County public libraries and it is posted on the City of Winston-Salem's website at www.cityofws.org.

The Archie Elledge WWTP operates under NPDES Permit NC0037834. Muddy Creek WWTP operates under NPDES permit NC0050342. The land application of biosolids is regulated by the North Carolina Division of Water Quality under Permit WQ0000094. The Thermal Biosolids Dryer operates under DRS permit WQ0029804



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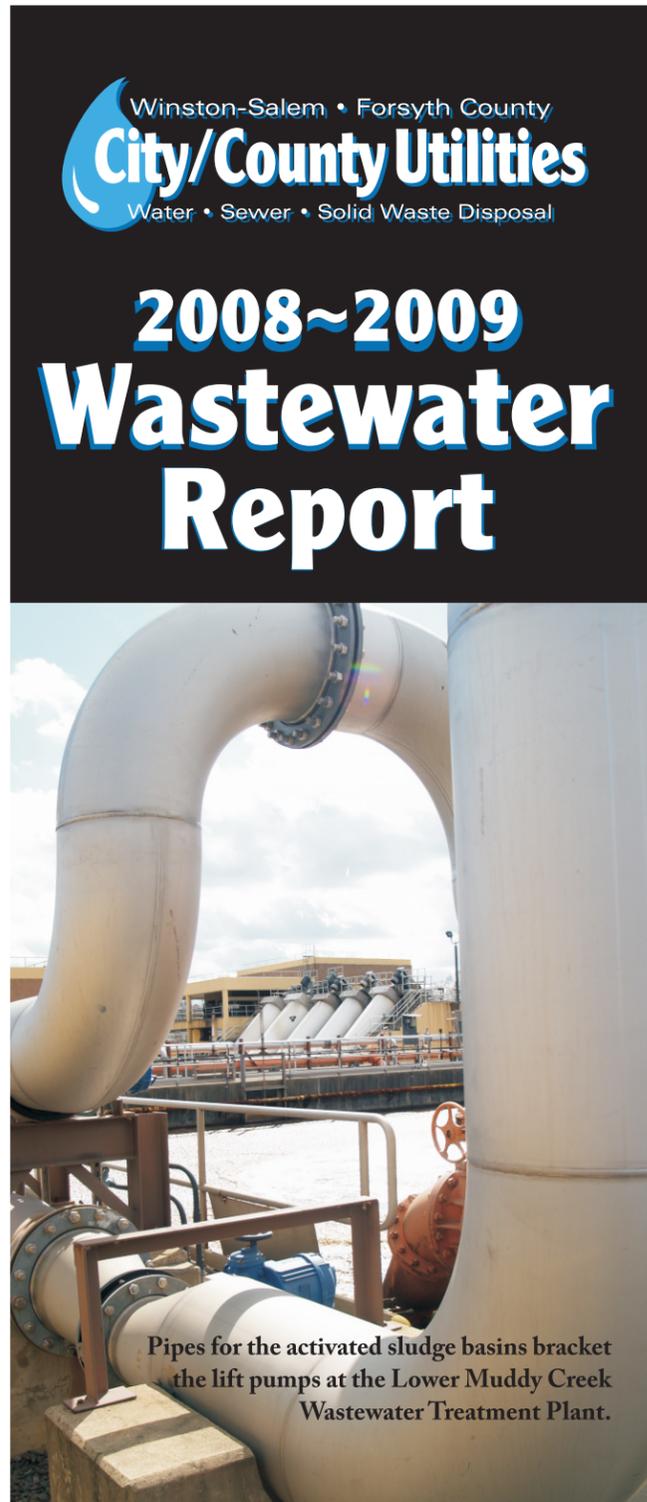
Forsyth County

County Commissioners: David R. Plyler, Debra Conrad, Beaufort O. Bailey, Richard V. Linville, Walter Marshall, Ted Kaplan, Gloria D. Whisenbunt; County Manager: Dudley Watts

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2008~2009 Wastewater Report

Pipes for the activated sludge basins bracket the lift pumps at the Lower Muddy Creek Wastewater Treatment Plant.

The Winston-Salem/Forsyth County wastewater treatment system exceeds all state and federal treatment standards

The Winston-Salem/Forsyth County Utility Commission operates two wastewater treatment plants (WWTPs) with a combined treatment capacity of 51 million gallons per day. The collection and treatment system includes approximately 1,675 miles of sewer lines and 53 pumping stations. The Utility Commission and its staff work hard to meet or exceed the requirements mandated by the North Carolina Clean Water Act and the requirements of the National Pollutant Discharge Elimination System (NPDES) permits that regulate the actual operation of the treatment plants and the disposal of biosolids.

