City of Wilson

Spring 2022 AIA Grant Application

April 29, 2022

Prepared by:

Kyle F. Manning, PE

Civil Engineer III

City of Wilson

North Carolina Department of Environmental Quality
Division of Water Infrastructure
Application for Funding

(Last updated: February 2022)

1. General Information

Applicant Name	County	DUNS Number
City of Wilson	Wilson	847638251

Project Name	Federal Tax ID #	PWSID # (if applicable)
City of Wilson Asset Inventory Assessment 2022/2023	56-6000240	

Applicant Type

- ☒ Municipality
- ☐ County
- ☐ Water and Sewer District
- ☐ Water and Sewer Authority
- ☐ Sanitary District
- ☐ Non-Profit Water Corporation
- ☐ Other (Specify:)

Total Project Cost	Funding Amount Requested
$400,000	$400,000

Funding Type(s) Requested

- ☒ Asset Inventory and Assessment (AIA) Grant
- ☐ Merger/Regionalization Feasibility (MRF) Grant
- ☐ Pre-Construction Planning Grant (without construction)
- ☐ Other: _____
- ☐ Construction Project
  - ↳ ☐ Drinking Water
  - ↳ ☐ Wastewater
  - ↳ ☐ CWSRF Green Project: stream restoration, stormwater BMP, reclaim water

Acceptance of Funding Offer (for Construction Projects only)

These questions will be used to identify the best funding fit. Funding from the American Rescue Plan Act (ARPA) is available as grants, and principal forgiveness is available from the State Revolving Funds.

1. I am willing to accept funding that includes federal conditions. ☒ Yes ☐ No
2. I will only accept a funding offer (loan and/or grant) if a minimum of $0 is offered as a grant or principal forgiveness. *Enter $0 if you are willing to accept a loan offer with no grant or principal forgiveness.*
3. ☐ Because of the potential hardship related to a State Revolving Fund and/or State Reserve Program loan, this application seeks to replace the $ loan awarded to the Insert Project Name (Insert project number) with grant funding. *Note: loans that have already received disbursements are not eligible.*

2. System Parameters

Residential Sewer Connections	Residential Water Connections
20,672	22,796
Non-Residential Sewer Connections	**Non-Residential Water Connections**
1,869	2,082
Monthly Sewer Bill per 5,000 gallons	**Monthly Water Bill per 5,000 gallons**
45.45	38.16

Percentage of Utility Bills Collected and Rate Increase Percentages

Year	Percentage of Utility Bills Collected	Rate Increase Percentage
2021	97.82	2%
2020	99.05	0%
2019	99.15	0%
2018	98.59	0%
2017	99.22	0%

(OVER)

3. Applicant Contact Information	
Authorized Representative Name:	W.T. Bass, IV
Authorized Representative Title:	Public Works Director
Mailing Address Line 1:	PO Box 10
Mailing Address Line 2:	
City:	Wilson
State:	NC
Zip Code:	27893
Physical Address Line 1:	
Physical Address Line 2:	
Physical Address City:	
Physical Address State:	
Physical Address Zip Code:	
Phone Number:	252-399-2467
E-Mail Address:	bbass@wilsonnc.org
4. Application Preparer Contact Information	
Firm Name:	City of Wilson
Contact Name:	Kyle Manning
Mailing Address Line 1:	PO Box 10
Mailing Address Line 2:	
City:	Wilson
State:	NC
Zip Code:	27893
Physical Address Line 1:	
Physical Address Line 2:	
Physical Address City:	
Physical Address State:	
Physical Address Zip Code:	
Phone Number:	252-296-3416
E-Mail Address:	kmanning@wilsonnc.org
5. Engineer Contact Information	
Is the engineering firm different from the application preparer?	☒ Yes ☐ No
Engineering Firm Name:	HDR, Inc.
Contact Name:	Mary Brice
Mailing Address 1:	555 Fayetteville St
Mailing Address 2:	Suite 900
City:	Raleigh
State:	NC
Zip Code:	27601
Physical Address Line 1:	
Physical Address Line 2:	
Physical Address City:	
Physical Address State:	
Physical Address Zip Code:	
Phone Number:	919-900-1636
E-Mail Address:	mary.brice@hdrinc.com

6. Project Description (see Instructions)

The City of Wilson (City) has three major challenges impacting the successful operation of a proactive collection system management system over the next five years:

1. Aging Infrastructure;
2. Water Affordability; and
3. Staff Recruiting and Retention.

If approved, the asset inventory and assessment grant will allow the City to begin addressing each of the major challenges. Specifically, the City will develop a Wastewater System Master Plan (WSMP) to increase our system knowledge and identify aged infrastructure in immediate need of repair, minimize the potential rate increases within our community, and further enhance staff recruiting and retention by increasing salaries and reducing overtime.

Specific items with the WSMP will include the following:

1. Manhole inspections and smoke testing to proactively identify sources of I/I and potential areas of failure;
2. Hire an outside consultant to assist with strengthening our existing asset management plan, including the creation of standard operating procedures for staff; and
3. Survey work to allow the continued refinement of our GIS inventory and Sewer GEMS hydraulic model.

Estimated number of new connections served by project (if applicable):	0

For Construction Projects and Pre-Construction Planning Grants only:

☐ The proposed project is a result of an Asset Inventory and Assessment Grant previously awarded by the Division?

☐ The proposed project is a result of a Merger / Regionalization Feasibility Grant previously awarded by the Division?

☒ None of the above.

7. Additional Information for Consideration

(OVER)

8a. Project Budget (for Construction Projects and Pre-Construction Planning Grants only)			
	Division Funding Requested	**Other Secured Funding Source(s)**	**Total Cost Amount**
Indicate construction costs by line item (e.g., linear feet of different-sized lines)			
Construction Costs			
Contingency (10% of construction costs):			
Construction Subtotal:			
Engineering Costs			
Engineering Design			
Permitting			
Land Surveying Costs			
Engineering Subtotal:			
Administration Costs			
Planning (pre-construction costs)			
Easement Preparation			
Engineering Report Preparation			
Environmental Documentation Preparation (if applicable)			
Legal Costs			
Compensation for Connection Fees and System Development Fees that will not be charged after connecting residences in disadvantaged, underserved areas (if applicable)			
Project Funding Administration (if applicable)			
Other:			
Other:			
Administration Subtotal:			
TOTAL PROJECT COST:			
A Professional Engineer signature and seal for the estimate *must be provided* in the space to the right for the application to be considered complete.			

8b. Project Budget (for AIA and MRF grants, and training and/or rate study components to other projects)	
	Division Funding Requested
Development of a Wastewater System Management Plan	$400,000
TOTAL DIVISION FUNDING REQUESTED:	$400,000

(OVER)

Certification by Authorized Representative

The attached statements and exhibits are hereby made part of this application, and the undersigned representative of the Applicant certifies that the information in this application and the attached statements and exhibits are true, correct, and complete to the best of his/her knowledge and belief. By initialing each item and signature at the end of this application, he/she further certifies that:

WTB 1. as Authorized Representative, he/she has been authorized to file this application by formal action of the governing body;

WTB 2. the governing body agrees to provide for proper short-term and long-term maintenance and operation of the approved project after its completion;

WTB 3. the Applicant has substantially complied with or will comply with all federal, state, and local laws, rules, and regulations and ordinances as applicable to this project;

WTB 4. the Applicant will adopt and place into effect on or before the completion of the project a schedule of fees and charges which will provide for the adequate and proper operation, maintenance, and administration and repayment of all principal and interest on loans (if applicable) of the project;

WTB 5. the Applicant has followed proper accounting and fiscal reporting procedures, as evidenced by the Applicant's most recent audit report, and that the Applicant is in substantial compliance with provision of the general fiscal control laws of the State;

WTB 6. the Project Budget for construction projects and pre-construction planning grants provided in this application form (if applicable) includes all funding requested from all sources of funding proposed for this project;

WTB 7. the City of Wilson, North Carolina is organized and chartered under the laws of North Carolina, or the special purpose unit of local government is incorporated under the laws of North Carolina. All officials and employees are aware of, and in full compliance with NCGS 14-234, "Public officers or employees benefiting from public contracts; exceptions." (For units of local government only. All others should initial "N/A");

WTB 8. the Applicant acknowledges that all loans, and Viable Utility Reserve grants, are subject to approval by the Local Government Commission;

WTB 9. the Applicant acknowledges that, in accordance with G.S. 120-157.2, for local government debt to be issued greater than $1,000,000, the local government must report to Committee Chairs, Committee Assistant, and the Fiscal Research Division of the General Assembly at least 45 days prior to presentation before the Local Government Commission (For units of local government only. All others should initial "N/A"); and

WTB 10. if the Applicant receives a grant with American Rescue Plan Act (ARPA) State Fiscal Recovery Funds, the Applicant acknowledges and accepts the following conditions:

a) all ARPA project funds must be reimbursed by December 31, 2026;

b) project funds will not be used to pay existing debt or as a match for other federal funds;

c) if the project is also funded with other federal funds, the federal requirements of the other funds will apply to the ARPA funds; and

d) for projects receiving ten million dollars or more in ARPA funding: recipients must certify or provide plans and reports meeting federal requirements on reporting on prevailing wage rates, project labor agreements, and related information as specified in the U.S. Treasury's *Compliance and Reporting Guidance for the State and Local Fiscal Recovery Funds* (pages 21-22).

