City of Newton Wastewater Treatment System
Performance Annual Report for 2014
February 26, 2015

I. General Information

Facility Name: City of Newton Sanitary Sewer Collection System

Contact Person: Dennis D. Falder, Collection and Distribution Superintendent
PO Box 550
Newton, NC 28658
(828) 695-4298

Applicable Permits: Wastewater Collection System Permit Number-WQCS00044

ALSO

Facility Name: City of Newton, Clark Creek Wastewater Treatment Plant

Contact Person: Danny Sigmon, WWTP Superintendent
PO Box 550
Newton, NC 28658
(828) 695-4346

Applicable Permits: National Pollutant Discharge Elimination System (NPDES) Permit Number - NC0036196
Land Application (Non-Discharge) Permit Number - WQ0003902

The City of Newton views environmental protection as one of our top priorities. For this reason, the City actively participates in the collection, treatment and disposition of sewage generated within its boundaries.

Description of Collection System

Wastewater (sewage), discharged by customers, flows to the city owned and operated Clark Creek Wastewater Treatment Plant through a sanitary sewer system encompassing approximately 149.58 miles of sanitary sewer lines. Of these lines, approximately 11.34 miles are force mains with the remaining 138.24 being gravity lines. The force mains of piping ranging in size from 6” to 12” and the gravity lines consist of piping ranging in size from 6” to 36”. The City of Newton operates and maintains 8 sewer lift stations within the sewer collection system.

Upon arrival at the treatment plant all wastewater is treated and discharged in an

environmentally safe manner in accordance with National Pollutant Discharge Elimination System (NPDES) regulations.

Clark Creek Wastewater Treatment Plant, completed in 1979, upgraded in 1992, 2005 and 2010. The facility currently operates according to NPDES permit NC0036196 which includes the treatment of a maximum of 5.0 million gallons of wastewater per day (MGD). Homes, businesses, and industries discharge their wastewater (sewage) into the sanitary sewer system. Once the wastewater is discharged into the pipes it travels through the collection system until it reaches the Wastewater Treatment Plant. The system is composed of a complicated network of pumps, manholes, standby generators and over six hundred thousand (651,000) feet of pipe. The Wastewater Treatment Plant is staffed and operated 24 hours per day, 365 days a year. The City of Newton Wastewater Plant staff includes 10 State Certified Operators, including five employees that hold the highest certification obtainable in North Carolina for Wastewater Treatment Operators. The Environmental Protection Agency and the North Carolina AWWA-WEA has recognized the Clark Creek WWTP for Operation and Maintenance Excellence.

II. Performance

Yearly Performance:

During the year 2014, the wastewater collection staff visited all lift stations at a minimum of once a week. The pump maintenance crew performed scheduled preventative maintenance and made all necessary repairs as needed to keep lift stations operating at peak performance. In that same year, we have visibly inspected, cleaned, and applied root control to a combined total of 81,840 feet of sewer lines. This equals to 15.5 miles, which represents about 10.37 percent of our collection system. The break down to the yearly performance is visibly inspecting with a camera 2.2 miles of sewer main, which represents about 1.47 percent of our collection system, applied root control in 5.8 miles of the collection system, which is about 3.9 percent of the collection system, and jetting/vacuuming 7.5 miles, which is about 5 percent. The aerial and high priority lines were inspected twice this year; once in May, then again in October. We have also implemented two manholes supervisory control and data acquisitions (SCADA), so that we can respond quickly to wastewater backups before they cause an overflow. These were put in locations that were problem areas from the past. Lines not visible to the general public were bush-hogged and/or inspected in the spring and summer months. Lastly, the City of Newton is being proactive by educating the public about grease. This was done twice a year; once in the spring and once in the fall; furthermore, there are fats, oil, and grease (FOG) education material on the city web site.

City of Newton wastewater collection permit required a Capital Improvement Plan to designate funding for reinvestment into the wastewater collections system infrastructure. 2014 did have a Capital Improvement Plan that the City Council adopted. The Fiscal year of 2014-2015 the City of Newton Capital Improvement Plan has been revised and approved by the City Council in one of their 2014 spring board meetings.

