



WATER RESOURCES



WILSON  
NORTH CAROLINA



WHAT TO DO WHEN THE DRAINS **STOP** FLOWING?

CITY OF WILSON  
Wastewater Collection  
and Treatment System  
Report

Fiscal Year 2019-2020

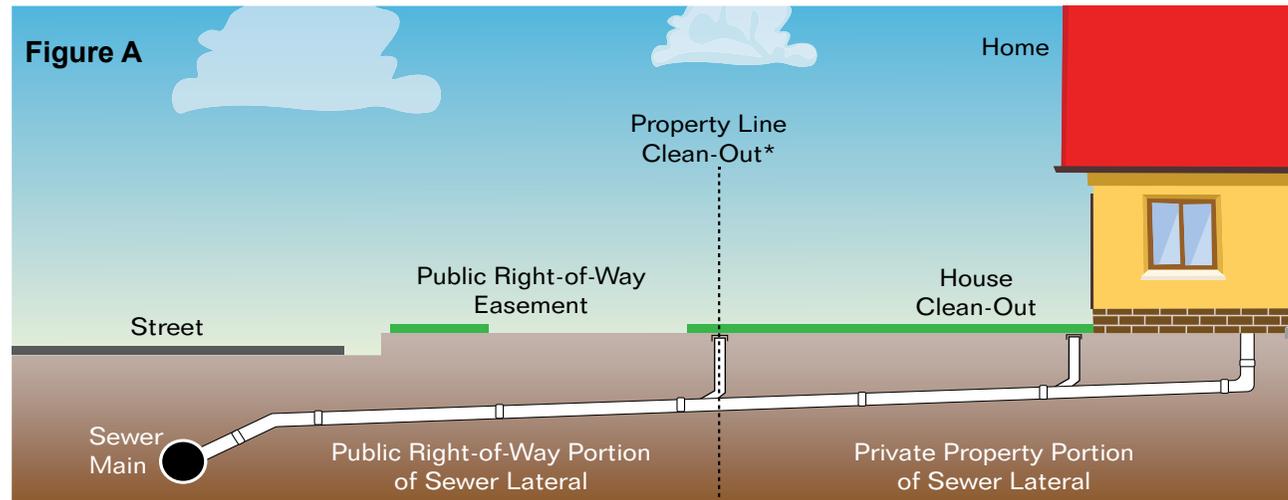
# WHAT TO DO WHEN THE DRAINS STOP FLOWING?

When wastewater (sewer) stops draining in your home, it is a very serious problem that can be considered a plumbing emergency. Since the water has no place to go, it starts to come back up into the household plumbing.

When wastewater is not draining properly, determine if the drainage problem is only affecting one fixture, or multiple fixtures. If it is only one fixture, then the blockage is probably related to the fixture itself, or the interior plumbing near the fixture. If you cannot clear the blockage yourself then you should seek a plumbing professional. If multiple drains in the home are not flowing properly, then you may have a blockage in the sewer drain that flows from the home to the City's sewer main. When you have a clogged sewer drain, you should not use any of the plumbing in the home until the stoppage is cleared.

## Who is responsible for clearing the sewer line blockage?

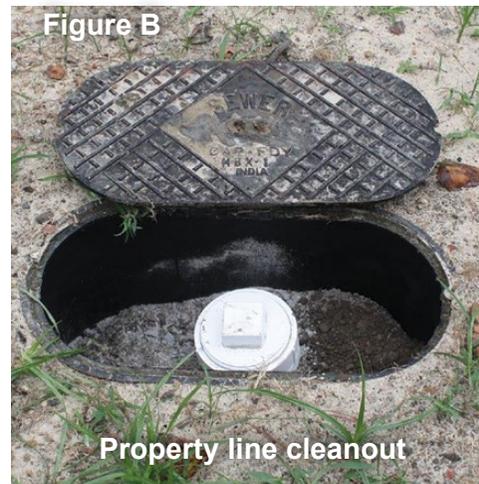
Responsibility for the maintenance of sewer piping from the home to the sewer main connection is shared between the property owner and the City of Wilson. The property owner is responsible for the piping from home to the property line cleanout. The City of Wilson maintains the sewer line beginning at the property line cleanout. Please see Figure A to understand your sewer pipe maintenance responsibilities.