Completeness Checklist

*In addition to this application, **the following items must be included for a complete application package. Incomplete applications will not be considered.** Please initial that each item is included in this submittal.*

WTB	Resolution by Governing Body of Applicant with Certification by Recording Officer*
WTB	Water & Sewer Financial Information Form*
WTB	Fund Transfer Certification*
WTB	Applicable Priority Rating System Form* with supporting narratives and documentation
WTB	Affordability Calculator* or handwritten affordability calculations
WTB	Current rate sheets in effect on application deadline (for both water and sewer if the utility provides both water and sewer, or for water or sewer depending on the utility service)
N/A	PE Seal on project budget (construction projects and pre-construction planning grants only. All others initial "N/A")
N/A	Supporting documentation/maps for construction projects that connect residences in disadvantaged, underserved areas to water/wastewater utility (if applicable. If not applicable, initial "N/A")

* Forms and templates are available separately on the Division's website.

** For each application, please provide copies that are bound (e.g., report cover with fasteners, plastic report combs, spiral or 3-ring binders). No paper clips, staples or binder clasps. **

Submittal Information

- Send one (1) **original hard copy** and one (1) **electronic copy** of the Application.

Send complete Application package to:

Mailing Address† (US Postal Service *only*)
Division of Water Infrastructure
1633 Mail Service Center
Raleigh, NC 27699-1633

Physical Address (FedEx, UPS)‡
Division of Water Infrastructure – 8th Floor, Archdale Building
512 North Salisbury Street
Raleigh, NC 27604
919.707.9160

†Please allow two weeks for delivery if mailing via the US Postal Service.
‡For all courier services, please use the physical address, as having a courier deliver to the mailing address will delay package delivery.

Application Signature

Please note: original signatures are required for each application.

SIGNATURE OF AUTHORIZED REPRESENTATIVE

W.T. Bass, IV	Public Works Director/City Engineer	4/29/2022
TYPED NAME	TYPED TITLE	DATE

Council Resolution

R-013-22

RESOLUTION BY CITY COUNCIL OF THE CITY OF WILSON, NORTH CAROLINA

WHEREAS, The Federal Clean Water Act Amendments of 1987 and the North Carolina the Water Infrastructure Act of 2005 (NCGS 159G) have authorized the making of loans and grants to aid eligible units of government in financing the cost of construction of wastewater collection system improvements, drinking water distribution system improvements, and studies of the wastewater collection system, and

WHEREAS, The City of Wilson has the need for and intends to replace the existing wastewater collection system outfall gravity lines identified as The Lower Bloomery and Old Fields Outfall Sewer Lines, and

WHEREAS, The City of Wilson has the need for and intends to replace and/or rehabilitate the existing drinking water distribution system lines identified as The Steel Water 24-Inch Line Replacement Phase II, and

WHEREAS, The City of Wilson has the need for and intends to conduct a condition study assessment, capacity evaluations, risk assessments, and overall planning elements including the refinement of the capital improvement plans on the wastewater collection system, and

WHEREAS, The City of Wilson intends to request State loan and grant assistance for the projects,

NOW THEREFORE BE IT RESOLVED, BY THE CITY COUNCIL OF THE CITY OF WILSON

That City of Wilson will arrange financing for all remaining costs of the project, if approved for a State loan or grant award.

That the City of Wilson will adopt and place into effect on or before completion of the project a schedule of fees and charges and other available funds which will provide adequate funds for proper operation, maintenance, and administration of the system and the repayment of all principal and interest on the debt.

That the governing body of the City of Wilson agrees to include in the loan agreement a provision authorizing the State Treasurer, upon failure of the City of Wilson to make scheduled repayment of the loan, to withhold from the City of Wilson any State funds that would otherwise be distributed to the local government unit in an amount sufficient to pay all sums then due and payable to the State as a repayment of the loan.

That the City of Wilson will provide for efficient operation and maintenance of the project on completion of construction thereof.

That W.T. Bass, IV, the **Authorized Official**, and successors so titled, is hereby authorized to execute and file an application on behalf of the City of Wilson with the State of North Carolina for a loan and or grant to aid in the study of and construction of the projects described above.

That the **Authorized Official**, and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project: to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.

That the City of Wilson has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to Federal and State grants and loans pertaining thereto.

Adopted this the April 21, 2022 at Wilson, North Carolina.

Carlton L. Stevens, Mayor

ATTEST:

Tonya A. West, City Clerk

CITY OF WILSON INCORPORATED 1849 WILSON COUNTY, N.C.

CERTIFICATION BY RECORDING OFFICER

The undersigned duly qualified and acting Clerk of the City of Wilson does hereby certify: That the above/attached resolution is a true and correct copy of the resolution authorizing the filing of an application with the State of North Carolina, as regularly adopted at a legally convened meeting of the City Council of the City of Wilson duly held on the 21st day of April 2022; and, further, that such resolution has been fully recorded in the journal of proceedings and records in my office. IN WITNESS WHEREOF, I have hereunto set my hand this 21st day of April, 2022.

Tonya A. West, City Clerk – City of Wilson

CITY OF WILSON INCORPORATED 1849 WILSON COUNTY, N.C.

Narrative

Wilson Sewer AIA Narrative

Categories 1 & 2 - Project Benefits and System Management

Narrative

Overview

The City of Wilson (City) has three major challenges impacting the successful operation of a proactive collection system management system over the next five years:

1. Aging Infrastructure;
2. Water Affordability; and
3. Staff Recruiting and Retention.

If approved, the asset inventory and assessment grant will allow the City to begin addressing each of the major challenges. Specifically, the City will develop a Wastewater System Master Plan (WSMP) to increase our system knowledge and identify aged infrastructure in immediate need of repair, minimize the potential rate increases within our community, and further enhance staff recruiting and retention by increasing salaries and reducing overtime.

Specific items with the WSMP will include the following:

1. Manhole inspections and smoke testing to proactively identify sources of I/I and potential areas of failure;
2. Hire an outside consultant to assist with strengthening our existing asset management plan, including the creation of standard operating procedures for staff; and
3. Survey work to allow the continued refinement of our GIS inventory and Sewer GEMS hydraulic model.

Aging infrastructure

The City of Wilson, like many communities, is facing a “cliff” when it comes to aging infrastructure. As shown in Figure 1, a large amount of infrastructure for both water and sewer is exceeding 40 years of age (built prior to 1980). Additionally, the “newer” infrastructure built between 1980 and 1999 will approach 40-year mark over the next 10 years. As a result, it is expected that repair costs associated with the sanitary sewer system will rapidly increase. The City has been in a reactive mode addressing issues as they have arisen through system failures and sanitary sewer overflows (SSOs). This reactive mode of understanding the condition of the system is not sustainable.

If funding is received through this AIA Grant, it will allow the City of Wilson to proactively determine areas which are in the greatest need for repairs by building upon previous survey and flow monitoring work conducted in 2019. Thus, reducing repair costs in the future. As it is generally cheaper to proactively fix a potential issue then wait for an asset to fail. Additionally, this prevents additional SSOs.

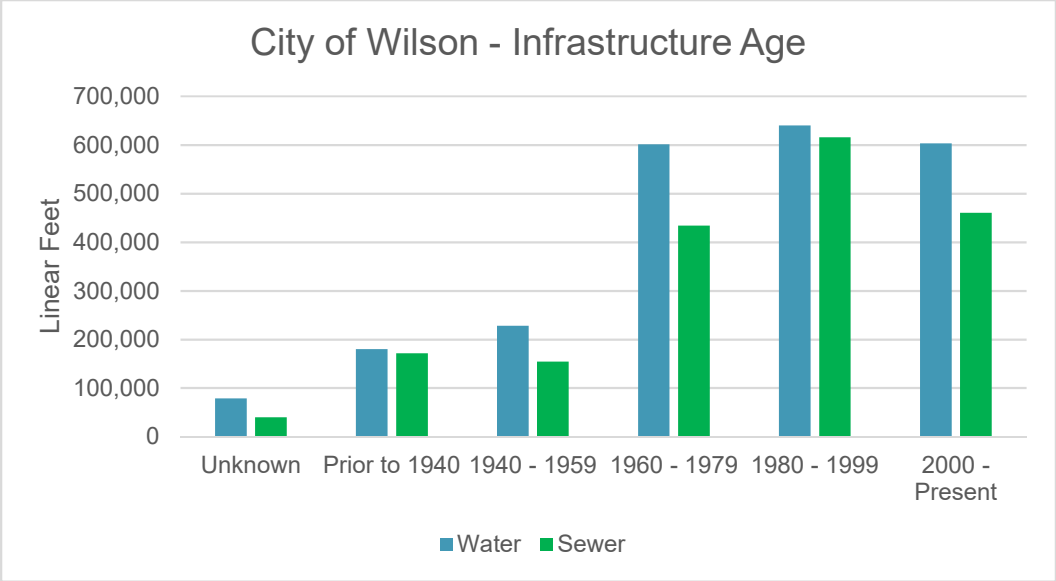


Figure 1: City of Wilson - Linear Asset Installation Date

Additionally, the City has approximately 135,702 linear feet of 6" gravity sewer mains located throughout the collection system. All of these lines were installed prior to 1973 and are constructed of vitrified clay. These older 6" mains are significant sources of I/I within the collection system and do not meet current DEQ minimum design criteria for public sanitary sewer collection systems. The City invested in the creation and maintenance of a GIS platform with asset inventory data and continuously improves the GIS accuracy to development a reliable data source, retain accurate legacy knowledge, and assist with work management.

The City has also invested in a study to identify infiltration and inflow (I/I) throughout the entire collection system and intends to build upon that work with smoke testing and CCTV inspections focused on the basins with the highest I/I (**Attachment 1**). Additionally, in 2021, the City created an I/I Reduction Plan building upon the 2019 I/I Study (**Attachment 2**). Furthermore, a copy of the existing asset management plan is included in the submittal packet.

