



Wastewater Collection System

System Performance Annual Report July 1, 2015– June 30, 2016

I. General Information:

A. Facility / System Name:

City of Hendersonville Wastewater Collection System

B. Responsible Entity:

City of Hendersonville

C. Operator in Responsible Charge (ORC):

Tim Sexton
305 Williams Street
Hendersonville NC 28792
(828) 697-3073
Email tsexton@hvlnc.gov

D. Non-Discharge Permit Number:

Collection System Permit Number WQCS00070

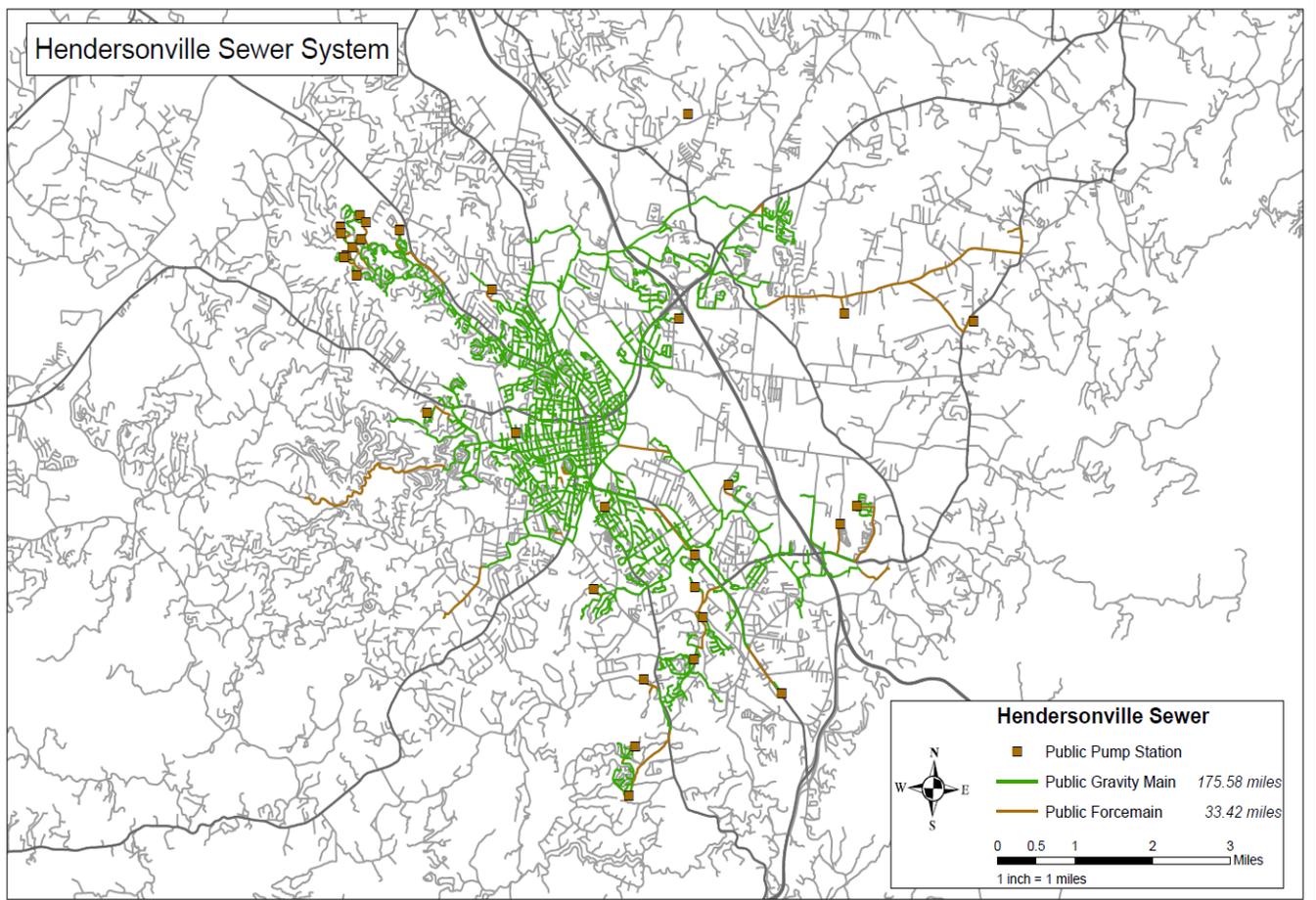
NPDES Permit Number (WWTP):