\*Not standard on all properties

## Whom should I call first?

If you have multiple fixtures that are not draining properly, try to locate your property line cleanout (see Figure B). It is typically located a few feet from the edge of your property near the street. It should be flush with the ground, but may be covered by landscaping. Some homes may not have a property line cleanout. If you can locate the cleanout, try to remove the cover of the cleanout. If you feel any pressure, stop immediately and contact the City of Wilson. If you remove the cover and you see standing water in the pipe, or it is trying to flow up through the cleanout, contact the City of Wilson. If water appears to be flowing freely at this point, then the stoppage is prior to the property line cleanout and is the property owner's responsibility.



## What will the City do when called?

If you think there is a blockage after the property line cleanout, contact the City of Wilson's Unified Communications Center at 399-2424. A service crew will be dispatched to inspect the sewer lines and they will clear any blockages that are within the City's area of responsibility at no cost to you. If they determine the blockage is prior to the property line cleanout, you will be notified so you can contact a plumbing professional.

## Collection System Maintenance and Projects Completed:

- 68 miles of pipe cleaned (about 19% of the entire 363 mile system - 10% required)
- 2,400 feet of pipe replaced
- 119 sewer services replaced
- 33 grease blockages cleared from sewer mains

# MISSION STATEMENT

*“Protecting our Environment and Water Quality, through Teamwork and Excellent Service, now and for future generations.”*

## HOMINY CREEK WATER RECLAMATION FACILITY (WRF)

The WRF is located in Wilson at 3100 Stantonsburg Road. It is a state-of-the-art regional treatment plant that processes wastewater for approximately 20,500 metered customers and a service population of approximately 52,500. The City of Wilson also treats wastewater from the Town of Black Creek, the Town of Lucama and the Town of Sims.

The term water reclamation defines the treatment or processing of wastewater to make it reusable with specific treatment reliability. Reclaimed water must also comply with very stringent water quality criteria. The term water reuse defines the use of treated wastewater for beneficial uses, such as agricultural irrigation and industrial cooling. The City of Wilson is committed to reusing reclaimed water in areas that drinking water is not needed such as irrigation water for Wedgewood Golf Course, the Burt Gillette Athletic Complex and industrial process/cooling water. The reclaimed water system is part of the City's water conservation plan.



This report provides information concerning the City of Wilson's wastewater collection and treatment system performance for July 1, 2019 to June 30, 2020 as required in the North Carolina Clean Water Act of 1999 (House Bill 1160). If you have any questions about the information contained in this report, or would like to learn more about your wastewater collection system or the Hominy Creek Water Reclamation Facility, please call (252) 399-2492.

### TABLE DEFINITIONS & KEY

< - less than

> - greater than

**MGD (Million Gallons per Day)** - a unit of measurement for flow volume

**NTU (Nephelometric Turbidity Units)** - a unit of measurement for Turbidity. The lower the value, the clearer the water.

**PPM (Parts per Million)** - a unit of measurement.

Parts per million compares to 1 minute in 2 years.

**PPB (Parts per Billion)** - a unit of measurement.

Parts per billion compares to 1 minute in 2,000 years.

**SU (Standard Units)** - a unit of measurement for pH.

**Ammonia** - one of several forms of nitrogen that exist in aquatic environments. Excessive ammonia can cause toxic effects to aquatic life. Ammonia is measured in PPM.

**BOD (Biochemical Oxygen Demand)** - a required test that determines the amount of oxygen required by microorganisms to consume pollutants. BOD is measured in PPM.

**Chronic Toxicity** - a required test used to determine the potential effects of treated wastewater discharged into the receiving stream. The test ensures that treated wastewater discharged into surface waters does not negatively impact aquatic ecosystems.

**DO (Dissolved Oxygen)** - a required test used to determine the amount of oxygen that is present in water. It is a direct indicator of an aquatic resource's ability to support aquatic life. DO is measured in PPM.

**FC (Fecal Coliform)** - a required test used to determine the presence of disease causing organisms. FC are harmless but are used as indicators of other organisms (if FC are present others may be present). FC is measured as number of colonies per 100 milliliters of sample.

**pH** - a required test used to determine the hydrogen ion concentration in water. It is used to indicate basicity or acidity of a solution on a scale of 0 to 14, with pH 7 being neutral.