The City has suffered a significant number of SSOs over the last two years due to aging infrastructure and I/I. In 2021, the City suffered eight SSOs, of which two were related to aging infrastructure and I/I. In just the first four months of 2022, the City has suffered another eight SSOs, of which four were related to aging infrastructure and I/I. It should be noted that none of the SSOs from 2021 and 2022 were caused by Hurricanes. **Attachment 3** includes all SSO reports over the last two years.

The I/I from the aging infrastructure has also results in increased treatment costs and financially burdensome treatment facility and pump station expansions. In FY21 (July 1, 2020 through June 30, 2021), the City's Wastewater Treatment Plant treated approximately 11.54 MGD (82% of capacity). As a result, the City of Wilson had to notify DEQ that the plant would need to be expanded due to the 80/90 rule. However, of that 11.54 MGD, approximately 65% of the flow was I/I (See attached I/I Reduction Plan for calculation and additional supporting information). Hazen

and Sawyer's preliminary estimate for a WWTP expansion from 14 MGD to 17.3 MGD is approximately $80M (~$24M/MGD).

Operationally, the City of Wilson's cost to treat 1 MGD is approximately $1,655 (includes employee salaries, chemical costs, electricity for pumps, etc.). Thus, if I/I could be reduced by just 10%, the annual savings from an operational standpoint would be approximately $453,116.

Additional data collection will facilitate the City's shift to a proactive mode of asset management.

The City has a basic asset management plan in place. Initially, the City developed a GIS system that serves as the primary database for asset inventory data. Using its own funds, the City reviewed its existing work management practices and has begun implementation of Cityworks as an Asset Management System (AMS) to record both preventive maintenance and corrective maintenance. Cityworks will allow water and sewer to track work orders against specific assets. The City has also conducted limited studies on asset condition assessment on the sewer collection system as mentioned above.

New management of the system has difficulty accurately developing the capital improvement plan (CIP) since condition assessment is based mostly on operator knowledge and failures of infrastructure. The City would like the CIP to reflect prioritization such that infrastructure is replaced or rehabilitated before failure. To accomplish this more proactive approach, the City needs better condition assessment data.

The WSMP process will include collection of additional inventory and condition data and will incorporate all existing inventory and condition data on a GIS platform to improve the City's ability to evaluate risk and investment priorities. The WSMP process will also be used to document guidelines for a condition assessment program that will facilitate integration of data collection with the AMS platform.

Water Affordability

The City significantly exceeds all five of the Division of Water Infrastructure's affordability parameters a listed below.

- MHI: $42,036 (compared to the state benchmark of $54,602)
- Unemployment: 5.8%(compared to the state benchmark of 3.9%)
- Poverty Rate: 23.2% (compared to the state benchmark of 14.7%)
- Population growth: -0.42% (compared to the state benchmark of 4.26%)
- Property valuation per capita: $85,484 (compared to the state benchmark of $119,594)

As shown in Figure 2, the City also has a significant portion of the service area mapped as both potentially underserved and part of flood zones that exacerbate the impacts to disadvantaged communities and the infrastructure challenges. These issues create significant stress in asset management to address aging infrastructure and associated environmental challenges (e.g., SSOs, flooding, etc.) while keeping water affordable and accessible for the residents of the City.

Using the Affordability Calculator provided by DEQ, if the WWTP expansion for $80M was to move forward, the additional costs per connection per month would be $14.55 (**Attachment 4**). This would be an increase in the monthly sewer rate of 32%. Further decreasing the affordability of services to the disadvantaged communities.

As described in the prior section, the City's cost to treat 1 MGD is approximately $1,655 (includes salaries, chemical costs, electricity for pumps, etc.). Thus, if I/I were reduced by just 10%, the annual savings from an operational standpoint would be approximately $453,166.

The WSMP process will incorporate an evaluation and provide the City the ability to identify priority capital improvements and allow for improved ability to forecast financial requirements, implement the most effective projects, and possibly delay capital investments such as the wastewater treatment plant expansion project.

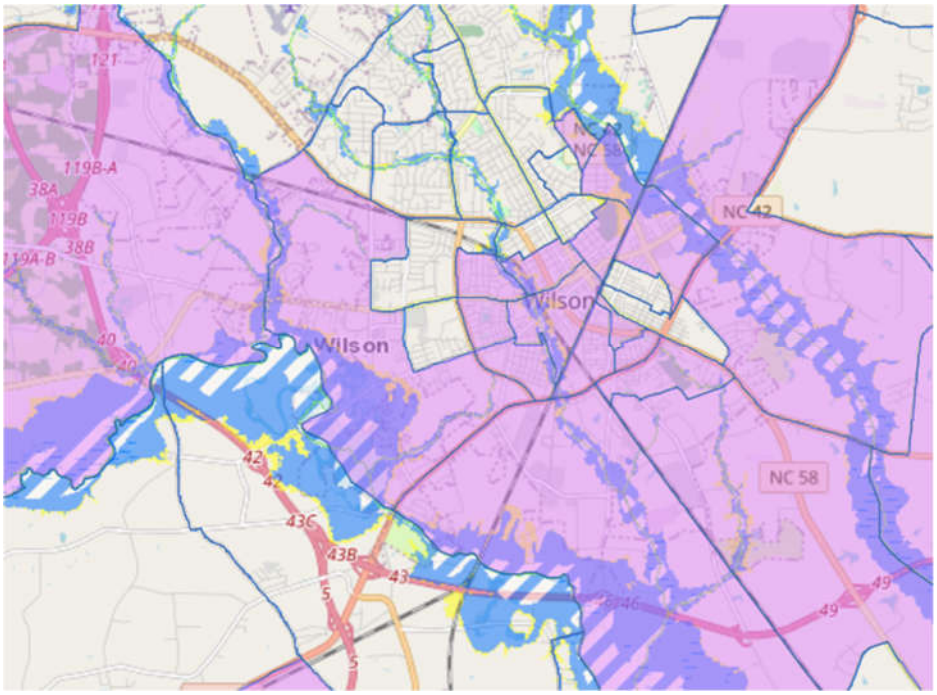


Figure 2 - City of Wilson - DEQ Community Mapping Tool and Floodplains

Staff Retention/Organization Changes

The City's collection and distribution operations and maintenance staff have recently moved from the Water Resources Department to the Water Infrastructure Division within the Public Works Department. Collection and distribution operations and maintenance staff have combined with staff who maintain additional linear assets for the City such as stormwater. As these groups combine, there is a risk of loss of institutional knowledge or inefficient knowledge sharing related to the operational conditions of pump stations, system connectivity within the gravity collection system, and specific system needs. The City anticipates organizational changes related to management of collection and distribution assets will continue. Additionally, these changes are

challenges to the Water Infrastructure Group management staff as well as they navigate these new tasks, look to fully define the situation, and develop plans to address issues, including the possibility of regulatory penalties.

The Water Infrastructure Group manages day-to-day operation of the collection, distribution, and stormwater systems. As of April 2022, of the 61 funded positions approved by City Council, only 48 positions are filled, creating a vacancy rate of approximately 20%. Additionally, of the 48 positions currently filled, 10 of the individuals have less than a year of experience. Hiring for positions and keeping experienced operators has been exceptionally difficult due to current salary constraints. Figure 3 shows the range of salaries for the City of Wilson Water Infrastructure Group compared to other municipalities.