Capital Improvement Projects:

In 2014 the City of Newton has replaced eight-thousand, three hundred and eighty feet of 12” sewer main and one-thousand, eight hundred and seventy feet of 8” sewer main, thus giving the total sewer main replacement at ten-thousand, two hundred and fifty feet.

Other capital improvement was replacement of forty-one manholes, and sixty-one manhole rings and covers. Most of those replacements helped reduce inflow and infiltration of an outside water source. Lastly, the City of Newton has root treated 5.8 miles, which is stated in the yearly performance section.

Sanitary Sewer Overflows:

01/11/2014: 1432 Hwy 10 West. Inflow and infiltration; heavy rain was the cause. The estimated overflow into the water of the state was 37,200 gallons. (Hildebran Creek)(Anthony Creek) Reported to DWR; and Public Notice was sent to local papers. Incident # 201400094 (Manhole # 2260 & 1523)

01/11/2014: 1827 Burris Rd. Heavy rain was the cause. The estimated overflow was 740 gallons that stayed on the ground. Report was recorded.

03/07/2014: 1004 N. Gaither Ave. Unknown debris was the cause. The estimated overflow was 9,750 and of that 7,310 was overflow into the water of the state. (Snow Creek) Reported to DWR. Incident # 201400524 (Manhole #211)

03/12/2014: 2466 Old Conover Startown Rd. Grease and cloth rags were the cause. The estimated overflow was 50 gallons that stayed on the ground. Report was recorded.

04/28/2014: 1004 N. Gaither Ave. Tree roots was the cause. The estimated overflow was 4,500 on the surface. Reported to DWR. Incident # 201400838 (Manhole # 211)

In 2014, the City of Newton WWTP effectively treated six hundred thirty nine million six hundred seventy one thousand (639,671,000) gallons of wastewater. During this time the City of Newton wastewater collection system experienced two (2) overflows that reached the waters of North Carolina. The amount of these overflows to reach surface waters was less than 0.007% of the amount of wastewater collected and treated for 2014. No overflows resulted in a fish kill or other negative environmental impact.

The Clark Creek WWTP average daily flow for 2014 was 1.75 MGD. To ensure compliance with all Federal and State laws regarding the safe treatment of wastewater, the City of Newton appropriated one million four hundred fifty nine thousand five hundred and fifty dollars ($1,459,550.00) towards operating and maintaining its wastewater treatment plant. For 2014 the City of Newton Clark Creek Wastewater Treatment Plant received one (NOV) Notice of Violation from NCDENR dated 06/16/2014 for a weekly average fecal coliform reading above 400 CFU/100 during the week ending 01/25/2014. The City replied to the NOV with factual information that the downstream watershed was not impacted by the WWTP discharge alone but the Division denied the City request to Remit the Civil fine of $399.22. The City paid the amount under vigorous protest.

narrative report of the eight pump stations is as follows:

Burris Road Pump Station (PS): This pump station is inspected three times a week by the staff to empty the bar screen cleaning debris basket and is remotely monitored via a SCADA alarm system. This system monitors and reports pump run condition; pump failure alarm, high level alarm, power failure alarm and generator failure alarm. There is

an emergency power generator on site.

Walnut Creek PS: This pump station is inspected three times a week by the staff to empty the bar screen cleaning debris basket and is remotely monitored via a SCADA alarm system. This system monitors and reports pump run condition; pump failure alarm, high level alarm, power failure alarm and generator failure alarm. There is an emergency power generator on site.

West Side PS: This pump station is inspected three times a week by the staff to empty the bar screen cleaning debris basket and is remotely monitored via a SCADA alarm system. This system monitors and reports pump run condition; pump failure alarm, high level alarm, power failure alarm and generator failure alarm. There is an emergency power generator on this site.

HWY#10/Southfork PS: This pump station is inspected one time per week by the staff and is monitored remotely via a SCADA alarm system. This system monitors and reports pump run condition; pump failure alarm, high level alarm, power failure alarm and generator failure alarm. There is an emergency power generator on site.