NC0025534

E. Description of Collection System:

The City of Hendersonville (the “City”) wastewater collection system is located in and around the corporate limits of the City. The majority of the system consists of gravity sewer mains. There are currently thirty (30) wastewater lift stations with pressure force mains located within the system that are owned and operated by the City. The collection system consists of approximately 175-miles of gravity sewer mains ranging in size from 6” to 42”. These mains are connected by manholes at each intersecting point. Also there are approximately 33 miles of sewer force mains ranging from 2” to 8” that connect to the lift stations and discharge into manholes at a higher elevation. The system collects wastewater and delivers it to the City’s wastewater treatment plant (NPDES Permit No. NC0025534) located on Balfour Road.

F. Map of Collection System:



II. Performance:

A. General:

The City's wastewater collection system had a total of seventeen (17) reportable sanitary sewer overflows (SSOs) during the twelve month period from July 1, 2015 to June 30, 2016. All SSOs occurred in a four month period (October-December 2015 and February 2016) when we received almost 34-inches of rainfall, which was over one-half of the rainfall that we received for the entire fiscal year (July 2015-June 2016). These spills resulted in a total of 265,157-gallons of untreated wastewater reaching area streams. The spills did not result in any fish kills or other known environmental impact.

City staff has consistently been working on an inflow and infiltration (I/I) reduction program. During this twelve-month period our crews repaired sections of the system resulting in the reduction of approximately 9,833-gallons of inflow per one-inch of rainfall and 45.5 gallons per minute of continuous flow. The City has added an inflow infiltration technician position to the sewer collections division of the Department. This technician is dedicated to searching out and identifying potential sources of inflow through smoke testing and dye testing. During this 12-month period we have smoke tested 36,791ft of sewer mains. The City has also hired a utilities engineer to assist with this effort and will be designing repair and replacement plans for any defective sewer mains identified that are resulting in inflow.

During the year our crews have cleaned 81,193-feet of our sewer system or approximately 9% of the gravity system. Our crews also inspected approximately 50,811-feet of sewer mains or approximately 6% of the gravity system using closed circuit TV (CCTV) equipment. The City invested over \$218,000 in new CCTV equipment and vehicle, approximately \$350,000 in new vacuum cleaning equipment and vehicle over the past 4-years. The City has also invested approximately \$70,000 for a mini-excavator with a mowing attachment and \$68,000 for a skid-steer bushhog machine, both for clearing sewer rights-of-way during that same time period.

B. By Month:

SSOs which reached area streams:

Tuesday, October 13, 2015 an SSO totaling approximately **100 gallons** was experienced within the City's collection system.

This SSO resulted from a customer's clean out being opened while the sewer lateral was blocked at 210 Rhodes St. resulting in approximately **100 gallons** of untreated wastewater eventually entering an unnamed tributary to Wash Creek. The incident was identified by City staff at 9:35 PM and ended at 9:40 PM. There were no known environmental impacts resulting from this overflow.

Wednesday, October 28, 2015 an SSO totaling approximately **32,400 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole with a bad seal between the base section and cone section at 99 Balfour Rd resulting in approximately **32,400 gallons** of untreated wastewater eventually entering an unnamed tributary to Mud Creek. The incident was identified by City staff at 8:30 AM and ended at 10:00 PM. There were no known environmental impacts resulting from this overflow.

Monday, November 2, 2015 an SSO totaling approximately **12,000 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole with a bad seal between the base section and cone section at 99 Balfour Rd resulting in approximately **12,000 gallons** of untreated wastewater eventually entering an unnamed tributary to Mud Creek. The incident was identified by City staff at 4:30 PM and ended at 11:00 PM. The reason for the delay was due to flooding around this manhole. There were no known environmental impacts resulting from this overflow.

Monday, November 9, 2015 an SSO totaling approximately **10,800 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole with a bad seal between the base section and cone section at 99 Balfour Rd resulting in approximately **10,800 gallons** of untreated wastewater eventually entering an unnamed tributary to Mud Creek. The incident was identified by City staff at 3:00 PM and ended at 9:00 PM. The reason for the delay was due to flooding around this manhole. There were no known environmental impacts resulting from this overflow.

Thursday, November 19, 2015 an SSO totaling approximately **13,800 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole with a vent cut into a riser section not grouted correctly at 99 Balfour Rd. resulting in approximately **13,800 gallons** of untreated wastewater eventually entering an unnamed tributary to Mud Creek. The incident was identified by City staff at 9:00 AM and ended at 12:00 AM. There were no known environmental impacts resulting from this overflow.

