



## Wastewater Collection System

### System Performance Annual Report July 1, 2021– June 30, 2022

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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](mailto:tsexton@hvlnc.gov)

D. Non-Discharge Permit Number:

Collection System Permit Number WQCS00070

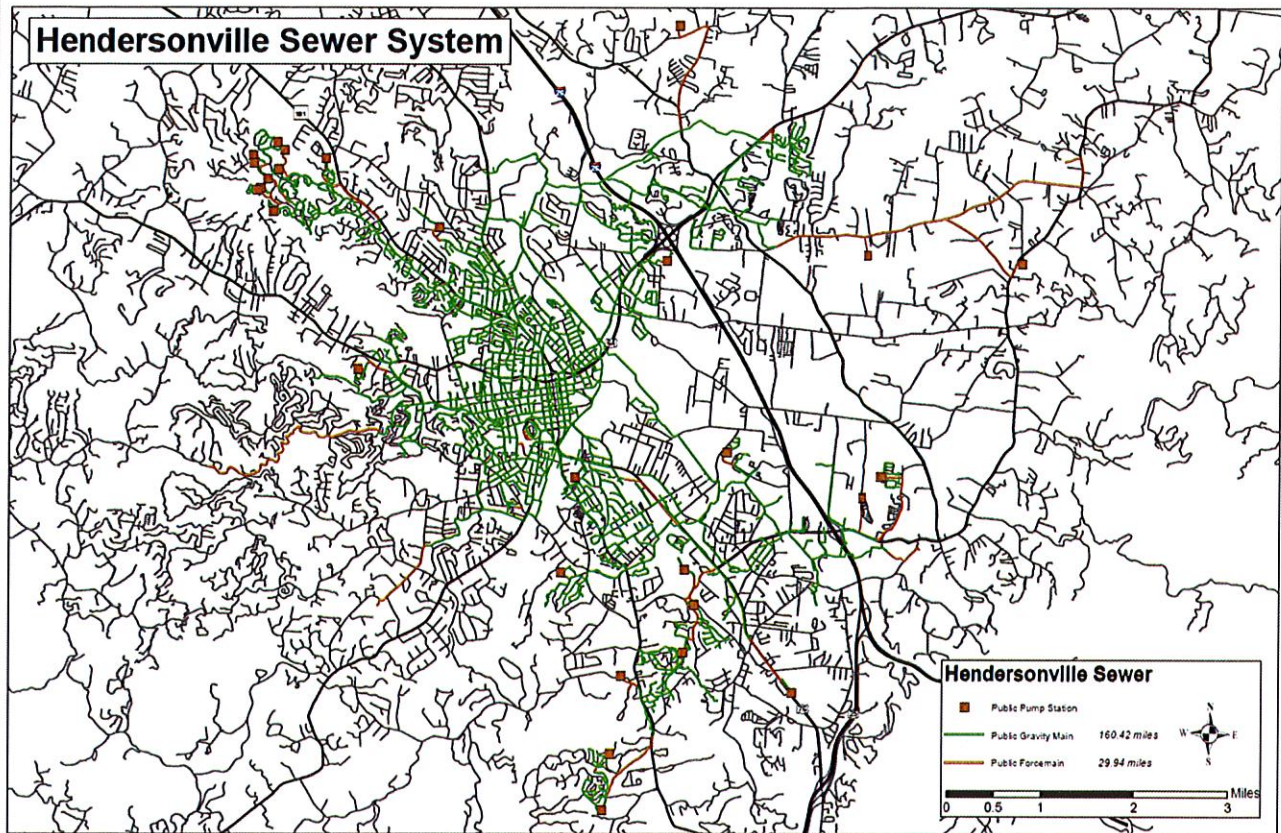
NPDES Permit Number (WWTP):

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 providing wastewater service to approximately 10,000 residential and non-residential customers. The majority of the system consists of gravity sewer mains. There are currently 31 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 161-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 21 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 4.8-mgd wastewater treatment plant (NPDES Permit No. NC0025534) located on Balfour Road.

F. Map of Collection System:



II. Performance:

A. General:

The City added an inflow infiltration technician position to the sewer collections division of the Department in July 2015. This technician is dedicated to identifying potential sources of inflow and infiltration through the use of iTrackers, smoke testing, and dye testing. City staff have consistently been working on an inflow and infiltration (I&I) reduction program since the hiring of this technician. In July 2016, the City added a 3-person repair crew to our field operations group. This crew is charged with making repairs identified by our inflow infiltration technician and water loss technician. In 2018, the Department added a dedicated four-person rights-of-way maintenance crew, including a crew leader to oversee the crew, for maintaining all sewer easements and right of way. This year the City has purchased an additional CCTV camera truck and created an additional two-person camera crew dedicated mainly to working with the I&I technician locating I&I. The City is planning to purchase an additional combination vacuum truck and creating an additional two person crew next fiscal year.