Startown School PS: This pump station is inspected once a week by the WWTP staff and is monitored remotely via a SCADA alarm system. This system monitors and reports pump run condition; pump failure, high level alarm and power failure alarm. A portable emergency power generator is stored at the Public Works building and is on a battery tender. In 2014 we have changed all the electrical parts including motors from a single phase to a three-phase electrical system.

Balls Creek PS: This facility is inspected once a week by the staff and is monitored remotely via a SCADA alarm system. This system monitors and reports pump run condition; pump failure, high level alarm, power failure alarm and generator failure alarm. There is an emergency power generator on site.

Gregory Wood Products PS: This facility is inspected once per week by the staff and is monitored via a SCADA alarm system. This system monitors and reports pump run condition; pump failure alarm, high level alarm, power failure alarm and generator failure alarm. There is an emergency power generator on site.

Target Distribution Center PS: This facility is inspected once a week by the staff and is monitored via a SCADA alarm system. This system monitors and reports pump run condition; pump failure alarm, high level alarm, power failure alarm and generator failure alarm. There is an emergency generator on site.

Aerial and High Priority Lines:

Location	Manhole	Size	Material	Footage	Type
2210 Little Coulters Church Rd	2338-2339	24	Steel	40	AERIAL
2210 Little Coulters Church	2334-2338	36	Steel	40	AERIAL
1775 Southwest Blvd	2322-2306	36	Steel	40	AERIAL
1775 Southwest Blvd	2320 -2318	24	STEEL	40	AERIAL

1346 McKay Rd.	2167-2328	12	CI	18	AERIAL
1346 McKay Rd.	2165-2166	12	CI	18	Under Creek
2393 W Hwy 10	1357-1356	12	CI	6	AERIAL
1390 Kensington	1349-1384	18	DI	30	Under Creek
1698 Kensington	1367-1368	12	CI	5	AERIAL
720 Westside Dr	2263	18	PVC	418	Parallel to creek
720 Westside	2264	18	PVC	418	Parallel to creek
846 Westside Dr	2215-2216	12	CI	15	AERIAL
235 N Gate	2280-2277	18	CI	40	Under Creek
530 Hamilton	1004-1006	8	DIP	10	AERIAL
41Cherry Ln	1177-1178	12	DIP	40	AERIAL
41 Cherry Ln	1505-1178	8	DIP	120	AERIAL
811 Ridge Dr	1871-1872	12	DIP	40	AERIAL
811 Ridge Dr	881-742	12	DIP	20	AERIAL
1522 W NC Hwy 10	2204-1730	12	DIP	40	AERIAL
1254 Long Dr	2205-1699	12	CI	8	AERIAL
1135 Long Dr	1698-1699	12	Steel	8	AERIAL
1011Quail	1695-1696	12	Steel	8	AERIAL
1432 Old Conover Startown Rd	1694-1693	12	Steel	8	AERIAL
1432 Old Conover Startown Rd	1690-1691	12	Steel	10	AERIAL
1306Beechwood	1306-1305	8	Steel	8	AERIAL
1180 Edgefield	1293-386	8	DIP	8	AERIAL
3336 Startown Rd	1666-1667	12	Steel	20	AERIAL
2055 Milton	1680-1681	12	Steel	5	AERIAL
1376 Old Conover Startown Rd	1685-1686	12	Steel	30	AERIAL
1991 Old Conover Startown Rd	1641-1642	12	Steel	5	AERIAL
2078 Settlemyre Bridge Rd	1635,1636,1637	18	PVC	175	Parallel to creek
2078 Settlemyer Bridge Rd	1743-1612	8	Steel	30	AERIAL
2078 Settlemyer Bridge Rd	1742-1612	15	Steel	30	AERIAL
2078 Settlemyer Bridge Rd	1634-1633	12	Steel	15	AERIAL
1928 Settlemyer Bridge Rd	1632-1631	12	Steel	2	AERIAL
100 Raido Station Rd	2251-2254	18	DIP	15	AERIAL
773 Raido Station Rd	1451-MH ?	12	Steel	50	AERIAL
1088 Raido Station Rd	855-MH ?	12	Steel	50	AERIAL
1019 W 1st St	2246-2242	18	Steel	30	AERIAL
844 W 6th St Circle	1977-820	8	Steel	140	AERIAL
Westlake & W 7th St	795-796	8	DIP	30	AERIAL
Westbrook & Poplar	1712-1836	8	DIP	35	AERIAL
731 W 15th St	2223-2225	12	DIP	10	AERIAL
1818 Northwest Blvd.	1188-646	12	DIP	40	AERIAL
802 W 15th St	2222-2168	12	DIP	15	AERIAL
2202 Northwest Blvd.	1191-1190	12	CI	5	AERIAL
510 S Cline Ave	455-478	8	DI	40	AERIAL
639 W 1st St	838-508	12	Clay	448	Parallel to creek
311 W 1st St	549-839	12	PVC	30	Parallel to creek
1901 Northwest Blvd.	702-664	8	DI	10	AERIAL

