

Ansonville System Performance Annual Report Collections & WWTP

Permit # NC 0081825



July 1st 2022 - June 30th 2022

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The Town of Ansonville Annual Wastewater Treatment and Collection System Report

(January 01, 2022-June 30,2023)

As a requirement of the Town's system permit issued by the State of North Carolina, the Town of Ansonville is required to report the system performance to all its customers on an annual basis. This report provides information about the Ansonville's wastewater treatment facility an in addition the collection system.

All of the information provided has been supplied by the utility staff and is complete and accurate to the best of my knowledge.

Troy Cassidy

North Carolina Rural Water Association

Ansonville Collection System

The 2022 Census reveals that Town of Ansonville serves a population of 421 people and serves water and sewer to over 474 customers and commercial customers.

On average the city collects 64,500 gallons of domestic and industrial wastewater collected through a network of piping and sewer lift stations to assist in flow travel to the Ansonville Wastewater Treatment Facility.

Currently the collection system transports the sewer with over 15 miles of gravity sewer, 215 manholes, 1 mile of force main lines and 6 total lift pump stations.

The Town has a zero goal for sewer spills and sanitary sewer overflows from collection system manholes; however, because sewer systems are mechanical devices such as pumps and motors which are subject to failure as well as the collections system is subject to clogs or backups.

Most collection backups are due to grease, tree roots and improper disposal of rags and other debris that is not meant to be disposed within the sewers.

The Town was fortunate and did not have any reportable spill in the (2022-2023) fiscal year

Collection System Maintenance and Spill Prevention Program

The Town takes sanitary sewer spills and overflows very seriously and are continuously working on the collection system with regards to maintenance and inspections to assist for future Capital Improvement Plans (CIP) pertaining to improving and upgrading the collection system to meet the ever-demanding regulations brought down by local and federal government.

As part of this program the Town cleans lines by means of Hydro Flushing and perform smoke test and camera inspection of the collection system lines on annual routine basis. These inspections help identify problem areas and allow the city to better manage these problematic spots as well as allow the city for a more efficient management of the sewer budget .

The Town seeks to operate under the pretense of Proactive Maintenance rather than Reactive Maintenance.

This fiscal 2022-2023 year the city had camera over 2,200 feet of sewer lines , smoke tested the whole system and cleaned 5,300 feet of sewer lines.

The Town has also incorporated a spill prevention response plan which includes identifying failing, aged equipment, develop a vendor response list and employee on call system to mitigate spills and procedures to follow should an overflow occur.

Public Notices

Often time residents can do their part to help minimize any future overflow events by reporting unauthorized uncovering of sewer manholes, noticing, and reporting any improper disposal of materials into manholes, such as septic hauler trucks.

Vandalism and Sabotage within the collection system and more so with lift station facilities may occur. Any type of unusual or concerning incident around the lift stations that is observed should be reported to Ansonville Town 704-826-8404.

Furthermore, if any strong sewer smells noticed within your surroundings, please notify the Utility to investigate cause.

The Town has a website and flyer regarding Fat, Oil, Grease (FOG) management. Never pour any of those noted substances into your residential drains which lead to collection system. The Fog is the main contributor to most sewer overflows.

Please visit the Town website for more information regarding FOG at www.townofansonville.godaddysites.com and Face Book The town of Ansonville.

The Town of Ansonville owns and operates the wastewater treatment facility known as Ansonville WWTP.

The wwtp is located off 7687 Pinkston Rivere Road.

Ansonville wwtp NPDES permit # NC0081825 allows the facility to be authorized by the State of North Carolina to discharge the treated effluent to the Pee Dee River Class B basin.

Process Description

The wwtp is permitted for .120 million gallons a day (MGD). Currently the facility operates at around 53% capacity of .120 (MGD).

The sewer enters the treatment facility through the network of collection system lines and lift stations which assist movement until gravity can once again allow for the sewer flow. Once the sewer is at the plant it enters at the headworks, which is where the separation of inorganics material occurs by the use of manual bar screen. All inorganic material gets collected and then is taken to the local landfill.