During this twelve-month period our crews have performed the following:

- Completed repairs to the collection system that have reduced an estimated 2,858 gallons of inflow per one-inch of rainfall and 317 gallons per minute of continuous flow or approximately 166,615,200 gallons annually (continuous flow reduction).
- Smoke tested 84,472-LF of sewer mains in search of I&I.

- Cleaned 138,806-LF of gravity sewer main approximately 16.3% of the collection system.
- Inspected 40,597-LF of sewer mains or approximately 4.7% of the gravity system using closed circuit TV (CCTV) equipment.

The City has also invested approximately \$70,000 for a mini-excavator with a mowing attachment and approximately \$128,000 for two skid-steer bush hog machines, both for clearing sewer rights-of-way.

The City also has recently completed a Sewer Collection System Asset Inventory and Assessment and sewer system master plan. The master plan provides a roadmap to maintain, improve, and expand its collection system so that the City can operate a great utility for all its current and future customers. The Sanitary Sewer Asset Inventory and Assessment includes a condition assessment of the sewer collection system, development and calibration of a dynamic hydraulic model, flow projections from the service area through 2040, hydraulic capacity assessment of the sewer system, and finally, the development of a risk-based, prioritized capital improvement program (CIP). The City is actively implementing the recommendations presented in this sewer system master plan, including construction of the identified CIP projects.

B. By Month:

The City's wastewater collection system had a total of seven reportable sanitary sewer overflows (SSOs) during the twelve-month period from July 1, 2021 to June 30, 2022. These spills resulted in a total of approximately 4,298-gallons of untreated wastewater reaching area streams. All SSO's were remediated according to the City's standard operating procedure and did not result in any fish kills or other known environmental impacts.

SSOs which reached area streams:

**Tuesday, August 17, 2021,** an SSO (sanitary sewer overflow) totaling approximately **2,050-gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not a locked rim/lid at 718 Jonesborough St resulting in approximately **2,050-gallons** of untreated wastewater eventually entering an unnamed tributary to Mud Creek. The rim/lid was replaced on 8/20/2021 to stop future spills at this site. The incident was identified by City staff at 6:27 pm and ended at 8:11 pm. There were no known environmental impacts resulting from this overflow.

**Tuesday, August 17, 2021,** an SSO totaling approximately **215-gallons** was experienced within the City's collection system.

This SSO resulted from a manhole lid that was not locked correctly at 732 Jonesborough St resulting in approximately **215-gallons** of untreated wastewater eventually entering into Mud Creek. The rim was cleaned and then retightened to stop the spill. The incident was identified by City staff at 6:27 pm and ended at 7:10 pm. There were no known environmental impacts resulting from this overflow.

**Wednesday, August 18, 2021,** an SSO totaling approximately **50-gallons** was experienced within the City's collection system.

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This SSO resulted from a manhole lid that was not locked correctly at 441 South Whitted St resulting in approximately **50-gallons** of untreated wastewater eventually entering an unnamed tributary to Wash Creek. The incident was identified by City staff at 6:00 am and ended at 6:05 am. There were no known environmental impacts resulting from this overflow.

**Wednesday, December 1, 2021,** an SSO totaling approximately **590-gallons** was experienced within the City's collection system.

This SSO resulted from a contractor washing debris into a gravity main and caused a blockage behind 506 Walnut Tree Circle resulting in approximately **590-gallons** of untreated wastewater eventually entering into Mud Creek. The incident was identified by City staff at 11:47 am and ended at 1:45 pm. There were no known environmental impacts resulting from this overflow.

**Tuesday, January 4, 2022,** an SSO totaling approximately **348-gallons** was experienced within the City's collection system.

The SSO resulted from a contractor boring into a force main at 173 Winding Meadows Dr resulting in approximately **348-gallons** of untreated wastewater entering an unnamed tributary to King Creek. The incident was identified by City staff at 4:45 pm and ended at 5:56 pm. There were no known environmental impacts resulting from this overflow.

**Wednesday, March 9, 2022,** an SSO totaling approximately **945-gallons** was experienced within the City's collection system.

This SSO resulted from a contractor boring into a gravity sewer main at the intersection of Chelsea St and Arlington place resulting in approximately **945-gallons** of untreated wastewater eventually entering an unnamed tributary to Britton Creek. The incident was identified by City staff at 9:22 am and ended at 10:25 am. There were no known environmental impacts resulting from this overflow.

**Thursday, June 9, 2022,** an SSO totaling approximately **100-gallons** was experienced within the City's collection system.

This SSO resulted from a failed section gravity sewer main at the intersection of Hwy 64 East & N King St resulting in approximately **100-gallons** of untreated wastewater eventually entering into Mud Creek. The section of sewer line was replaced with pvc to stop any future spill. The incident was identified by City staff at 4:30 pm and ended at 4:45 pm. 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](http://www.hendersonvillenc.gov)

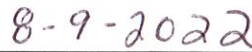
Customers on the City's wastewater system have been notified of this report by a press release to all electronic and print news media outlets that provide general coverage to the Henderson County area.

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



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Date