



Wastewater? Sewage? What's that?

People make wastewater!

Wastewater or sewage is water, plus what you have added, that drains from your home's sinks, toilets, bathtubs and washing machines. People also create wastewater at work. Offices, businesses, and manufacturers may not create only domestic wastewater, but water combined with the discharge associated with a manufacturing process or a service.



Where does it all go?

The City of Gastonia has an extensive system of pipes that collects both the domestic and industrial wastewater and transports it to one of two wastewater treatment facilities operated by the City of Gastonia. The Long Creek facility serves the northern, central, and southeastern sections of Gastonia and portions of Gaston County including the Town of Ranlo. The Crowders Creek facility serves the southwestern and western sections of Gastonia, all of Bessemer City and Clover S.C., as well as part of Kings Mountain.

What happens there?

The wastewater treatment plants serve to clean our wastewater and prevent contaminants from getting into the environment. When wastewater enters a treatment facility, **Bar Screens** catch and remove trash and large objects. **Grit Chambers** then remove heavy particles like gravel, seeds, and coffee grounds. Wastewater then flows through large settling tanks called **Clarifiers** that allow any remaining heavy particles to settle to the bottom. After the primary clarifiers, the liquid portion flows into **Anaerobic, Anoxic and Oxidic Basins** where naturally occurring microorganisms consume the pollutants.

The wastewater then flows into final clarifiers where the microorganisms settle out and are returned to the Basins. The flow now goes through **Filters** and then is **disinfected** before the treated water is returned to the creek or river. The **Solids**, which have been removed from the water portion, are pumped to **Digesters** that cook it and turn it into organic matter known as "biosolids". These biosolids are used to fertilize State permitted farmland. After treatment, the Crowders Creek plant discharges the cleaned water to Crowders Creek, while the Long Creek plant discharges to the South Fork Catawba River.

Why was this report published?

The City of Gastonia's two wastewater treatment plants have permit limits and monitoring requirements regulated by the North Carolina Department of Environment and Natural Resources (NCDENR). NCDENR also requires all North Carolina Wastewater Collection and Treatment Systems to annually report to its customers all sanitary sewer overflows (SSO's), violations of state issued permit limits and reporting requirements. Those listed below occurred from July 2002 through June 2003.

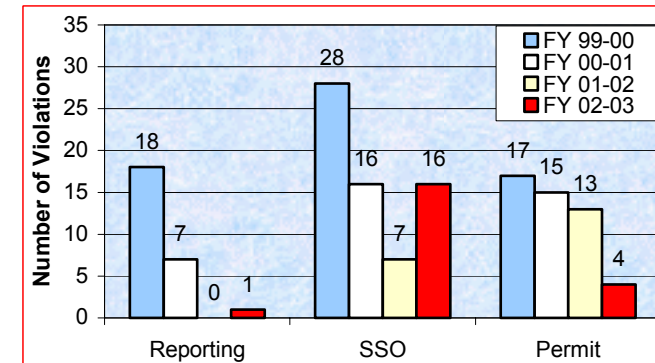
Month	SSO	Permit	Reporting
July 2002	0	1	0
August 2002	2	0	0
September 2002	1	0	0
October 2002	0	0	0
November 2002	4	0	0
December 2002	1	0	0
January 2003	0	1	0
February 2003	1	0	0
March 2003	0	0	0
April 2003	2	2	0
May 2003	5	0	1
June 2003	0	0	0

Several of the sanitary sewer overflows resulted from the significant amount of rain Gastonia has received overloading the collection system. Others were caused by equipment malfunction, power outages, or the accumulation of household and restaurant cooking grease. No SSO's were recorded at the Treatment Plants.

Sewer Overflows of 1,000 Gallons or more reaching streams

Date	Location	Volume (Gallons)	Cause
8/19/02	Redbud Drive	96,000	Equipment Failure
8/24/02	Huntington Drive	4,500	Power Outage
11/12/02	Jackson St.	9,200	Rain Event
11/24/02	Modena St.	13,500	Grease Blockage
11/26/02	Pamela St.	32,000	Equipment Failure
12/8/02	Court Drive	30,000	Equipment Failure
4/10/03	Jackson St.	13,800	Rain Event
5/14/03	Land Application	1,500	Contractor Error
5/22/03	Jackson St.	46,000	Rain Event
5/22/03	Duke St.	4,375,000	Rain Event
5/23/03	Lowell Bethesda Rd.	500,000	Equipment Failure

Performance History



Summary

The City of Gastonia has two wastewater treatment facilities that serve a Gastonia population of 68,255. There are 24,230 sewer connections and over 497 miles of sewer pipe in the Gastonia area. We also serve Clover, S.C., Ranlo N.C., Bessemer City, and part of Kings Mountain. The City's wastewater laboratory conducts an estimated 50,000 analyses per year. The treatment facilities are regulated by permit limits established to protect the receiving stream and its aquatic life.

The City of Gastonia Wastewater Treatment Division continues to implement initiatives to improve environmental performance and service for our customers.

■ Through a grant from the National Biosolids Partnership, the Wastewater Division is working to strengthen our existing environmental management system to incorporate elements from the National Biosolids Partnership Code of Good Practice. This program is strengthening the Division's biosolids management practices and public participation in the program. The Division continues to maintain the international ISO 14001 certification for its division-wide environmental management system.

■ Gastonia sponsored Mercury Day 2003 at the Schiele Museum on April 22. The objective of this workshop was to educate municipal professionals on how to measure and identify mercury sources in wastewater. Attendees included speakers from the NC Division of Water Quality and City Staff. Attendees came from 25 NC municipalities along with a special guest from Montevideo Uruguay.

■ We are participating in EPA's Management Operations and Maintenance (MOM) program that encompasses various divisions of the Public Works and Utilities Department.

■ The City has started an Oil & Grease Reduction Program to help reduce sewer blockages and overflows. This program seeks to educate residents and businesses how to properly dispose of grease. Special emphasis will be placed on food establishments that operate grease-separating devices.

Copies of this report are available at the City Hall at 181 South Street, the main Library at 1555 E. Garrison Blvd, and the Municipal Operations Center at 1300 North Broad Street. Notification of availability is provided by the local Time Warner Cable Community Channel 16, our web site at www.cityofgastonia.com, and via utility bills.

For more detailed information, contact Wastewater Treatment Division Manager:

Larry Cummings at (704) 866-6991
larryc@cityofgastonia.com

The Long Creek Wastewater Treatment facility has NPDES Permit No. NC0020184.

The Crowders Creek Wastewater Treatment facility has NPDES Permit No. NC0074268.

The Residuals Land Application Permit No. WQ0001793 authorizes application of biosolids on approximately 1967.1 acres.

You can help your city and the environment by not pouring cooking fats and oils down your drain. You can also stop vandalism to the collection system by reporting any suspicious activities around manholes to the police.

I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify that this report has been made available to the users or customers of the named system and that those users have been notified of its availability.

Matthew W. Jordan
Director of Public Works & Utilities
City of Gastonia, N.C.
July 31, 2003



City of Gastonia 2002-2003 Annual Wastewater System Performance Report



Department of Public Works & Utilities



ISO 14001
CERTIFIED