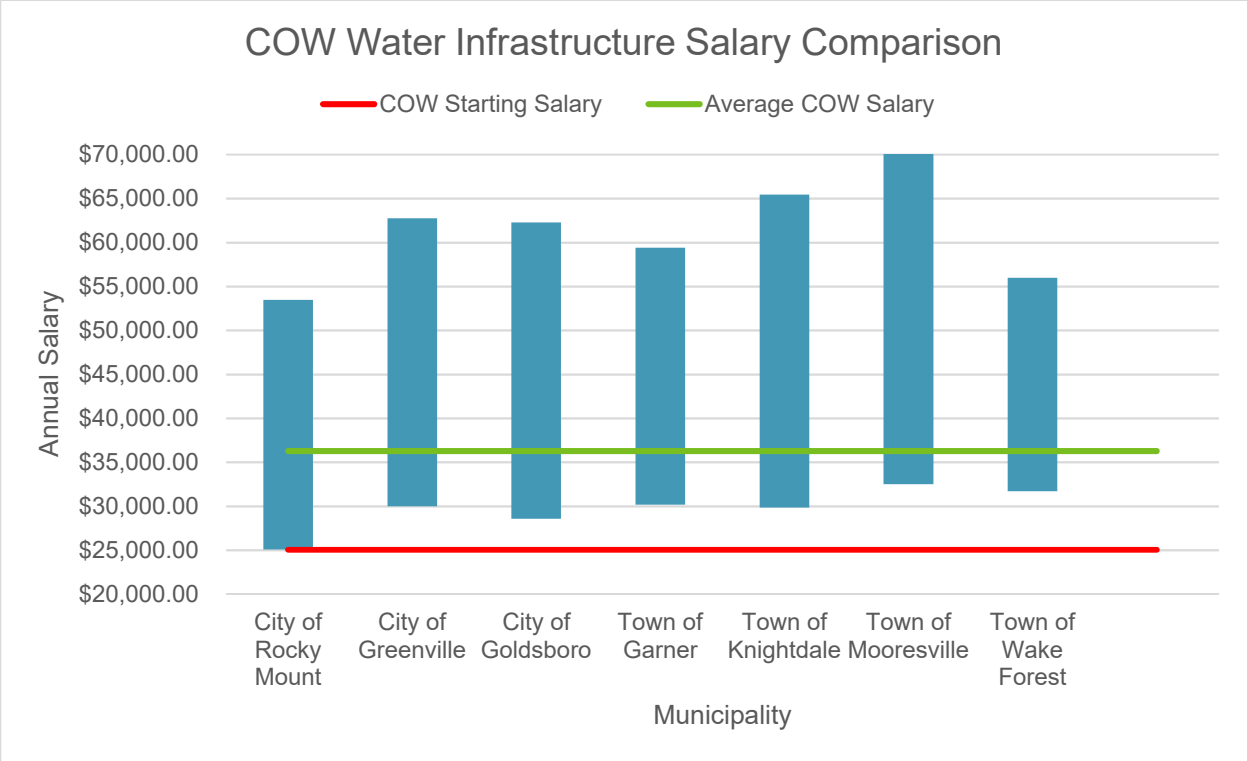


Figure 3: City of Wilson - Municipal Salary Benchmarking

Further compounding the staff issue is the increased overtime due to both the existing staffing shortage and the current reactive (over proactive) approach to collection system maintenance. Over the last three years, the collection and distribution staff have averaged approximately 565 hours (60% Collection/40% Distribution) each month of overtime responding to after-hours emergency calls due to main breaks and sewer spills. This works out to approximately 12 hours of overtime per employee per month, significantly impacting the operator's quality of life.

A large driver for the lack of filled positions is due to funding being unavailable. The lack of funding for salaries has primarily been due to impending capital improvement projects required to continue to treat the large amount of I/I reaching the wastewater treatment plant, increased overtime costs

associated with emergency repairs of aged infrastructure, and the increased daily cost of treatment due to I/I.

Using the funding from AIA grant to develop a WSMP will allow the City to accelerate our transition from a reactive to a proactive approach in the management our collection system. Ultimately, as projects are identified through this grant funding opportunity, construction projects will take place to eliminate sources of I/I and repair infrastructure identified in danger of immediate failure. This will reduce treatment costs, extend the larger capital improvement projects such as the WWTP expansion further out in the CIP, and decrease emergency (i.e. after hours) calls. All three of these items taken together will increase money available for salaries to better-align with peer utilities and improve operator qualify of life, which should decrease employee turnover and increase staffing levels. The increased staffing levels will then allow the City to even be further proactive with maintenance items and decrease the average overtime any single-individual will have to be assigned further improving employee morale.

2. Has the utility done any asset management or capital planning work previously? Give specific examples (i.e., immediate operational changes or longer-term changes in business practices) of how the system has benefited by having this information. Provide a copy (hard copy or CD) of any existing asset inventory map, smoke testing results or other condition assessment report, flow monitoring results, asset management plan or capital improvement plan.

The City has made significant improvements in asset management and capital planning including:

- An initial Asset Management Plan has been completed by City staff with assistance from HDR, Inc. (**Separate Document Provided within Application Packet**)
- A 2019 I/I Study, which included flow monitoring through 23 sub-basins conducted by Hydrostructures. (**Attachment 1**).
- A survey of major outfalls by Green Engineering was conducted in 2019 to determine inverts, confirm pipe diameters, and pipe materials.
- The Green Engineering survey results were used to generate a WaterGEMS and SewerGEMS hydraulic models of the collection and distribution system.
- In March of 2022, Hydrostructures began manhole inspections and smoke testing in Sub-basin 14 (the worst location for I/I based upon the 2019 study).
- A 2021 I/I Reduction plan outlining the City's intended course of action to reduce I/I and track results developed by City staff. (**Attachment 2**)
- GIS mapping and inventory of all linear assets by City staff. (**Attachment 5**)
- Starting in 2021, the City began transitioning from GIS to GISPro. Additionally, the City has entered into a contract to set up a Utility Network model within GISPro to increase data reliability. Further, the City is in the process of transitioning from FixIt Tickets (current system of managing work orders) to Cityworks. The Cityworks platform will allow the City to tie all work orders on a specific asset within GISPro.
- A revised 10-year (was previously a 5-year) CIP generated through input with key personnel at the operations level. Previous method was for leadership to generate the

CIP, however, the revised 10-year CIP also included solicited projects from the entire collection and distribution system staff (crew leader and up). (**Attachment 6)**

3. Identify (by title) the utility's asset management team that will be assembled to develop the asset inventory and assessment project. Describe any asset management and/or capital planning experience or training each team member has had. Include any external partners (consultants, county, COG, or nonprofit staff, etc.) that will participate on the team and describe the role of each member during this project. Differentiate between external members that are temporary (e.g., surveying companies) and those that will be continuously assisting in asset management planning (e.g., company providing long-term data management). In addition, describe the future role of each team member to continue to inventory, assess, prioritize, and plan for water infrastructure assets after completion of the project.

The entire asset management team consists of many individuals with excellent experience. The day-to-day project management, including drafting of RFQs, RFPs, and any bids for capital projects identified through this project, will be handled by Kyle Manning, PE (Civil Engineer). Kyle has previous experience in developing CIPs and project management experience at both at the City of Wilson and Durham County. Assisting Kyle and providing valuable insight into the work order system and budget process is Scott Hedgepeth (Assistant Public Works Director). All new information determined through survey work and smoke testing will be added to our existing GIS asset management system by Tim Blanchard (GIS Technician) or Beverly Baily (GIS Technician).

If an issue is discovered that can be addressed immediately by existing City staff, the Water Infrastructure Division, spearheaded by Noah Parsons (Water Infrastructure Division Manager) will take point. The Water Infrastructure Division is capable of handling spin-cast manhole rehabilitation, pipe bursting sewer mains up to 10" in diameter, and replacement of sewer mains up to 24" in diameter. Additionally, John Bissette (GIS Technician) within Water Infrastructure will provide updates to the existing collection system hydraulic model as data is gathered.

When additional funds are needed or if the CIP needs to be updated, W.T. "Bill" Bass, IV, PE (Public Works Director/City Engineer) and Amy Stanton (Chief Financial Officer) will be available to provide guidance and to seek council approval.

If a substantial update to the GIS assessment management system or if a new data entry tool for field personnel is needed then the City's GIS Services division led by Joe Ausby (GIS Manager) will be available.

The City is also fortunate to have working relationships with several excellent firms that have provided engineering, surveying, financial planning, flow monitoring, and other services throughout the years. These firms include: Green Engineering (survey and design), Hydrostructures (flow monitoring, smoke testing, development of hydraulic models, and manhole inspections), Raftelis (financial modeling for rates and system development fees), and HDR (preparation of grant applications and development of an initial asset management plan).

Attachment 7 provides a table indicating all team members, years of experience, a short description of each role, relevant certifications, and prior experience on towards asset management and capital planning. While this list is extensive, it is not exhaustive. There are numerous other individuals within the City who would be capable of assisting if necessary.

4. How does the utility currently set rates to generate revenue for appropriate levels of infrastructure maintenance, operations, and replacement? Has the process for setting rates changed in the last five (5) years, and how has it changed? How does the rate setting process blend with the CIP planning process?

Approximately three years ago Raftelis completed a rate study incorporating the CIP and the approved budget. A financial model was created to allow city staff (Bernard Mclean) to update any proposed changes to the rate structure and predict how enterprise funding would change. The model can be updated with current CIP projects and proposed budgets.

The WSMP will provide a more definitive outlook on expected capital project expenditures and associated economic benefits through reduced operational costs. These parameters could be added into the existing model to show rates which will allow the continued existence of a stable enterprise fund.

5. How will the utility use the information developed through this project to develop future infrastructure projects, and how will these projects be prioritized? How will these projects be incorporated into the CIP planning process in the future, and how will the source of funding be determined?

The City continues to make improvements in the sewer utility including: capacity upgrades and force main replacements for the Stantonsburg and Longview Pump Stations within the last three years, a blower upgrade and flood proofing an influent pump station at the WWTP, and the replacement of Bloomery Swamp Outfall line within the next year.

However, the City needs to make further improvements to the collection system due to excessive I/I (~65% of wastewater flow into the WWTP in 2021), which results in increased operational costs, increased capital improvement costs, and increases the risk of SSOs.

The WSMP will expedite the requirement improvements to the collection system by assisting with the identification of issues and developing a plan of action to address each one. The WSMP will be used to help provide guidance and justification to City Council for project expenditures. Additionally, the WSMP will allow the City to maintain a proactive approach in running the utility and addressing issues quickly and efficiently.

6. How will the utility's asset inventory developed through this project be kept up to date, and how will the utility pay for this ongoing effort? Include any information about partnering with the county, Council of Government (COG), or others to maintain and update the asset inventory.

The City will continue to use GIS as the primary method of maintaining an asset inventory of the collection system. Any new information obtained through this project will be incorporated into GIS by existing staff. This includes both Tim Blanchard and Beverly Bailey handling the day-to-day

updates within GIS for Water Infrastructure assets. Additionally, the internal GIS Services Group (Joe Ausby, Leigh Parker, and Jeff Webb) will available to assist if information requires a more extensive update of the GIS database.

7. Provide the System Operating Ratio each year for the past three (3) years. Explain any discrepancies in the Operating Ratio from year to year. See below for Operating Ratio calculation instructions.

Attachment 8 is the NC DEQ Division of Water Infrastructure Water & Sewer Financial Information Form and supporting documentation shows the operating ratio for the prior three years. The OR for the last three years were 1.046 (2021), 0.924 (2020), and 0.996 (2019).