Monday, November 30, 2015 an SSO totaling approximately **16,000 gallons** was experienced within the City's collection system.

This SSO resulted from a gravity main that was washed out by a storm drain at 2121 Spartanburg Hwy resulting in approximately **16,000 gallons** of untreated wastewater eventually entering an unnamed tributary to King Creek. The incident was identified by City staff at 11:00 AM and ended at 4:00 PM. There were no known environmental impacts resulting from this overflow.

Wednesday, December 2, 2015 an SSO totaling approximately **2,250 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not locked correctly at 99 Balfour Rd resulting in approximately **2,250 gallons** of untreated wastewater eventually entering an unnamed tributary to Mud Creek. The incident was identified by City staff at 9:30 AM and ended at 10:15 AM. There were no known environmental impacts resulting from this overflow.

Wednesday, December 2, 2015 an SSO totaling approximately **12,750 gallons** was experienced within the City's collection system.

This SSO resulted from a damaged manhole rim at 99 Balfour Rd resulting in approximately **12,750 gallons** of untreated wastewater entering to Mud Creek. The incident was identified by City staff at 10:45 AM and ended at 3:00 PM. There were no known environmental impacts resulting from this overflow.

Tuesday, December 29, 2015 an SSO totaling approximately **4,500 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not locked correctly at 99 Balfour Rd resulting in approximately **4,500 gallons** of untreated wastewater eventually entering an unnamed tributary to Mud Creek. The incident was identified by City staff at 9:00 AM and ended at 10:30 AM. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **1,407 gallons** was experienced within the City's collection system.

This SSO resulted from a damaged force main on Highland Park Dr. resulting in approximately **1,407 gallons** of untreated wastewater entering into King Creek. The incident was identified by City staff at 4:30 PM and ended at 6:00 PM. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **900 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not a locking lid at 610 Spartanburg Hwy resulting in approximately **900 gallons** of untreated wastewater entering into Mud Creek. The incident was identified by City staff at 3:00 PM and ended at 6:00 PM. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **5,400 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not a locking lid at 813 Jonesborough St resulting in approximately **5,400 gallons** of untreated wastewater entering into Mud Creek. The incident was identified by City staff at 12:30 PM and ended at 5:00 PM. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **1,800 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not a locking lid at 813 Jonesborough St resulting in approximately **1,800 gallons** of untreated wastewater entering into Mud Creek. The incident was identified by City staff at 12:30 PM and ended at 3:30 PM. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **4,500 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not a locking lid at 732 Jonesborough St resulting in approximately **4,500 gallons** of untreated wastewater entering into Mud Creek. The incident was identified by City staff at 12:30 PM and ended at 3:30 PM. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **146,100 gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not locked and 2-valve boxes at 99 Balfour Rd resulting in approximately **146,100 gallons** of untreated wastewater entering to Mud Creek. The incident was identified by City staff at 11:45 AM and ended at 7:00 PM on Thursday, February 4. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **225 gallons** was experienced within the City's collection system.

This SSO resulted from lift station #016 at Kenmure driving range overflowing resulting in approximately **225 gallons** of untreated wastewater entering to King Creek. The incident was identified by City staff at 10:30 AM and ended at 11:15 AM. There were no known environmental impacts resulting from this overflow.

Wednesday, February 3, 2016 an SSO totaling approximately **225 gallons** was experienced within the City's collection system.

This SSO resulted from lift station #018 at Candlewood Ln overflowing resulting in approximately **225 gallons** of untreated wastewater entering to Meminger Creek. The incident was identified by City staff at 10:30 AM and ended at 11:15 AM. There were no known environmental impacts resulting from this overflow.

Note: After flood events our crews inspect low lying areas in search of damaged manholes.

III. Notification:

Copies of this report are available to the public at:

Hendersonville Water and Sewer
City Operations Center
305 Williams Street
Hendersonville, North Carolina 28792
8:00 AM – 5:00 PM (Monday through Friday)

Also published on the City's website at www.hendersonvillenc.gov

Customers on the City's wastewater system have been notified of this report by a press release to all electronic and print news media outlets that provide general coverage to the Henderson County area.

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 or customers of the City of Hendersonville's wastewater collection system and that those users have been notified of its availability.



Tim Sexton, ORC
Collection System Supervisor
Hendersonville Water and Sewer

8-2-16

Date