301 W 20th St	703-218	8	DI	30	Under creek
316 W 21st St	613	8	Clay	25	MH near creek
302 W 24th St	597-598	10	CI	20	AERIAL
2636 Northwest Blvd	567-849	12	CI	10	AERIAL
2726 N Ashe Ave	240-238	10	CI	25	AERIAL
2726 N Ashe Ave	1316-288	8	CI	20	AERIAL
425 E P St	1104-1103	12	CI	30	AERIAL
1814 US 321 South	1123-1124	15	CI	30	AERIAL
1931 Brookside	1106-2086	6	DIP	25	AERIAL
1058 Meadowbrook	2087-MH N/A	8	DIP	25	AERIAL
1235 Lakewood Dr	2089-1138	8	DIP	25	AERIAL
1235 Lakewood Dr	1139-1533	14	PVC	25	Under Creek
1545 St. James Church Rd.	2501-1530	8	DIP	25	AERIAL
425E N St	1121-1516	10	DIP	35	AERIAL
425 E N St	1515-1514	16	CI	4	AERIAL
400 E N St	1509-1508	8	CI	60	AERIAL
400 E N St	1509-1508	12	CI	60	AERIAL
428 E K St	1074-989	12	CI	40	AERIAL
428 E K St	1074-989	12	CI	40	AERIAL
518 E J St	1512	24	PVC	30	Parallel to creek
518 E J St	1050-1049	24	PVC	340	Parallel to creek
511 Burton St	914-961	8	DIP	8	AERIAL
612 St James Church Rd	1569-1570	10	CI	20	AERIAL
612 St James Church Rd.	288-1833	12	CI	20	AERIAL
152 S Caldwell Ave	326-1084	12	CI	10	AERIAL
112 McDanials Circle	1774-439	12	CI	5	AERIAL
30 S Gaither Ave	1495-MH # ?	8	DI	40	AERIAL
108 N Gaither Ave	411-#?	8	CI	45	AERIAL
307 N Ervin Ave	1490-410	12	DIP	10	AERIAL
702 N Gaither Ave	434-433	8	DIP	40	AERIAL
1004 N Gaither Ave	213	12	PVC	50	Parallel to creek
1113 N Davis Ave	2021-2020	8	DIP	60	AERIAL
1113 McRee Heights	211-210	12	DIP	8	AERIAL
1116 MCree Heights	209-1381	8	DI	15	AERIAL
1119 McRee Heights	1550-1771	12	DIP	5	AERIAL
1672 Powerline Ave	721-1425	8	CI	170	AERIAL
2410 Brookwood	610-971	8	DIP	5	AERIAL
1212 E H St	938-939	8	DI	22	AERIAL
1202 E H St	1565	12	PVC	55	Parallel to creek
1633 Fisher Ct	2464-2465	12	DI	6	AERIAL
1800 St James Church Rd	2457-1457	15	CI	15	AERIAL
1666 Fisher Ct	2454-2451	12	CI	40	Parallel to creek
2014 S. Hwy 16	1444-1445	12	CI	15	AERIAL
1516 S. Hwy 16	1561-1560	12	Steel	15	AERIAL
1625 Berkshire	1795-1796	8	DIP	6	AERIAL
1450 Berkshire	1819-1820	12	PVC	8	Under Creek