The OR for 2020 and 2019 were below one, primarily due to the City's policy of counting transfers to capital reserve funds as capital outlay. For example, in 2020, over $8M was shown as a capital outlay, however, a majority of that money was transferred to capital reserve funds for future project including the WWTP expansion project and a WTP expansion project.

8. Describe any additional benefits to the utility of receiving this Asset Inventory & Assessment grant that have not been previously mentioned.

The completion of a WSMP will allow staff to better communicate with City Council on capital improvement needs and start proactively addressing aging infrastructure issues.

Additionally, the planning tool may allow additional cost sharing between the different groups within Public Works. For example, work may be planned such that a street that needs to be replaced can be coordinated with a sewer main replacement project.

Line Item 2.D - Operating Ratio

For FY 2021, the City has an OR greater than one as shown in the calculation below from the information in the Financial Information Form.

$$\boldsymbol{OR} = \frac{\boldsymbol{Operating\ Revenues}}{(\boldsymbol{Total\ Expenditures} + \boldsymbol{Debt\ Principal} + \boldsymbol{Interest} + \boldsymbol{Capital\ Outlay})}$$

$$OR = \frac{\$28{,}215{,}709}{(\$18{,}264{,}013 + \$3{,}542{,}700 + \$404{,}651 + \$4{,}762{,}411)} = 1.05$$

Financial forms attested by the CFO are also attached for prior year operating ratio calculations.

Line Item 3.A - Current Rate

Certified rates are also attached as **Attachment 9**.

Supporting calculation:

Base Rate for Water (3/4" Meter) = $12.00 per month

Water Use Rate (0 – 50 ccf) = $3.91 per ccf

Base Rate for Sewer (3/4" Meter) = $13.00 per month

Base Use Rate = $5.40 per ccf

Sewer usage assumed to be 90% of water usage

$$Water\ Usage\ (ccf) = 5{,}000\frac{gallons}{month} * \frac{1\ CF}{7.48\ gallons} * \frac{CCF}{100\ CF} = 6.68\ ccf/month$$

$$Water\ Charge\ per\ month\ (\$) = \$12.00 + \frac{\$3.91}{ccf} * \frac{6.69\ ccf}{month} = \frac{\$38.16}{month}$$

$$Sewer\ Usage\ (ccf) = 0.9 * 5{,}000\frac{gallons}{month} * \frac{1\ CF}{7.48\ gallons} * \frac{CCF}{100\ CF} = 6.01\ ccf/month$$

$$Sewer\ Charge\ per\ month\ (\$) = \$13.00 + \frac{\$5.40}{ccf} * \frac{6.01\ ccf}{month} = \frac{\$45.45}{month}$$

Total Water and Sewer Bill for 5,000 Gallons = $38.16 (water) + $45.45 (sewer) = $83.61

Line Item 3.B - Local Government Unit Indicators

See attached affordability calculator in **Attachment 4** showing the effects of the $80M wastewater treatment plant expansion on sewer rates. The City of Wilson has five out of five LGU indicators worse than the state benchmark.

Attachment 1

2019 I/I Collection System Study

FLOW MONITORING AND INFLOW & INFILTRATION ANALYSIS

PREPARED FOR

CITY OF WILSON
NORTH CAROLINA

WILSON
NORTH CAROLINA

HYDROSTRUCTURES, PA
126 Commerce Court
Pittsboro, NC 27312
919.542.5002

INFLOW & INFILTRATION ANALYSIS

City of Wilson, NC

I. INTRODUCTION

The City of Wilson is experiencing the same problems with their wastewater collection system as many municipalities throughout the country; much of this infrastructure is aging and maintenance personnel are faced with problems such as sanitary sewer overflows (SS0's), pipe collapses and failures, and overloaded lift stations and treatment plants. At the same time, regulatory agencies have responded with more stringent regulations and penalties to protect water quality and the public health.

The City has been experiencing wet weather induced inflow and infiltration (I/I). In efforts to identify sewer basins contributing the majority of extraneous flow, the City contracted Hydrostructures, P.A. to perform a flow monitoring study and to conduct an Inflow and Infiltration Analysis of their sanitary sewer system. The flow monitoring data will also be used to develop and calibrate a hydraulic sewer model of the interceptors and outfalls 12-inches in diameter and greater. The information gathered during the I/I analysis will allow the meter basins (or sub-basins) in the system to be prioritized for additional investigation. The most severe areas will be recommended for additional study, repair, and / or rehabilitation. This report discusses the results of the I/I analysis and prioritizes the sewer sub-basins.

Attachments to this document include:

- **Flow Meter and Rain Gauge Location** Map – illustrates the flow meter locations and meter basin boundaries.
- **Flow Meter Installation Logs** – provides a record of the meter installation location including the manhole number, pipe position and diameter where the sensor was installed, and ground cover and invert photographs.
- **Flow Meter Tree** – schematic illustrating the flow meter connectivity and their relationships to major lift stations and the WWTP.
- **Hydrographs** - graphs showing depth of flow, velocity, flow rate and rainfall for each meter.
- **Thumb Drive** - containing digital data (Excel) and a PDF of the report contents

II. EQUIPMENT AND METHODOLOGY

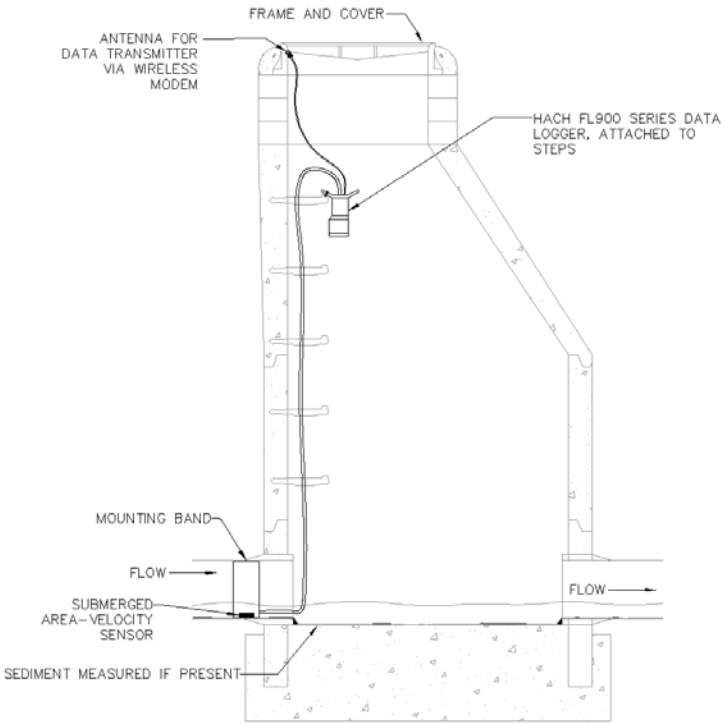
Hydrostructures, P.A. installed and maintained twenty-five (25) temporary electronic flow meters at pre-determined points within the City. The meter locations were selected to adequately break the system into logical, smaller basins and at any critical junctions. The flow monitoring allows us to; 1) record general flow conditions and 2) determine the relative severity of inflow and infiltration (I/I) within the various meter basins as a result of wet weather. The entire sewer collection system was monitored during this study.

Hydrostructures' installation crew assessed the locations to determine if acceptable hydraulic conditions existed for proper meter function. Meters were moved when necessary to achieve adequate conditions while maintaining the intent of the monitoring.

Flow measurements were performed using Hach FL900 series flow meters at each of the 25 locations from February 8, 2018 to May 22, 2018. Figure 1 shows a typical flow meter setup. The Hach FL900 data logger is combined with a submerged area-velocity sensor to measure open channel flow depth and flow velocity at the selected locations. The sensor is mounted on a stainless-steel band that is installed into the monitored pipe. The sensor measures depth of flow with a pressure transducer and velocity using Doppler waves, both simultaneously, which can then be used to calculate the volumetric flow rate. The loggers calculated flow using the continuity equation, which states that the average velocity of a liquid passing through a pipe times the cross-sectional area of flow equals the rate of flow. A data point for level (depth), velocity, and flow is recorded and stored every 15-mintures.

Combined with the Data Delivery System (DDS), the meters submitted real-time data via a wireless cellular modem to a dedicated server where it was available for viewing / processing through an internet-connected web browser. Failure notifications were sent to staff via SMS texts and emails when any problems occurred with the meters. Field technicians were dispatched to address any issues. Periodically (monthly) and at the end of the monitoring period, the field technicians manually confirmed the level and velocity readings and removed the meters.

Figure 1: Typical Hach FL900 with Submerged Area-Velocity Sensor



Rainfall was measured using tipping bucket style rain gauges and data loggers. These rain gauges collect rainfall into a conical funnel which drops the rainfall onto a tipping scale. The tipping scale can hold one hundredth of an inch of rainfall. Every time the scale trips, 0.01-inches or rainfall is recorded by the logger. Data is summed and processed at the office and presented in fifteen-minute intervals.

Nine (9) electronic data logging rain gauges were installed in combination with the flow meters

as inflow and rain induced infiltration can only be analyzed in conjunction with recorded rain events. Rain gauges measure total rainfall and rainfall intensity. This is of importance due to the direct relationship between rainfall intensity and inflow. More intense rain events tend to increase flooding and ponding of water around manhole lids, cross-connected storm and roof drains, and broken clean-outs, which can cause large quantities of inflow to enter the collection system in a short period of time. Long sustained rain events of low intensity, on the other hand, tend to saturate the ground, raising the groundwater table and causing an increased amount of groundwater infiltration. The rain gauge density is for the hydraulic modeling efforts and not so much for the I/I Analysis.

