

Town of Maggie Valley System Performance Annual Report 2023

I. General Information

Facility Name - Town of Maggie Valley Sewage System
3987 Soco Road
Maggie Valley, NC 28751

Town of Maggie Valley Wastewater Treatment Plant (WWTP)
5320 Jonathan Creek Road
Waynesville, NC 28785

Contact Information

Town Manager	Vickie Best	(828) 926-0866 ext. 102
Public Works Director	Michael Mehaffey (ORC) WWTP & CS	(828) 926-0866 ext. 102
Public Works	Seth Boyd Backup (ORC) WWTP & CS	(828) 926-0866 ext. 102

Permit Numbers:

- NPDES Permit #NC0056561
- Marketing & Distribution Permit #WQ0010615 (Class A Residuals)
- General Storm Water Permit #NCG110104
- Collection System Permit #WQCS00122
- EPA Lab Code #NC01414
- North Carolina Lab Code #5171

II. Description of Facilities

A. Collection System

The Town of Maggie Valley's service area covers approximately 16 square miles. The Town provides service to areas along Jonathan Valley from Fie Top Road to Interstate 40. There are over 47 miles of public sanitary gravity sewer line, one public pump station within the collection system and approximately 1210 manholes system wide. There is another 4 miles of private sewer system that drains to the Town's public collection system. The Town's collection system is considered young as the majority of the lines were completed in 1986. Pipe sizes throughout the collection system range from 4 inches to 18 inches with the majority (38 miles) being larger pipes 8 inches to 18 inches in size. Pipe materials used within the system include both polyvinyl chloride (PVC) and ductile iron pipe (DIP) with the majority being PVC. The Town's 2,107 sewer customers reflect a service population of an estimated 5,268 people.

B. Wastewater Treatment Plant (WWTP)

The present wastewater treatment plant (WWTP) is a 1.0 million gallon per day (MGD) extended aeration secondary treatment plant serving Maggie Valley and the Jonathan Valley area. Overall the Town services approximately 2,107 separate sewer customers with a combined customer

population of approximately 5,268. In 2023, the facility treated an average daily flow of 298,000 gallons per day. The plant consists of a step bar-screen with shaftless screw conveyor for preliminary treatment. 2 - first stage and 2 - second stage aeration basins along with a rectangular clarifier for secondary treatment. Disinfection is done by injecting chlorine into the effluent and dechlorination is achieved with sulphur dioxide gas injection. Residuals are held in two 90,000-gallon aerobic digesters until dewatering is completed by a one-meter belt filter press. Dewatered sludge is then stabilized by using the N-VIRO Alkaline Stabilization Process. Part of the sludge is land-filled. The WWTP distributed approximately 150 tons of Class A Residuals in 2023.

III. Performance Measures

A. Collection System

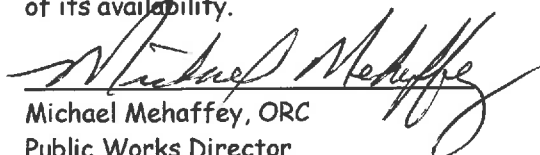
- The Town of Maggie Valley has an aggressive preventive maintenance program of high-pressure line cleaning and video inspection. This year over 29,000 lineal feet of pipeline was cleaned and inspected in this way. This represents approximately 12% of the 47 miles of sewer system.
- Public Works completed and submitted to NCDENR-DWQ, during the yearly system inspection, two six-month High Priority Inspection Reports and a System Inspection and Maintenance Report as required. The High Priority Line report documents inspection of aerial lines, siphons and lines in proximity to creeks and streams. The System Inspection Report documents oversight and walking of the entire sewer system and maintenance and repair logs.
- The collection system recorded no reportable sanitary sewer overflow (SSO) in 2023.
- Town Staff has completed the repairs identified during the 2020 Inflow & Infiltration Study and found 3 additional points of I & I that contributed a substantial amount of flow. We see the results of the Study and related repairs showing up as reduced average Daily flows from the previous year.

B. Wastewater Treatment Plant (WWTP)

- Performance measures were successfully achieved during the 2023 annual reporting period. The WWTP continues to provide effective/efficient treatment services to the community averaging BOD, TSS and Ammonia removal efficiencies well above the NCDENR and EPA requirements. Flow to the WWTP continues to remain well below hydraulic capacity for the plant, with an average flow of 298,000 gallons per day in 2023. The combination of Inflow & Infiltration Repairs and rainfall below average, were contributors in reduced average Daily flows. The WWTP remained in compliance for all permitted parameters, with one non-compliant ammonia sample, and received a favorable review by NC-DENR Regional Office staff with respect to the annual facility inspections.

IV. Certification

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 and customers of the Town of Maggie Valley sewer system and that those users have been notified of its availability.


Michael Mehaffey, ORC
Public Works Director

Town of Maggie Valley Sewage System

1-16-2024
Date