1730 Nelson	2478-2477	12	PVC	8	Under Creek
1730 Nelson	1803-1808	8	DIP	30	AERIAL
1824 Mount Olive Church Rd	Force Main	8	DIP	10	AERIAL
1824 Mount Olive Church Rd	Force Main	12	DIP	10	AERIAL
1847 Burris RD	Force Main	8	DIP	10	AERIAL
1847 Burris Rd	Force Main	12	DIP	10	AERIAL
1702 New Hwy16	2415-2416	15	Steel	15	AERIAL
607 Thomas	2047-1386	8	Steel	10	AERIAL
1401 Burris Rd	2078-1392	12	DIP	20	AERIAL

III. Notification

The City will notify the users of the wastewater system of this Annual Report by way of the City Newsletter, the City Web-site, and by announcement at a City of Newton Council meeting on February 3, 2015.

IV. General Information

The City of Newton is responsible for maintaining unobstructed wastewater flow in the City owned sewer system. The line that connects a house or building to the City sewer system is called a service lateral. The property owner is responsible for maintaining the service lateral. If a blockage occurs causing a sewer backup, the city encourages residents to call the city so a crew can verify which part of the line is obstructed. A city crew will check the main line and clear the line if necessary. If the main line is clear, the property owner will be notified of the need to call a plumber to clear the service lateral. Occasionally there are blockages in service laterals that extend into the utility right-of-way. When this occurs the City will check and clean the line to the "clean out" if requested. However, the property owner is ultimately responsible for the entire length of the service lateral.

Why do sewer lines block?

Many things can become lodged in a sewer line causing a backup; e.g. sticks, rocks, bricks, pieces of broken pipe, string, rags, GREASE, paper towels, newspapers, sanitary napkins, plastics, etc. Many blockages occur as a result of tree roots growing into sewer pipes. Roots collect grease and animal fat poured down drains. Over time, this collection of debris can cause an obstruction. You can help prevent sewer backups in your home and protect the environment if you adhere to the following advice: (1) Never flush or put anything down a toilet or drain that would clog a sewer line, (2) do not wash grease down a drain and (3) report any sewer overflow immediately.

It is a good idea to collect grease in a can or jar and put it in the refrigerator. When the

container is full, and it solidifies, dispose of it with the household garbage.

The City of Newton has a Grease Trap Policy and a Standard Operating Procedure for controlling grease discharge from commercial establishments.

What is a "Backwater Valve" and do I need one?

A backwater valve is a relatively inexpensive item that can be installed on your plumbing system that will help prevent sewer back-ups and overflows that could occur on your property or in your home. The N.C. Plumbing Code requires that a "backwater valve" be installed in all structures if they have a plumbing fixture that has a "flood rim elevation" below the next upstream city sewer manhole. City residents can avoid sewer back-ups by installing this backwater valve, which is designed to prevent a sewer back-up in the customer's plumbing caused by a blockage in the city's sewer system. The valve allows sewage to leave the residence or business, but does not allow sewage to flow back into the property. (The flood rim elevation is the level at which a fixture, such as a toilet or sink, will overflow) It is possible that some local homes or businesses that have fixtures with flood rim elevations below the next upstream sewer manhole may not have the backwater valve installed. Any structure with plumbing fixtures below the next upstream sewer manhole is at risk of sewage backing up into the structure. Structures with plumbing fixtures in basements are more likely to need the valve installed. Residents are advised that the city is not responsible for damages caused by a sewer back-up on private property if the required backwater valve has not been installed.
For more information or to determine if your home needs a backwater valve, contact Dennis Falder at 695-4298.

Questions?

Should you have any questions regarding the treatment of wastewater in your community or need to report a sewer problem, please feel free to call the City of Newton Public Works and Utilities Department at 828 695-4310. To report a sewer problem after 5:00 PM or on weekends call 695-4306

V. 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 will be made available to the users of the system as stated in the report. An announcement of the availability of the report is scheduled to be made at a regularly scheduled City Council Meeting held on February 4, 2014.

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Danny Sigmon Date
City of Newton
WWTP Superintendent