

City of Conover Wastewater Treatment System
Performance Annual Report for 2022

March 6, 2023

I. General Information

Facility Name: City of Conover Sanitary Sewer Collection System

Contact Person: Thomas J. Miller Jr.,
Collection System Operator Responsible in Charge (ORC)
PO Box 549
Conover, NC 28613
828-464-4808

Applicable Permits: Wastewater Collection System Permit Number-
WQCS00088

ALSO

Facility Name: City of Conover, Northeast Wastewater Treatment Plant

Contact Person: Eric Williams, WWTP Operator Responsible in Charge-
Pretreatment Coordinator
PO Box 549
Conover, NC 28613
828-465-2279

Applicable Permits: National Pollutant Discharge Elimination System (NPDES)
Permit Number – NC0024252

The City of Conover 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

The City of Conover's collection system consist of 126 miles of sewer line with six (6) sewer lift stations. The collection system transports wastewater to the City of Conover's Northeast Wastewater Treatment Plant, and a portion to the City of Newton's Clark Creek Regional Wastewater Treatment Plant.

Homes, businesses, and industries discharge their wastewater (sewage) into the sanitary sewer system. Once the wastewater is discharged into the sewer pipes it travels through the collection system until it reaches the wastewater treatment plant

Upon arrival at the treatment plant, located at 3680 Hillview Drive, all wastewater is treated and discharged in an environmentally safe manner in accordance with the National Pollutant Discharge Elimination System (NPDES) regulations.

Conover's Northeast Wastewater Treatment Plant, originally built in 1964, upgraded in 1980 and completely redesigned in 1991 currently operates according to NPDES permit NC0024252. The facility is a Sequencing Batch Reactor (SBR) activated sludge facility with tertiary sand filters, which has a permitted treatment capacity of 1.5 million gallons per day. The facility operates 24 hours per day and is staffed 8 hours per day, except on weekends. Staff visits the facility on the weekend and holidays to ensure that it is operating properly. The 2022 daily average flow is 0.782 Million Gallons per Day (MGD).

II. Performance

Yearly Performance:

During the year 2022, the wastewater collection staff visited all lift stations at a minimum of once per week. The collection staff performed schedule preventative maintenance and made all necessary repairs as needed to keep the lift stations operating at peak performance. In 2022, we have visually inspected 8,683 feet (1.64 miles) of sewer lines and cleaned 68,612 feet (12.99 miles) of sewer lines. The combined 14.63 miles of sewer lines inspected represents 11.6 % of Conover's collection system. The aerial and high priority lines are inspected 4 times per year and after major rain events. Lines that are not visible to the general public are mowed three (3) times per year in the spring and summer months.

Sanitary Sewer Overflows (SSOs):

The City of Conover wastewater collection system experienced eight (8) reportable overflows and all eight (8) reached the waters of North Carolina. No fish kills occurred due to the SSOs.

04/01/2022 603 2nd Avenue Dr NE, blockage due to grease was the cause. The estimated volume spill was 120 gallons reaching a tributary of Lyle Creek. Reported to DWR incident# 202200538.

04/18/2022 806 3rd St Pl SW, blockage due to grease was the cause of the spill. The estimated volume of 150 gallons reached a tributary of Cline Creek. Reported to DWR incident # 202200623.

05/23/2022 1820 Evans St NE, Infiltration and inflow from rain storm. The estimated volume of 960 gallons reached Mull Creek. Reported to DWR incident # 202200788.

06/10/2022 2099 Pump Station Rd NE, an estimated 500 gallons spilled into the waters of Lyle Creek. Pipe failure was the cause. It was reported to DWR incident # 202200882.

07/30/2022 2099 Pump Station Rd NE., an estimated 200 gallons reached Mull Creek. Infiltration and Inflow due to excessive rain was the cause of the overflow. It was reported to DWR incident # 202201215.

09/01/2022 413 6th Ave SW, overflow was due to roots in the line. An estimated volume of 30 gallons reached a tributary of Cline Creek. It was reported to DWR incident # 202201385.

09/05/2022 2006 Pump Station Rd NE, overflow due to infiltration and inflow from rain event. An estimated 350 gallons reached Mull Creek. Reported to DWR incident # 202201399.

12/19/2022 702 3rd Ave NE, overflow occurred due to debris in the line. An estimated 35 gallons reached a tributary of Lyle Creek. Reported to DWR incident # 202201833.

NEWWTP NC0024252	Discharge 001											
	Date	Flow (mgd)	Effluent Pollutants				Toxicity	Influent Pollutants				Removal
BOD			NH3	TSS	Fecal Coliform	BOD		NH3	TSS	BOD%	TSS%	
	1/2022	0.684	1.49	1.35	1.33	2.75		281.5	11.85	149.6	99.5%	99.1%
	2/2022	0.749	3.04	1.46	1.62	1.87		281.2	11.34	147.1	98.9%	98.9%
	3/2022	0.803	5.61	1.89	1	1.68	PASS	281.8	11.54	133.5	98.0%	99.3%
	4/2022	0.828	2.89	2.04	0.6	3.79		273.0	11.18	161.7	98.9%	99.6%
	5/2022	0.869	7.29	1.55	0.6	10.95		303.4	12.00	149.2	97.6%	98.9%
	6/2022	0.660	1.21	0	0	5.33	PASS	323.6	12.02	170.7	99.6%	100%
	7/2022	0.692	0.64	0.33	0.58	13.53		313.9	12.54	169.7	99.7%	99.7%
	8/2022	0.760	1.24	0.91	3.73	25.01		331.4	12.29	122.1	99.6%	96.9%
	9/2022	0.732	1.64	0.79	2.97	16.35	PASS	311.2	14.16	217.4	99.5%	98.6%
	10/2022	0.734	0.18	0.96	2.25	2.9		310.2	12.09	220.3	99.9%	99.0%
	11/2022	0.925	2.25	1.19	1.92	2.7		329.8	11.2	226.7	99.3%	99.2%
	12/2022	0.948	2.7	1.62	1.78	1.83	PASS	305.8	11.25	189.6	99.1%	99.1%
	average	0.764	1.90	0.57	1.10	7.39		300.5	11.96	154.1	99.3%	99.4%
	NPDES LIMIT	1.500	16/8	4.0/2.0	30	200col/100 ml	Pass/Fail				85%	85%

Northeast Wastewater Treatment Plant Performance

The City of Conover received a Notice of Violation for exceedance of the following: Effluent BOD weekly limit on June 11, 2022. The weekly average BOD recorded was 12.97 which was just above the weekly average limit of 12.0. The City also exceeded the June monthly average for BOD. The reported monthly average of BOD was 9.31 mg/L and the limit is 8.0 mg/L. In June, the NE WWTP had an exceedance on the monthly average of Total Ammonia Nitrogen. The reported monthly average was 2.26 mg/L of Total Ammonia Nitrogen with a monthly limit value of 2.0 mg/L. On June 25, 2022 the City had a monitoring violation for not recording a effluent temperature reading for that day. We are required to monitor the effluent water temperature five (5) times per week. The violations have been addressed by City Staff and no other violations have occurred.

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 Conover Public Works at 828-464-4808. To report a sewer problem after 4:30 PM or on weekends call Catawba County Communications at 828-464-3112.