**TN (Total Nitrogen)** - a required test used to determine the sum of the different forms of nitrogen found in water, including nitrate, nitrite and ammonia. Nitrogen is a critical nutrient required for all life but elevated concentrations can result in excessive growth of algae and aquatic plants. TN is measured in PPM.

**TP (Total Phosphorus)** - a required test used to determine all the different forms of phosphorus found in water. Phosphorus is a critical nutrient required for all life but elevated concentrations can result in excessive growth of algae and aquatic plants. TP is measured in PPM.

**TRC (Total Residual Chlorine)** - a required test used to determine the total amount of remaining chlorine present in water. Chlorine is added to destroy or deactivate disease-producing microorganisms. Excess residual chlorine may cause adverse effects to aquatic life. TRC is measured in PPB.

**TSS (Total Suspended Solids)** - a required test that measures the amount of suspended solids in a sample. TSS are measured in PPM.

**Turbidity** - a required test that measures clarity of water. It is used to indicate water quality and filtration effectiveness. Turbidity is measured in NTU.

### NPDES PERMIT COMPLIANCE (NC0023906)

The WRF was compliant with all NPDES permit limits this year.

#### PLANT PERFORMANCE

Pollutant	Concentration	Pollutant	Concentration
<b>Ammonia Nitrogen</b>	<b>PPM</b>	<b>Flow</b>	<b>MGD</b>
Average	<0.01	Average	9.09
Permit Limit	1.0/3.0 (summer - monthly/weekly) 2.0/6.0 (winter - monthly/weekly)	Permit Limit	14.00 (monthly)
<b>Biochemical Oxygen Demand</b>	<b>PPM</b>	<b>pH</b>	<b>SU</b>
Average	1.5	Minimum - Maximum	6.5 - 7.7
Permit Limit	5.0/7.5 (summer - monthly/weekly) 10.0/15.0 (winter - monthly/weekly)	Permit Limit	Within 6.0 - 9.0 (daily)
<b>Chronic Toxicity</b>		<b>Total Nitrogen</b>	<b>Lbs/Yr</b>
Test Performed Quarterly	Passed all	Pounds Discharged	59,353
Permit Limit	Pass or Fail	Permit Limit	157,886
<b>Dissolved Oxygen</b>	<b>PPM</b>	<b>Total Phosphorus</b>	<b>PPM</b>
Average	8.8	Average	0.48
Permit Limit	>7.0 (daily)	Permit Limit	2.00 (quarterly)
<b>Fecal Coliform</b>	<b>Colonies/100 ml</b>	<b>Total Residual Chlorine</b>	<b>PPB</b>
Average	2	Average	<0.01
Permit Limit	200/400 (monthly/weekly)	Permit Limit	18.0 (daily)
		<b>Total Suspended Solids</b>	<b>PPM</b>
		Average	0.05
		Permit Limit	30.0/45.0 (monthly/weekly)

### REUSE PERMIT COMPLIANCE (WQ0018709)

The WRF was compliant with all Reuse permit limits this year.

#### PLANT PERFORMANCE

Pollutant	Concentration	Pollutant	Concentration
<b>Ammonia Nitrogen</b>	<b>PPM</b>	<b>pH</b>	<b>SU</b>
Average	0.05	Minimum - Maximum	6.3 - 7.4
Permit Limit	4.0/6.0 (monthly/daily)	Permit Limit	6.0 - 9.0 (daily)
<b>Biochemical Oxygen Demand</b>	<b>PPM</b>	<b>Total Suspended Solids</b>	<b>PPM</b>
Average	4.5	Average	<0.01
Permit Limit	10.0/15.0 (monthly/daily)	Permit Limit	5.0/10.0 (monthly/daily)
<b>Fecal Coliform</b>	<b>Colonies/100 ml</b>	<b>Turbidity</b>	<b>NTU</b>
Average	1	Average	0.42
Permit Limit	14/25 (monthly/daily)	Permit Limit	10.0 (daily)
<b>Flow</b>	<b>MGD</b>		
Average	0.23		
Permit Limit	4.1 (monthly)		

## SANITARY SEWER OVERFLOWS (SSOs)

Sanitary sewer overflows (SSOs) occur when untreated sewage is discharged into the environment prior to reaching the sewer treatment facilities. These typically occur at manholes, pump stations, or broken sewer pipes. Infiltration/inflow (I/I) is unwanted water that enters the sewer collection system through deteriorating older pipes, leaking manholes, illegal connections such as roof drains, etc. During heavy rain events, pipes can become overloaded from I/I and cause SSOs. Pipe stoppages caused by fats, oils and grease can also lead to SSOs. Replacing and rehabilitating these lines and manholes reduces I/I into the sanitary sewer system, thus protecting the public health, improving treatment plant efficiency and reducing system maintenance. Generators provide emergency back-up power for pump stations and help prevent SSOs.



