

Town of Mooresville, North Carolina

Public Services Department

Utilities Division



**Wastewater Collections System Annual Report
Fiscal Year 2017-2018**

Town of Mooresville Utilities Division

Public Utilities Director: Allison Kraft, P.E.

Wastewater Collection System

System ID #: WQCS00043

Maintenance Supervisor/ORC: Jamie Johnson

Rocky River Wastewater Treatment Plant

NPDES Permit #: NCo046728

Wastewater Treatment Plant Manager /ORC: Jamie Levis

Copies of this report are available at the following locations:

Mooresville Operations Center
2523 Charlotte Hwy
Mooresville, NC 28117

Rocky River WWTP
369 Johnson Dairy Road
Mooresville, NC 28115

Mooresville Town Hall
413 N. Main Street
Mooresville, NC 28115



Rocky River Wastewater Treatment Plant

1. Background and Intent

House Bill 1160, the Clean Water Act of 1999, was ratified by the North Carolina General Assembly on July 20, 1999 and signed into law by the Governor on July 21, 1999. This legislation placed significant reporting requirements on entities that own or operate wastewater systems.

Reporting requirements include specific items such as the number of wastewater overflows, violations of permit conditions or environmental regulations, as well as, the impact of any such violations on the environment and the corrective measures taken to minimize recurrences.

The Town of Mooresville Utility Division establishes compliance through this annual report and shares with how they can help ensure the collection system's reliability.

2. Wastewater System Description

The Town of Mooresville owns and operates a wastewater collection and treatment system. The collection system consists of approximately 265 miles of gravity sewer pipelines, over 6,500 manholes and 49 wastewater lift stations, serving over 16,000 accounts. The Water and Sewer Maintenance includes 27 staff members who operate, maintain and repair the collection system.

This system conveys untreated wastewater to the Rocky River Wastewater Treatment Plant (RRWWTP), located on Johnson Dairy Road. The RRWWTP is a conventional wastewater treatment rated for 5.5 million gallons per day (MGD) of average flow with an additional 2.0 MGD of treatment capacity available at its package plant, located on the same property. It operates with a staff of 19 operators, lab analysts, maintenance staff and environmental compliance. During Fiscal Year 2017-2018, the RRWWTP treated an average of 4.19 million gallons of wastewater per day.

The treated water must comply with stringent state and federal permit limits and conditions as set forth in the issued NPDES permit. The treated water is discharged into Dye Creek in the Yadkin/Pee Dee River Basin. The residuals generated during the process are processed into a Class A residual which is distributed to local farms though out the area. When Class B residuals are generated they are transported to a landfill for disposal.

The documented removal efficiencies were as follows for the RRWWTP in this reporting year:

BOD:	99.41%
TSS:	99.22%
NH3:	99.45%
Oil/grease:	87.02%

3. Wastewater System Projects

The Town of Mooresville continually performs pro-active preventative maintenance to the collection system to prevent wastewater overflows.

The following maintenance projects were completed during this reporting year:

Wastewater Collection System

- Gravity Sewer Rehabilitation/Replacement: 1.66 miles
- Manhole Rehabilitation: 10 repairs
- Sewer Line Inspections: 25.5 miles
- Sewer Mains Cleaned: 83.8 miles
- Lift Station Wet Wells Cleaned: 18
- Lift Station Maintenance: 132-Repairs or part replacements & troubleshooting

RRWWTP

- Sodium hydroxide feed system upgrade
- Digester #1 mixer upgrade
- Belt press conveyor systems rebuild
- Progressive cavity pump rebuild

4. Wastewater Collection System Overflows

The Town of Mooresville investigated approximately 193 municipal and private potential wastewater overflows during the past fiscal year. The Town of Mooresville reports in accordance with North Carolina General Statutes and NCDEQ guidance. Discharges of untreated wastewater to surface waters of the State or overflows that exceed 1,000 gallons are reported to NCDEQ. The Town of Mooresville reported 9 overflows within this past fiscal year which are listed in Table 5-1. NCDEQ did issue the Town of Mooresville a Notice of Violation for the overflow on 1/14/18 at 253 Golf Course Drive for a “Discharge without a valid permit”.

Table 5-1

Wastewater Collection System Overflows Resulting in Spill or Overflow of Wastewater				
Date	Address	Cause	Spill Volume (gallons)	Surface Water
07/10/2017	565 W Lowrance	Roots	30	Tributary to Reed Creek
09/05/2017	163 Mooresville Blvd	Equipment Failure	73	Tributary to Back Creek
10/31/2017	130 Rockhopper Ln	pipe failure	670	Back Creek
11/11/2017	314 Lee St	Grease/Rags	84	Reed Creek Tributary 1
11/15/2017	516 W Park Ave	sticks/debris	75	Back Creek
12/04/2017	110 Endicott Ct	pipe break	24	Unnamed Tributary to Reed Creek
12/22/2017	106 Easy St	Roots	38	Unnamed Tributary to Reed Creek
01/14/2018	253 Golf Course Dr	Equipment Failure	197,500	Reed Creek
04/24/2018	331 W Lowrance Ave	Debris	120	Unnamed tributary to Reed Reek

Customers are reminded that they have a part in maintaining the Town’s wastewater system. Never put oils, liquid or solid greases, fatty meat, or other food scraps down a drain – even if you use a motorized garbage disposal or use hot water to melt grease. Never flush disposable wipes, paper towels, cotton swabs, or similar items.

Always remove solidified grease from kitchen utensils, equipment, and food preparation areas with scrapers or paper towels and dispose of scrapings and towels in trash cans.

Report anyone discharging liquids or other substances into open municipal sewer manholes or acts of vandalism to manholes, sewers, lift stations or other structures to the Public Utilities Department at 704-664-3705.

5. NPDES Violations

NCDEQ issued a Notice of Violation to the Town for the overflow on 1/14/18 at the lift station at 253 Golf Course Drive, citing “Discharge without a valid permit”. Upon investigation, it was found that a portion of an internal transformer had malfunctioned, causing a power loss to the pump controls. Following the event, utilities staff reviewed the incident to identify and implement measures that could be put into place at this and other stations to help prevent this failure from occurring again.

There were no violations reported at the RRWWTP for the reporting period.