

City of Morganton

2017 Wastewater System Performance Report



The City of Morganton operates a wastewater treatment system consisting of a 10.5 million-gallon a day wastewater treatment plant, fifteen sewer lift stations and over 200 miles of collection system. Morganton's collection system operates from the shore of Lake James to the Town of Glen Alpine, to portions of the Salem area and most of the City of Morganton. The collection system is a complex network of piping materials ranging from six inch diameter vitrified clay pipe, plastic pipe, ductile iron pipe and cement pipe up to 54 inches in diameter.

NPDES permit #NC0026573 allows the discharge of treated wastewater into the Catawba River. The wastewater treatment plant is a pure oxygen type facility. Its treatment units are bar screens, flow monitoring, cyclone degritting, primary clarification, aeration, secondary clarification, disinfection and dechlorination before discharge to the Catawba River. The solids process consists of raw sludge removal and storage as well as activated sludge removal to digesters. A dewatering process consists of centrifuge, polymer addition and composting. The composting product is then made available for sale to the public as Morganite.

During 2017, Morganton treated over **1.539 billion** gallons of wastewater. The average daily flow was 4.23 million gallons. The wastewater treatment facility staff continues to strive to improve wastewater treatment quality. Renovations are ongoing and new additions are being planned to alleviate some of the challenges the aging facility has experienced in the past and to provide for future permit demands. The wastewater treatment plant was compliant 10 out of 12 months. In January and April, there was a weekly and monthly permit violation for both TSS and BOD. These violations were due to heavy rainfall which caused hydraulic overloading of the facility. The plant was back in compliance the following week.

Residuals from the wastewater treatment plant are managed through the City of Morganton's Composting Facility regulated by permit # WQ0002127. The facility operates 5 days a week with two full time employees. During the 2017 calendar year the facility processed 1,210 dry tons of residuals from the wastewater treatment plant, producing 579 dry tons of finished compost material, 723 dry tons of which were distributed to customers.

The collection and distribution division monitors the water and sewer system. This small crew of dedicated personnel routinely goes into the lines to maintain and repair them. During 2017, this division maintained 1000 manholes, flushed 154,007 feet (29 miles) of sewer line and used a robotic TV camera to inspect 45,953 feet of sewer. Collection system crews completed 17 sewer taps during the 2017 calendar year, made 32 repairs to the system and relieved 51 stoppages. Sewer maintenance crews bush-hogged a total of 93,100 feet (18 miles) of sewer line right-of-way to give them access to the most remote sewer lines. Morganton's collection system is regulated through permit #WQCS00028.

There were two reportable overflows of the sewer system in 2017. A build-up of grease caused an overflow on West Fleming Drive on March 23th. It is estimated that 375 gallon spilled. On December 28th, a broken sewer pipe was discovered and repaired on Brookside Lane Outfall. It is estimated that 150 gallon spilled. In each of the overflow situations, the City personnel worked diligently to address the causes and to mitigate the overflows.

Annually, City crews use a remote camera to help clean and inspect portions of the sewer system. The City plans to continue to use contractors, when the money becomes available, to augment its preventative maintenance program. The results will be used to identify areas that need to be repaired and to plan appropriate action.

The camera that is used has its own light system and can rotate 180 degrees. The camera can tell if the lines are in good condition or whether there are cracks that are allowing the surrounding soil to fall into the sewer line. Cameras can also locate missing taps or indicate where leaks are occurring. This information tells us if we need to make an immediate repair or if the repair can be scheduled.

Fats, oils and grease continue to plague the collection system. Residential customers should avoid placing food into sinks and sanitary sewer lines. Particles accumulate in the customer's home as well as the collection system causing maintenance issues for the homeowner and the City.

Often our customers are the first to find problems. If you see something that appears to be wrong, please call the 24-hour number for water and sewer utilities at 438-5276.