



**ANNUAL  
WASTEWATER  
PERFORMANCE REPORT**



**FY 2022-2023**



# Wastewater Treatment Plant (WWTP)

**NPDES Permit #  
NC0025534**

**Non-discharge permit #**

**WQ0011381**

**Class A wastewater residuals  
distribution program**

Hendersonville's WWTP treatment process consists of a four pump influent pump station, where large solids are removed manually, followed by a grit removal process which removed smaller sediment from the wastewater. The wastewater then continues into two aeration basins, holding 2.4 million gallons each. These basins are where the wastewater undergoes biological treatment. The water then flows to two clarifiers, each 90ft. in diameter. Here, the water is allowed to achieve a slow flow which allows the solids portion of waste water to settle to the bottom. The solids are then returned to the basins for further treatment or dewatered by a belt press for disposal.

The liquid from the clarifiers is sent through an Aqua Diamond cloth media filter. Then the water passes through a UV disinfection system before before being discharged into Mud Creek.

# WWTP Performance

Total gallons of wastewater processed

**843,698,000**

Tons of biosolids disposed of

**6,645.92**

Gallons of septage accepted and processed

**4,517,650**

## Permitted Values

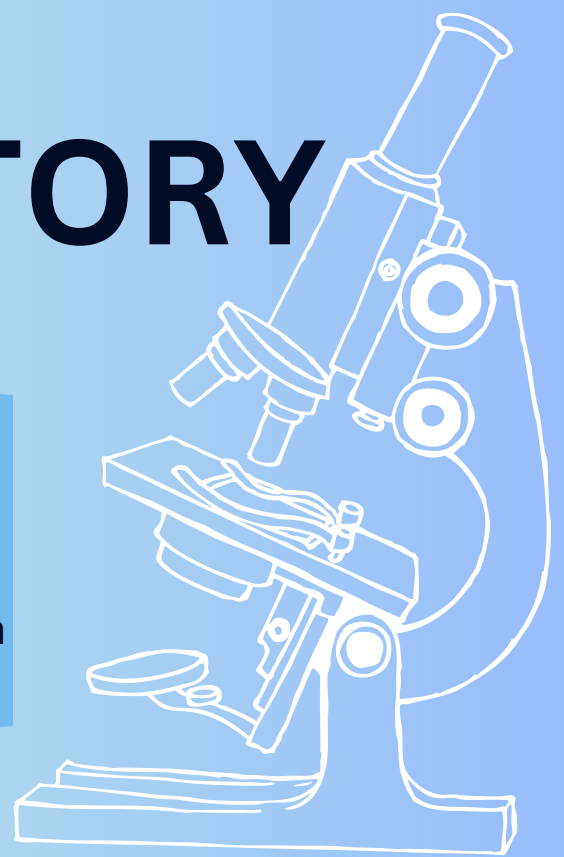
BOD, mg/l	Fecal Coliforms, colonies/100-ml	Removal Rate	Flow, MGD	TSS, mg/l
10/15, 20/30	200	85%	4.8	30/45

## Average Values July 2022-June 2023

BOD, mg/l	Fecal Coliforms, colonies/100-ml	Removal Rate	Flow, MGD	TSS, mg/l
3.8	28	99.1% (BOD) 98.7% (TSS)	2.227	6.6



# LABORATORY



The City of Hendersonville's Wastewater Treatment Plant has an in-house laboratory certified by the Division of Water Resources, Laboratory Certification Branch