This brochure includes information about the performance of the Utility Commission's wastewater treatment plants and sewer overflows in the collection system. It also includes details about the commission's preventative maintenance program to prevent potential problems, and compliance with state and federal standards during the fiscal year that ended June 30, 2009.

System Performance

From July 1, 2008, to June 30, 2009, the commission's sewage plants treated 11.61 billion gallons of wastewater. The Muddy Creek and the Archie Elledge Wastewater Treatment Plants both operated all year within the parameters established by its state and federal permits. There was one violation of the land-application permit due to an error by a contractor applying biosolids to farmland.

The commission's two wastewater treatment plants well exceeded state and federal requirements, discharging less than a third of the regulated pollutants allowed.

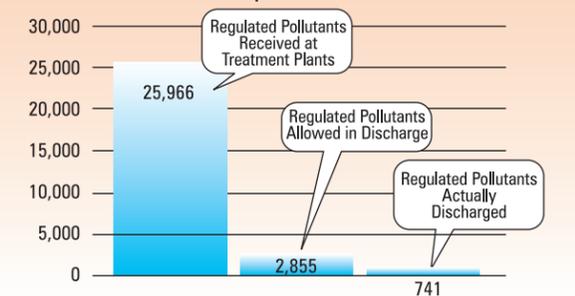
During the fiscal year there were 20 overflows in the sanitary sewer collection system, totaling 85,433 gallons, or 0.0007 percent of the 11.61 billion gallons of wastewater the system collected. There were 3 overflows from treatment plants and pumping stations, totaling 650 gallons, or 0.0000056 percent of the wastewater treated.

FY 2008-2009 Treatment Plant & Pump Station Overflow/Spill Information

Month/Year	Flow Discharged from Treatment Plants, MGal	Overflows/Spills	Overflow Volume, gallons
July 08	893.30	0	0
August 08	932.20	0	0
September 08	953.50	0	0
October 08	935.50	1	125
November 08	918.00	0	0
December 08	1,007.70	1	500
January 09	1,030.40	0	0
February 09	861.60	0	0
March 09	1,087.00	1	25
April 09	990.20	0	0
May 09	991.00	0	0
June 09	1,006.00	0	0
TOTAL	11,607.40	3	650

Date	Location	Spill vol. (gal)	Cause
10-16-08	Elledge Plant	125	Hose ruptured
12-12-08	Elledge Plant	500	Centrate line ruptured
3-28-09	Muddy Creek	25	Leak in sodium hypochlorite line

Wastewater Treatment Plant Efficiency Tons of Pollutants per Year - FY 2008-2009



The treatment process removed approximately 26,707 tons of regulated pollutants during the year ending June 30, 2009.

Reducing sewage overflows

During FY 2008-2009, there were 117 overflows in the sewerage collection system, down from 129 the previous year. The accumulation of fats, oils, and grease in sewer pipes account for 55 of these overflows. This is the same number as 2007-08 and down from 79 overflows caused by fats, oil and grease the year before that. These reductions reflect the effectiveness of the commission's Grease Interceptor Ordinance, which was put in place in 2003, and on-going public education efforts.

The commission's pro-active approach to keep sewer lines free of grease, tree roots and debris contributed to the reduction in sewer overflows. During the year the commission spent \$287,800 on contracted cleaning and chemical root treatment on 354,355 linear feet of sewer lines. In-house personnel cleaned an additional 1,054,924 linear feet.

The commission also spent \$3.05 million to rehabilitate 14,906 feet of gravity sewer mains, 121 manholes, and 123 service laterals. The enhanced condition of these sewer mains and manholes not only reduced sewer overflows, but also reduced infiltration of storm water runoff and groundwater into the sewer collection system. This reduces the amount of wastewater to be treated, thereby reducing overall operating costs.

In addition, 23,500 feet of sewer mains were inspected by closed-circuit TV. Staff and contractors improved the access to collection system easements by inspection and clearing approximately 29.3 miles of easements.

The City/County Utility Commission's goal is to have no overflows from the sewerage collection system. As always, customers can help prevent sewage overflows by not dumping debris and fats, oils, or grease in to their sinks and toilets.

What you can do

Our wastewater collection system is designed to handle three things: used water, human body waste, and toilet paper. It's very important to keep all foreign materials, such as grease and other household debris, from entering the system because they can cause blockages that lead to sewage spills.