III. PROJECT FINDINGS

A. Average Dry Weather Flow

Dry weather flow was calculated from the period between May 1st – 5th, 2018. A review of flow data and rainfall data indicated that this period provided sufficient representation of average dry weather flow. Table 1, below, lists the average dry weather flows calculated and a general summary of the flow data. Flow from upstream meters must be subtracted out to calculate the net average dry weather flow per meter basin (ex. (Average Dry Weather Flow in Basin) = (Average Dry Weather Flow Rate recorded at Meter) – (∑Average Dry Weather Flows from upstream meters)).

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Table 1: Average Dry Weather Flows

Meter Site Number	Pipe Diameter (inches)	Total Pipe Length (feet)	Average Dry-Weather Flow Rate recorded at Meter (gpd)	Average Dry-Weather Flow Rate in Basin (gpd)*
1	30"	56,653	1,763,000	542,000
2	36"	53,365	2,742,000	397,000
3	30"	53,953	2,677,000	196,000
4	12"	51,147	273,000	273,000
5	30"	20,455	2,482,000	129,000
6	24"	45,280	1,723,000	202,000
7	28"	174,622	2,072,000	349,000
8	30"	32,204	1,221,000	128,000
9	8"	51,899	399,000	399,000
10	18"	105,177	694,000	319,000
11	15"	48,670	375,000	375,000
12	12"	96,126	343,000	343,000
13	24"	119,556	1,521,000	381,000
14	18"	83,777	241,000	241,000
15	24"	27,937	1,115,000	163,000
16	18"	69,429	324,000	218,000
17	18"	98,349	672,000	672,000
18	18"	88,254	1,059,000	637,000
19	15"	109,922	363,000	363,000
20	15"	57,463	141,000	141,000
21	15"	77,415	280,000	280,000
22	15"	90,949	575,000	233,000

23	24"	30,036	497,000	134,000
24	15"	34,941	68,000	68,000
25**	18"	N/A	0	0
			TOTAL	**7,183,000**

***** *Dry Weather Flow Calculated from May 1 – May 5, 2018*

** * Meter 25 was installed on a crossover pipe on the Toisnot Outfall between meter basins 15 and 5, no wastewater flow was observed through this pipe over the monitoring period.*

B. Rainfall

Recorded total rainfall ranges from 10.57 inches to 13.32 inches during the monitoring period, depending on the rain gauge location. Rain Gauge 7 was located in the central portion of the system and provides a good representation of the rainfall observed. Rain Gauge 7 is used for this analysis.

Several significant rain events occurred during the monitoring period and two are used for the I/I analysis; these events occurred on March 20th and April 24th. Table 2, below, details the duration, peak intensity, and total precipitation recorded during the events. Measurable inflow and rain induced infiltration was observed during these storm events.

Table 2 - Rainfall / Intensity - Rain Gauge 7

Event Data	Duration	Highest Intensity (inches/hour)	Total Precipitation (inches)
March 20th, 2018	3/20/18 2:15 a.m. – 3/20/18 5:45 a.m.	0.49 in/hr	0.96 in.
April 24th, 2018	4/24/18 4:00 a.m. – 4/24/18 9:45 p.m.	0.39 in/hr	1.20 in.

C. I/I Calculations and Results

The total extraneous flow (I/I) entering a sewer collection system includes Groundwater Infiltration (GWI) and Rainfall-Dependent I/I (RDI/I).

- **Groundwater Infiltration (GWI)** is groundwater that enters the collection system through cracks, pipe joints or other defects in the sewer infrastructure. It usually occurs seasonally depending upon the depth of the groundwater table. The rate is fairly constant during periods of high groundwater.

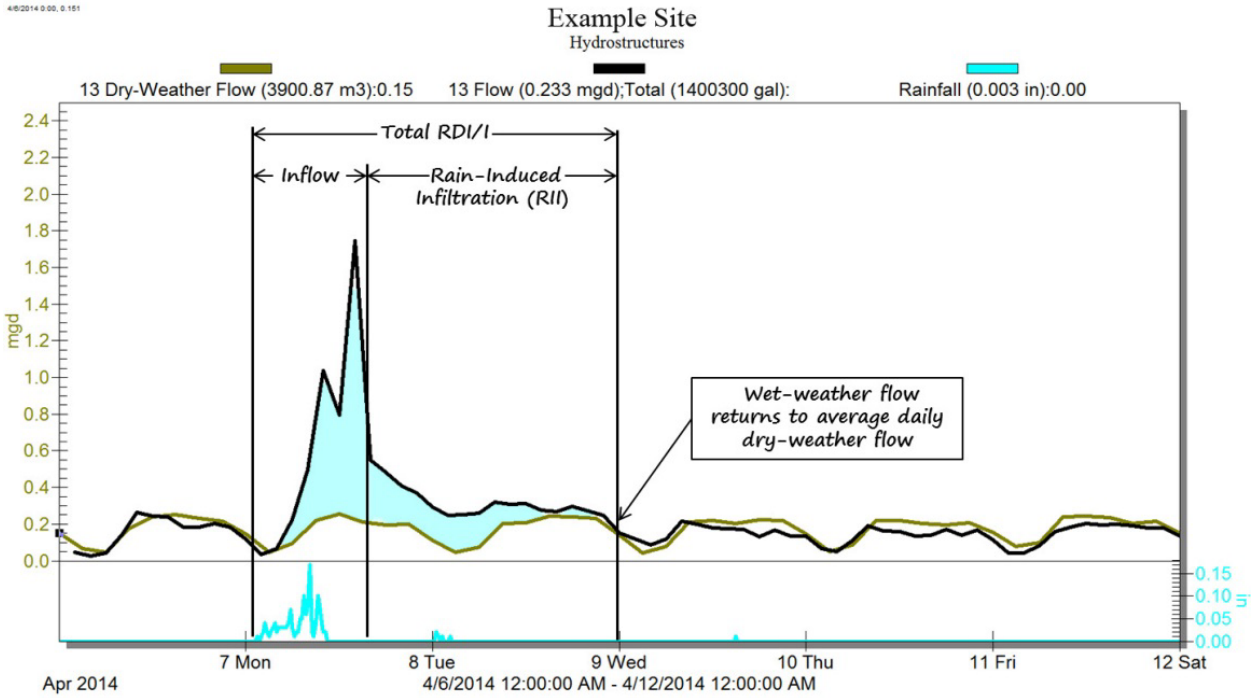
- **Rainfall-Dependent Inflow/Infiltration (RDI/I)** consists of two flow components, Rainfall-Induced Infiltration (RII) and Inflow, which enter the collection system due to rain events. Figure 2, below, illustrates these two components.

    - **Rainfall-Induced Infiltration (RII)** occurs shortly after a significant rainfall event as a result from stormwater entering the collection system through defects as it percolates into the ground. Gravity sewer mains are especially vulnerable to RII because the backfill material and stone bedding act as a "French drain", diverting the rainfall to the sewer main. Because RII occurs

during rain events, it behaves like and is often confused with inflow.

- **Inflow** is stormwater runoff that enters the collection system directly through sources such as roof or yard drains, storm drain/sewer system interconnections, manhole covers, broken or missing cleanout caps, etc. Inflow, which is a function of runoff, typically begins quickly after a rainfall event starts and diminishes quickly when the rain event ends.

Figure 2 – Components of RDI/I



RDII is calculated as the difference between "wet weather flow," which is flow during and immediately following a rain event, and "dry weather flow", which is the average daily flow calculated from a period with no rainfall. When calculating RDII per Basin, any flow measured by upstream meters must be taken into account. I/I previously measured by upstream meters must be subtracted out (ex. (RDII Flow in Basin) = (RDII at Meter I/I) – (∑RDII of Upstream Meters)).

The rain events on March 20th and April 24th are used for this analysis. Analyzing multiple events allows for additional evaluation and interpretation of the data and sometimes shows consistencies between the results. Volume of RDII is dependent on multiple variables not limited to rainfall amount, rainfall intensity, groundwater level, soil saturation, season of the year, etc. Therefore, varying results not uncommon.

Groundwater infiltration estimates are excluded from our I/I analysis. Temporary flow monitoring does not allow for an accurate estimate of GWI. GWI is best estimated from long-term flow monitoring where long dry periods can be confidently distinguished. Even then, GWI rates are an assumption typically based on average flow recorded between the hours of 3:00 and 5:00 AM.

Table 3, below, presents the results of the analysis and comparison of the events. I/I Severity is commonly used to prioritize meter basins from most to least severe. Severity is calculated by dividing the RDII measured within a meter basin by the number of inch-miles of pipe within that basin and presented in units of gpd/in-mile. Inch-miles of pipe are calculated by multiplying the diameter of the pipe by the length of pipe and dividing by 5,280 feet (1 mile). Converting length of pipe and pipe diameter to inch-miles allows sub-basins to be compared with common units of measure. Since the analyzed events were 24 hours (1 day), severity can be written as gpd/in-mile.