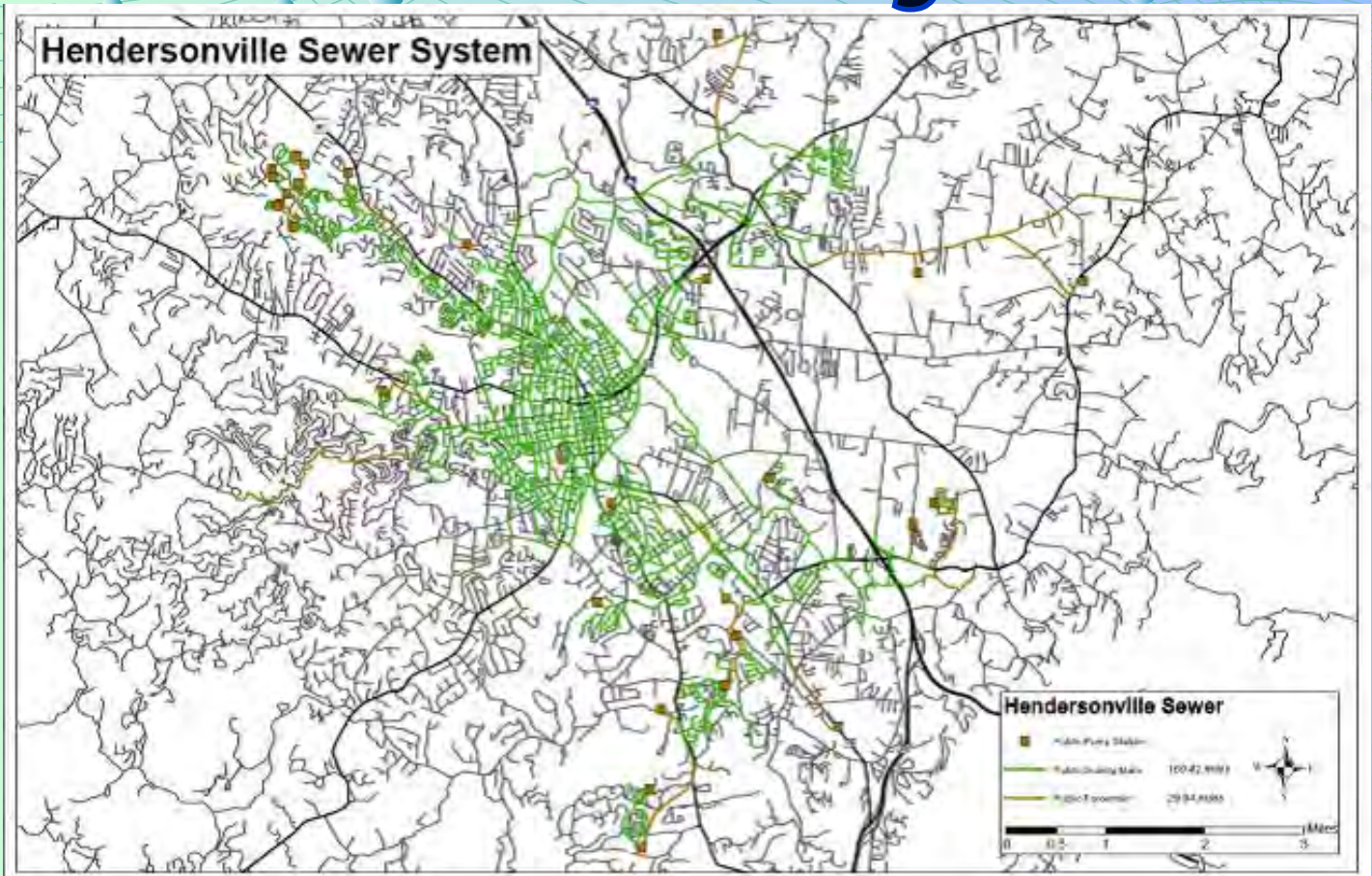
## Tests performed for NPDES permit compliance:

- Temperature
- Dissolved Oxygen
- pH
- Fecal coliforms
- Biochemical oxygen demand
- Total dissolved Solids
- Ammonia-nitrate

## Tests performed for process control analysis:

- Mixed Liquor Suspended Solids
- Volatile Suspended Solids
- Nonvolatile Suspended Solids
- Settleability
- Oxygen Uptake Rate

# Wastewater Collection System



Map of Collection System

The City of Hendersonville's wastewater collection system consists of approximately 161 miles of gravity sewer providing wastewater services to over 10,000 customers.



# Collection System Performance

Gallons of untreated wastewater to enter streams

2,668

Total number of reportable SSOs\*

3

\*No known environmental impacts resulted from any SSO\*

Date of SSO*	Surface water name	Gallons reaching surface waters	Location of SSO*	Probable Cause
8/26/22	Allen Branch	1,620	42 Cori Dr.	Rags, towels, and wipes
11/12/22	Clear Creek	1,000	Clear Creek Rd. & Carolina Village Dr.	Manhole lid not locked properly
5/10/23	Wash Creek	48	221 Lakemoor Ln.	Roots blocking sewer

\*SSO=Sanitary Sewer Overflows





# Protecting Our System

The Inflow & Infiltration (I&I) team smoke tested 22,791Ft of sewer looking for sources of I&I( 2.7% of system)

Crews using the SL-RAT (sewer line rapid assessment tool) Inspected 21,658Ft of sewer lines (2.5% of system)

Crews cleaned 111,986Ft of sewer (13.1% of system)

The City has two CCTV trucks; together they Inspected 48,642Ft of sewer piping (5.7% of system).

Right of way maintenance FY 22-23:

-\$70,000 for mini-excavator with mowing attachment

-\$128,000 for 2 skid steer bush hogs



# Copies of this report are available to the public at:

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

**Collection System  
Operator in Responsible  
Charge (ORC):**

**Tim Sexton  
305 Williams St  
Hendersonville, NC 28792  
(828) 697-3073  
Email: [tsexton@hvlnc.gov](mailto:tsexton@hvlnc.gov)**

**WWTP  
Operator in Responsible  
Charge (ORC):**

**Garrett DeMoss  
99 Balfour Rd  
Hendersonville, NC 28792  
(828) 697-3077  
Email: [gdemoss@hvlnc.gov](mailto:gdemoss@hvlnc.gov)**