During fiscal year 2019-2020, the City of Wilson experienced four (4) reportable SSOs. The WRF treated 3.3 billion gallons of wastewater during this period.

#### June 8, 2020

4630 Ward Boulevard

**Total:** 5,000 gallons

**Cause:** Pipe Failure

#### June 17, 2020

1206 Robin Hill Road

**Total:** 600 gallons

**Cause:** Infiltration/Inflow during heavy rain event

#### June 17, 2020

Intersection of Cardinal Drive & Lakeside Drive

**Total:** 420 gallons

**Cause:** Infiltration/Inflow during heavy rain event

#### June 17, 2020

Intersection of Beacon Street & Park Avenue

**Total:** 720 gallons

**Cause:** Infiltration/Inflow during heavy rain event



Customers who observe a sanitary sewer overflow should report these as emergencies to the City of Wilson's Unified Communications Center at **(252) 399-2424**.

Clientes que observan un desbordamiento del drenaje sanitario, deben reportar estas situaciones de emergencia al centro de comunicaciones unificadas de la Ciudad de Wilson, al telefono **(252) 399-2424**.

## DISPOSABLE DOES NOT MEAN FLUSHABLE

Flushing paper towels and other garbage down the toilet wastes water and can create sewer backups and SSOs. The related costs associated with these SSOs can be passed on to ratepayers. Even if the label reads "flushable", it is still safer and more environmentally correct to place the item in a trashcan.



# DO NOT FLUSH



### Partial list of items that should not be flushed

- ✗ Baby wipes, diapers
- ✗ Candy and other food wrappers
- ✗ Rubber items such as latex gloves
- ✗ Cigarette butts
- ✗ Clothing labels
- ✗ Sanitary napkins
- ✗ Rags and towels
- ✗ Cleaning sponges
- ✗ Hair
- ✗ Cotton swabs, medicated wipes (all brands)
- ✗ Toys
- ✗ Underwear
- ✗ Syringes
- ✗ Plastic items
- ✗ Disposable toilet brushes
- ✗ Aquarium gravel or kitty litter
- ✗ Tissues (nose tissues, all brands)

## WHAT THE CUSTOMER CAN DO TO HELP

In order to help the City of Wilson continue a high standard of water quality and protection of the environment please follow these simple steps:

**DO NOT pour grease, fats and oils from cooking down the drain** – instead, collect the grease in a container and dispose of it in the garbage.

**DO NOT use the toilet as a wastebasket** – place a wastebasket in each bathroom for the disposal of solid waste, disposable diapers, condoms, and personal hygiene products that DO NOT belong in the sewer system.

**DO NOT use the sink to dispose of food scraps** – instead, place food scraps in the garbage for disposal with solid wastes, or better yet, start a compost pile.

## FOR MORE WATER QUALITY INFORMATION

**City of Wilson – Water Resources**  
(252) 399-2492  
www.wilsonnc.org/water-resources

**Lower Neuse Basin Association**  
www.lnba.net

**Water's Worth It**  
www.watersworthit.org

**N.C. Environmental Education**  
www.eenorthcarolina.org

**River Guardian Foundation, Inc.**  
www.riverguardfdn.org

**Sound Rivers**  
www.soundrivers.org

**NCDEQ**  
(919) 733-2321  
www.deq.nc.gov

## AFFILIATIONS

The City of Wilson Water Reclamation Division is affiliated with the following organizations:

- Water Environment Federation
- N.C. Water Environment Association
- N.C. Rural Water Association
- American Water Works Association
- N.C. Water Works Association
- Lower Neuse Basin Association
- N.C. Water Quality Association
- N.C. Pretreatment Consortium
- Neuse River Compliance Association