TABLE 3: WET WEATHER I/I PER BASIN

			3:00 A.M. March 20th – 3:00 A.M. March 21st, 2018			3:00 A.M. April 24th – 3:00 A.M. April 25th, 2018		
Meter Number	Inch-miles (in-miles)	Average Dry-Weather Flow in Basin (gpd)	RDII in Basin (gallons)	I/I Severity (gpd/in-miles)	Peaking Factor	RDII in Basin (gallons)	I/I Severity (gpd/in-miles)	Peaking Factor
1	162.3	542,000	126,000	774	0.2	74,000	455	0.1
2	141.4	397,000	98,000	695	0.2	60,000	427	0.2
3	110.9	196,000	62,000	563	0.3	117,000	1,058	0.6
4	85.3	273,000	166,000	1,942	0.6	87,000	1,024	0.3
5	73.9	129,000	51,000	690	0.4	50,000	678	0.4
6	69.1	202,000	151,000	2,188	0.8	100,000	1,441	0.5
7	290.6	349,000	278,000	955	0.8	123,000	423	0.4
8	60.7	128,000	299,000	4,919	2.3	162,000	2,663	1.3
9	78.3	399,000	1,000*	11	0.0	83,000	1,061	0.2
10	206.2	319,000	235,000	1,140	0.7	32,000	154	0.1
11	109.0	375,000	97,000	891	0.3	167,000	1,530	0.4
12	160.2	343,000	262,000	1,634	0.8	191,000	1,195	0.6
13	201.4	381,000	368,000	1,829	1.0	364,000	1,807	1.0
14	132.0	241,000	715,000	5,416	3.0	397,000	3,003	1.6
15	82.8	163,000	196,000	1,421	1.2	73,000	529	0.4
16	122.7	218,000	494,000	4,029	2.3	460,000	3,752	2.1
17	148.5	672,000	650,000	4,380	1.0	378,000	2,547	0.6
18	160.9	637,000	138,000	858	0.2	55,000	345	0.1
19	182.4	363,000	212,000	1,162	0.6	185,000	1,015	0.5
20	116.1	141,000	61,000	528	0.4	26,000	224	0.2
21	124.9	280,000	132,000	1,057	0.5	186,000	1,489	0.7
22	149.8	233,000	485,000	3,238	2.1	273,000	1,821	1.2
23	59.6	134,000	267,000	4,489	2.0	145,000	2,429	1.1
24	53.2	68,000	112,000	2,098	1.6	30,000	558	0.4
25	N/A	0	0	0	0	0	0	0
		TOTAL	**5,656,000**		**TOTAL**	**3,818,000**		

* Meter malfunction - no data during rain event, quantity assumed

Note: EPA baseline for severe I/I is 3,000 gpd/in-mile

By summing the RDII for each event, a total of approximately 5,656,000 gallons of I/I entered the system as a result of the March 20th, 2018 event and 3,818,000 gallons of I/I

entered the system as a result of the April 24th, 2018 event. Even though more rain was recorded on April 24th, total RDII was less. This is likely attributed to the fact that soils where dryer and vegetation absorption was higher in late April.

Conditional formatting of the severity ratings in Table 3 reveals consistency regarding the highest scoring meter basins. Red highlighting signifies the highest numbers and green highlighting signifies the lowest numbers. Meter basins **8, 14, 16, 17, 22, and 23** had high severities during both events. Table 4 presents the meter basins from most to least severe according to the average severity from the two events.

Table 4: Basin Rankings

Meter Number	I/I Severity (gpd/in-miles)
14	4,209
16	3,891
8	3,791
17	3,463
23	3,459
22	2,529
13	1,818
6	1,814
4	1,483
12	1,414
24	1,328
21	1,273
11	1,211
19	1,089
15	975
3	811
7	689
5	684
10	647
1	614
18	602
2	561
9	536
20	376
25	0

Our analysis focused on the first 24-hours after the rainfall began. It should be noted that the flow remained elevated for serval days after the rainfall ceased and it took the system a while to recover and return to normal flow. This indicates a significant problem with rain induced infiltration (RII).

IV. RECOMMENDATIONS

The results of the analysis confirm that the City's sewer collection system is susceptible to inflow and rain induced infiltration. The City should begin with sewer investigation and evaluation in meter basins, 14, 16, 8, 17, and 23 in order to identify and reduce sources of inflow and RII. Hydrostructures presents the following recommendations tailored to address the findings of this analysis.

- **Smoke Testing** - Smoke testing should be performed on meter basins 14, 16, 8, 17, and 23 in order to identify sources of inflow such as direct / indirect storm drain connections, roof drain connections, broken cleanouts in low lying area, etc. Smoke testing is an efficient means of identifying large I/I defects within the system. The largest reduction of I/I per repair cost will likely be attributed to these repairs.

TABLE 5: SMOKE TESTING

Meter Basin	Basin Footage (LF)	Unit Cost (Price / LF)	Cost per Basin
14	83,800	$0.35	$29,330
16	69,400	$0.35	$24,290
8	32,200	$0.35	$11,270
17	98,300	$0.35	$34,405
23	30,000	$0.35	$10,500
		TOTAL	**$109,795**

- **Manhole Inspection** – Hydrostructures recommends that manhole inspections be performed in priority basins 14, 16, 8, 17, and 23. Manhole inspections serve a dual purpose in a sewer system evaluation study. First, they allow for further verification of the available mapping data by identifying manholes that cannot be found, are buried, or are not shown on the maps. Second, the field inspections allow us to evaluate the overall condition of the system, identify specific defects, and determine manhole rehabilitation methods and costs. Manhole rehabilitation historically returns a substantial decrease in I/I per dollar invested.

  We recommend that the City couple zoom camera pipe inspection with the manhole inspections. Zoom camera inspections allow us to clearly determine the pipe material, flow level, and reveal any obvious defects or heavy debris near the mouth of the pipe. The inspection distances are limited by obstructions, poor pipe alignment, diameter, and other variables. Zoom camera inspections are definitely not as comprehensive as traditional CCTV video inspection but are far less expensive when covering a large area. Priority pipes identified by zoom camera inspection can be earmarked for traditional main line CCTV inspection.

TABLE 6: MANHOLE INSPECTION

Meter Basin	Number of Manholes in Basin	Unit Cost for Inspection with Zoom Camera (Price / EA)	Cost per Basin
14	292	$190.00	$55,480
16	329	$190.00	$62,510
8	144	$190.00	$27,360
17	355	$190.00	$67,450
23	144	$190.00	$27,360
		TOTAL	**$240,160**

We encourage the City of Wilson to move forward with the recommendations presented in this study and begin reducing I/I and treatment costs. The sewer investigation exercises recommended above will identify specific defects contributing I/I into the system. Repair recommendations can be made for known defects. These study efforts may also identify the need for video inspection of main lines and dye testing storm / sewer interconnections identified from smoke testing before more comprehensive main line rehabilitation recommendations can be made.

Hydrostructures, P.A. has extensive experience with sewer evaluation, assessment, investigation, and rehabilitation engineering and we would welcome the opportunity to assist the City in their continuing efforts.

Attachment 2

2021 I/I Reduction Plan

2021 City of Wilson

I/I Reduction Plan

Background

The City of Wilson is committed to minimizing Inflow and Infiltration (I/I) entering the sewer collection system. The original basis for the I/I reduction plan was a Flow Monitoring and I/I Analysis performed by Hydrostructures dated April 5, 2019. The 2019 Hydrostructures Study indicated several sub-basins where I/I flow was considered excessive.

Figure 1 below shows the summary results of the 2019 Hydrostructures I/I Study. The blue dashed line represents what may be considered excessive I/I. Six sub-basins were initially identified to have I/I flows greater than 3000 gallons per day per inch diameter-mile (gpd/in-mile). The units gpd/in-mile allow comparison year-over-year as the system changes, sub-basins of different sizes, and different collection systems. Attachment A provides figures showing each collection system and tables detailing asset number and type for each sub-basin identified as having excess I/I.