The sewer water next enters a the aeration basins where oxygen is provided by positive displacements blowers in order to produce a Dissolved Oxygen which is used by the microorganism to break down the solids.

The microbiology process where the microorganism assists in the stability of the treated biomass takes place in two aeration basins where the process begins its initial stage of the treatment process which is called the oxygen process that converts ammonia to nitrite and then ultimately nitrates which are more easily released into the atmosphere and residual nitrates remaining suspended in the treated effluent.

Following the aeration process the treated wastewater goes to a clarifier. In the clarifier solids are allowed to settle and clear water will separate and become the treated effluent. The settled solids and microorganism that are in the solids will be returned to the lagoons as what is now called return activated sludge, or (RAS). Once back in the lagoons, the microorganisms now have air and food which will allow them to begin the stabilization process all over again.

In order to maintain a proper balance of solids also known as food and microorganism a Food to Microorganism ratio "F/M Ratio" must be attained. To maintain the F/M ration a portion of the solids have to be removed from the clarifier called Waste Activated Sludge "WAS", into a process called sludge digestion, or digester tanks.

The digester tanks allow for more stabilization of the biomass where microorganism are decaying and then another process of solids and liquid separation begins over a certain duration based on operational control of the digester process. The clear liquids are sent back to the Aeration basins as a term called "Supernatant", and the heavier thicken solids within the digester now has thicken to approximate 2.5-5.0 % solids and then are taken to the Anson County Wastewater treatment Facility for final disposal.

The Final Effluent which has separated in the clarifiers is now going to be discharged at the NPDES site at the . Prior to disposal in the Pee Dee River the treated water called "Effluent" will be disinfected with Chlorine Blocks called Tri-Chlor Tablets and inside the chlorine contact chambers. and then prior to discharge to the Pee Dee River the chlorine will be removed by the use of Dechlorination tablets. The chlorine contact chamber are designed to slow down the flow to achieve minimal detention time of 15 minutes to allow for deactivation of any pathogenic organism.

North Carolina NPDES requires that chlorine concentration within the can only contain a maximum of 28ug/l of chlorine concentration within the treated effluent. In order to achieve this

Fecal Coliform samples are routinely tested at the effluent sampling point must be below 200#/ml per sample to meet the NPDES permit requirements. Other Routine analysis of the treated effluent is tested for Total Suspended Solids 30.0 mg/l and Biological Oxygen Demand of 30.0 mg/l maximum allowable monthly average.

Sewer Collection System Improvements Project

Major projects are on schedule for the collection system within the next Five year Capital Improvement plan.

Sanitary Sewer Overflows Reported Fiscal Year

(July 1st, 2022- June 30th,2023)

<i>Months</i>	<i>Reported</i>	<i>Gallons Spilled</i>
january	<i>None</i>	0
Febuary	<i>None</i>	0
March	<i>None</i>	0
April	<i>None</i>	0
May	<i>None</i>	0
June	<i>None</i>	0
July	none	0
August	<i>None</i>	0
September	<i>None</i>	0
October	<i>None</i>	0
November	<i>None</i>	0
December	<i>None</i>	0

NPDES Violations and Deficiencies

For Ansonville WWTP

July 1st 2022- June 30TH 2023

During the period there were some violations regarding the NPDES Permit # NCOO81825.

March 5th 2022

Fecal Coliform #400

February 4th,2023 Sampling on different schedule

The responsible parties including contact numbers are as follow:

Town Mayor

Angela C. Caraway 704-826-8404

Public Works Director

Mr. Jason Mullis

Town Council

Mr. mark C. Belion 704-826-8404

Mrs. Denise Cannon 704-826-8404

Mrs. Sarah Burns 704-826-8404

Mr. Jesse Huntley 704-826-8404

Mrs. Phyliss Watkins 704-826-8404