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 #: NC0046728
  Wastewater Treatment Plant Manager /ORC: Jamie Levis

Copies of this report are available at the following locations:

Mooresville Operations Center  Rocky River WWTP  Mooresville Town Hall
2523 Charlotte Hwy  369 Johnson Dairy Road  413 N. Main Street
Mooresville, NC 28117  Mooresville, NC 28115  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 275 miles of gravity sewer pipelines, over 6,800 manholes and 50 wastewater lift stations, serving over 16,000 accounts. The Water and Sewer Maintenance includes 30 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 7.5 million gallons per day (MGD) of average flow. It operates with a staff of 19 including operators, lab analysts, maintenance staff and environmental compliance. During Fiscal Year 2018-2019, the RRWWTP treated an average of 4.67 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:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD</td>
<td>99.24%</td>
</tr>
<tr>
<td>TSS</td>
<td>99.26%</td>
</tr>
<tr>
<td>NH3</td>
<td>99.45%</td>
</tr>
<tr>
<td>Oil/grease</td>
<td>100.00%</td>
</tr>
</tbody>
</table>
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
- South Iredell Forcemain replaced
- Gravity Sewer Rehabilitation/Replacement: 1.93 miles
- Manhole Rehabilitation: 34 repairs
- Sewer Line Inspections: 26.5 miles
- Sewer Mains Cleaned: 95.5 miles
- Lift Station Wet Wells Cleaned: 35
- Lift Station Maintenance: 244-Repairs or part replacements & troubleshooting

RRWWTP
- RAS pump replacement with associated 16” and 12” valves
- Drive roller replacement on filet belt press
- Blower #1 for digester rebuilt
- Blower #2 replacement on order
- Blower #1 motor replaced
- Belt dryer replacement of both upper & lower belts

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 5 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 4/9/2019 at 325 Mazeppa Road for a “Discharge without a valid permit”.

<table>
<thead>
<tr>
<th>Date</th>
<th>Address</th>
<th>Cause</th>
<th>Spill Volume (gallons)</th>
<th>Surface Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/16/2018</td>
<td>253 Golf Course Dr</td>
<td>Severe Natural Conditions (Hurricane Michael)</td>
<td>700</td>
<td>Reed Creek</td>
</tr>
<tr>
<td>10/11/2018</td>
<td>253 Golf Course Dr</td>
<td>Severe Natural Conditions (Hurricane Michael)</td>
<td>2,250</td>
<td>Reed Creek</td>
</tr>
<tr>
<td>10/11/2018</td>
<td>130 Rockhopper Ln</td>
<td>Severe Natural Conditions (Hurricane Michael)</td>
<td>130</td>
<td>Back Creek</td>
</tr>
<tr>
<td>10/11/2018</td>
<td>568 Oaktree Rd</td>
<td>Severe Natural Conditions (Hurricane Michael)</td>
<td>20</td>
<td>Lake Norman</td>
</tr>
<tr>
<td>04/19/2019</td>
<td>325 Mazeppa Rd</td>
<td>Pump Failure</td>
<td>177,916</td>
<td>South Fork Winthrow Creek</td>
</tr>
</tbody>
</table>

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 4/19/2019 at the lift station at 325 Mazeppa Road, citing “Discharge without a valid permit”. Upon investigation, it was found to be an isolated incident that occurred due to mechanical failures and possible operational errors. Following the event, utilities staff reprogrammed the station to run a lag pump in emergency situations and also reviewed protocols for responding to and clearing out alarms to help prevent this failure from occurring again.

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