DON'T use the toilet as a waste basket. Put a waste basket in each bathroom for disposing of trash, disposable diapers, and personal hygiene or contraceptive products.

FY 2008-2009 Performance Summary of Wastewater Collection System

Month/ Year	Total No. of SSO's	Permit or Reporting Violations	SSO w/ > 1000 gal. in water*	Total SSO Volume (gallons)	Total Sewer Collected** (M gallons)	SSO Percentage of Total
July 08	6	0	1	9,796	893.30	0.0011%
August 08	7	0	0	2,025	932.20	0.0002%
September 08	4	0	2	3,600	953.30	0.0004%
October 08	12	0	5	9,135	935.50	0.0010%
November 08	10	0	2	6,470	918.00	0.0007%
December 08	14	0	1	6,915	1,007.70	0.0007%
January 09	17	0	5	14,789	1,030.40	0.0014%
February 09	11	0	1	7,354	861.60	0.0009%
March 09	7	0	1	3,664	1,087.00	0.0003%
April 09	11	0	1	8,187	990.20	0.0008%
May 09	8	0	1	3,148	991.00	0.0003%
June 09	10	0	1	10,350	1,006.00	0.0010%
TOTAL	117	0	20	85,433	11,607.40	0.0007%

*See details below.

**This is the total volume of treated waste discharged from the plant but is assumed to be equal to what is collected. This measurement is in million gallons.

Sanitary Sewer Overflows attributable to:

Grease	47.9%
Roots	23.9%
Debris in line	18.8%
Pipe Failure	6.0%
Vandalism	2.6%
Pump Station Equipment Failure	0.4%
Other	0.4%

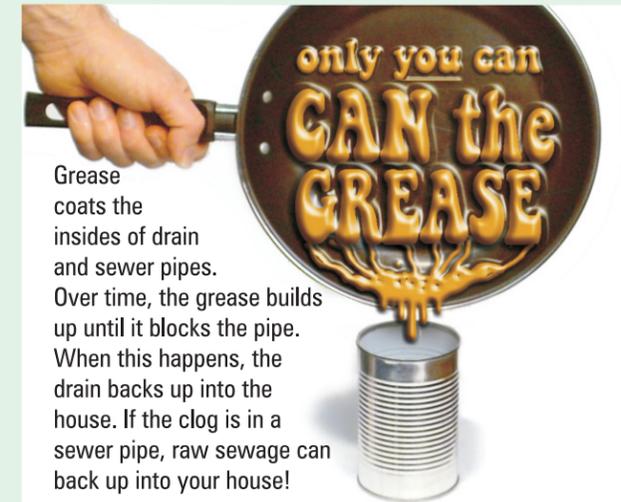
Individual Listing of Overflows Greater Than 1,000 Gallons That Reached Surface Waters

Location	Spill Volume	Location	Spill Volume	Location	Spill Volume
July-08 2511 Aaron Lane	7,515	December-08 495 Arbor Hill	4,000	May-09 521 Stone Gate Lane	1,270
August-08 No spills over 1,000 gals.		January-09 2679 Knob Hill Drive 1500 Dundee Street 5355 University Parkway 130 Flintfield Drive 1519 Williamson Street	3,810 1,200 1,200 1,207 3,750	June-09 Burham & Patterson Avenue	7,262
September-08 4600 Ogburn Avenue 100 Edgedale Court	1,500 1,400	February-09 421 Silas Creek Parkway	3,656		
October-08 3048 Zackary's Keep Court 534 Devonshire Street 2770 Dudley St 1590 Woods Rd 1610 Woods Avenue	1,225 2,000 1,200 1,125 1,125	March-09 2500 Old Lexington Road	2,915		
November-08 534 W. Devonshire Road 1615 Oak Grove Road	2,215 1,905	April-09 1965 Camden Forest Drive	5,080		

To report a sewer spill, please call City Link at 727-8000, 24 hours a day, 7 days a week.



> request a service > report a problem > make a suggestion



Grease coats the insides of drain and sewer pipes. Over time, the grease builds up until it blocks the pipe. When this happens, the drain backs up into the house. If the clog is in a sewer pipe, raw sewage can back up into your house!

Follow these steps for clog-free drains:

1. Pour or scrape grease from pots and pans into a can.



2. Store the can in your refrigerator.

3. When the can is full and the grease is chilled solid, throw it in the garbage.



4. Pour used liquid frying oil into containers that can be capped and thrown in the garbage.