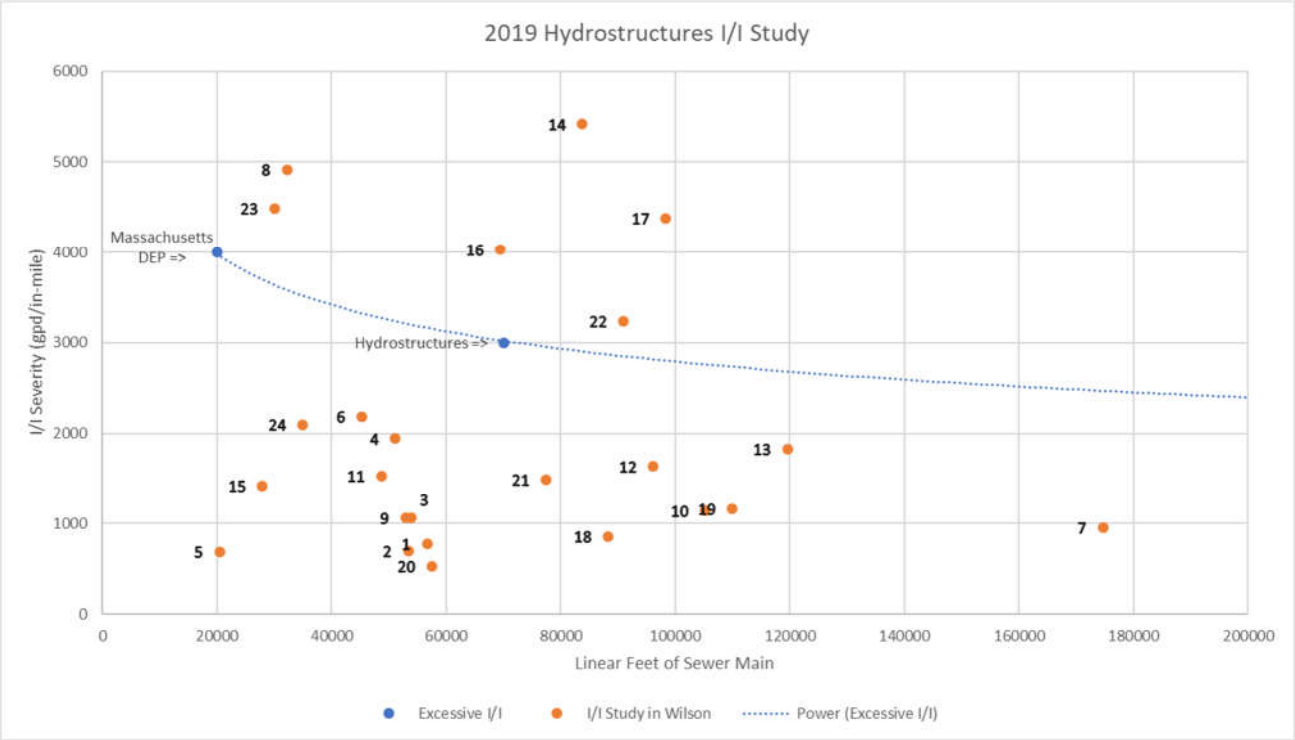


Figure 1: Summary of 2019 Hydrostructures I/I Study

System Wide I/I Analysis

A system wide I/I Analysis will be performed each fiscal year. Unless otherwise indicated, the Environmental Protection Agency's (EPA) *Guide for Estimating Infiltration and Inflow* dated June 2014 shall be used as the primary guidance document in estimating I/I flows for the collection system. The results shall be incorporated into the I/I Reduction Plan document to track progress towards the stated goal of reducing I/I. Figure 2 indicates the baseflow, inflow, and infiltration for each fiscal year studied in million gallons per day (MGD). Figure 3 indicates the inflow and infiltration over the same fiscal years in units of gallons per day per inch diameter-mile (gpd/in-mile). *Wastewater Engineering* by Metcalf & Eddy defines system-wide excessive inflow and infiltration to be flows greater than 1,500 gpd/in-mile. In 2019, Wilson's collection system I/I averaged 2,286 gpd/in-mile.

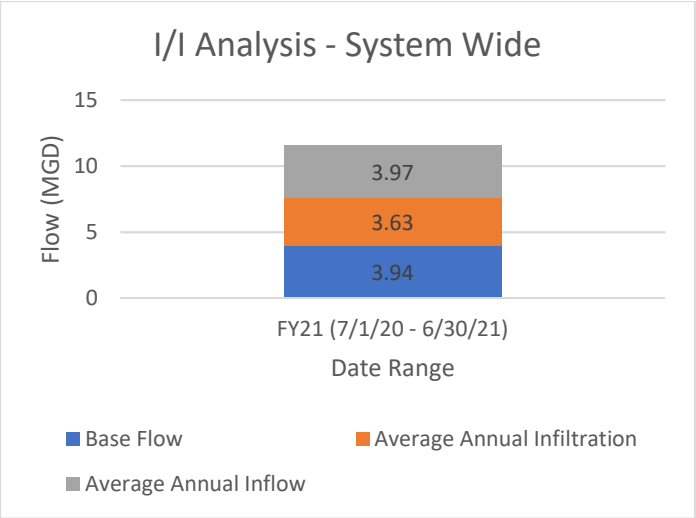


Figure 2: I/I Analysis by Fiscal Year (MGD)

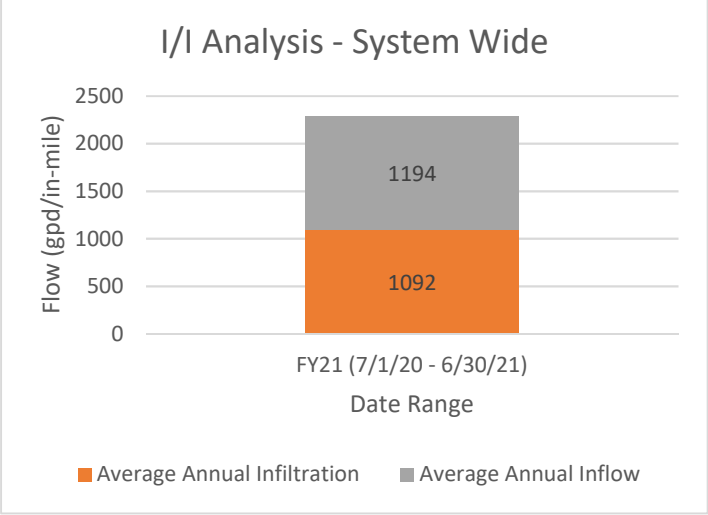


Figure 3: I/I Analysis by Fiscal Year (gpd/in-mile)

Five-Year Plan

Regardless of the year, outfall inspections will identify potentially significant sources of I/I, including missing manhole lids, damaged manholes, partially collapses lines, etc. These will be fixed as expeditiously as possible by maintenance crews to limit I/I. Additionally, multiple sewer collection system expansion projects may occur. While the primary purpose of these expansion projects is to allow additional wastewater flow into the system and encourage development, an additional benefit is the replacement of aging infrastructure with new materials further reducing I/I. These efforts will be tracked and noted on future sub-basin flow studies.

FY22

Perform traditional Sanitary Sewer Evaluation Survey (SSES) on sub-basin 14. Traditional SSES services includes manhole inspections, CCTV inspections, and smoke testing.

FY23

Perform traditional SSES on sub-basin eight. Perform enhanced SSES on sub-basin 23 as a pilot study. Enhanced SSES includes manhole inspections, micro-basin (<1000 ft) flow monitoring, and acoustic methods to identify sources of I/I.

If additional funding is available, perform traditional SSES on sub-basin 17 and enhanced SSES on sub-basin 16. A major benefit of performing all of the SSES in an expedited manner will allow the largest sources of I/I to be quickly eliminated. It will also allow greater planning flexible for construction projects over the next three years.

Perform work identified in FY22 to reduce I/I within sub-basin 14.

FY24

Perform traditional SSES on sub-basin 17.

Perform work identified in FY23 to reduce I/I within sub-basins eight and 23.

FY25

Perform enhanced SSES on sub-basin 16.

Perform construction work identified in FY24 to reduce I/I within sub-basin 17.

FY26

Perform construction work identified in FY25 to reduce I/I within sub-basin 16.

Perform a new sub-basin Flow Monitoring and I/I Analysis at the same locations as the April 5, 2019 study and evaluate program. Additional locations may be added to further divide the sub-basins if warranted. Additionally, compare traditional SSES with the enhanced method. Revise I/I Reduction Plan as appropriate.

Estimated Costs & Benefits

SSES, Repair/Rehabilitation/Flow Study Expected Costs					
	FY22	FY23	FY24	FY25	FY26
SSES Cost	$ 91,317	$ 102,683	$ 107,200	$ 156,215	$ -
Repair/Rehabilitation Cost	$ -	$ 837,770	$ 562,328	$ 1,090,690	$ 711,647
Sub-Basin Flow Study	$ -	$ -	$ -	$ -	$ 100,000
Total	$ 91,317	$ 940,453	$ 669,528	$ 1,246,905	$ 811,647

Flow Reduction and Savings on Treatment Costs due to I/I Reduction Activities					
	FY22	FY23	FY24	FY25	FY26
I/I Flow Reduction (MGD)	0	0.45	0.33	0.35	0.25
Cumulative I/I Flow Reduction (MGD)	0	0.45	0.78	1.13	1.38
Annual Savings from Reduced I/I	$ -	$ 272,385	$ 196,643	$ 209,185	$ 150,389
Cumulative Annual Savings	$ -	$ 272,385	$ 469,028	$ 678,213	$ 828,602

The estimated payback period for performing the SSES and the Repair/Rehabilitation process proposed in the Five-Year Plan is four years. The total cost of the program is approximately $3,800,000.

Cost Assumptions

Based upon FY22 budget documents, the cost to treat 1 MGD is approximately $1,655.

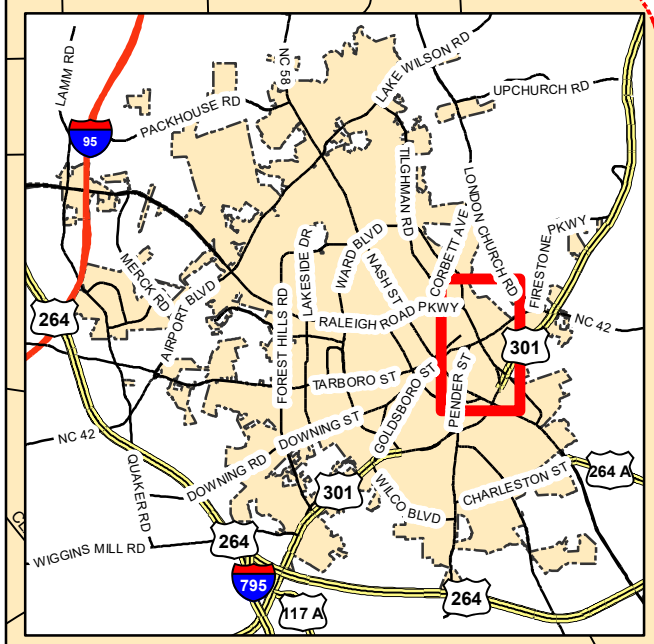
Based upon pricing received through an RFP in February 2022, the cost to perform traditional SSES services is approximately $1.09/LF. This pricing includes Level 1 NASSCO manhole inspections and smoke testing. Additionally, it includes a price for 10% of the system to have CCTV, sewer main cleaning, and Level 2 NASSCO manhole inspections.

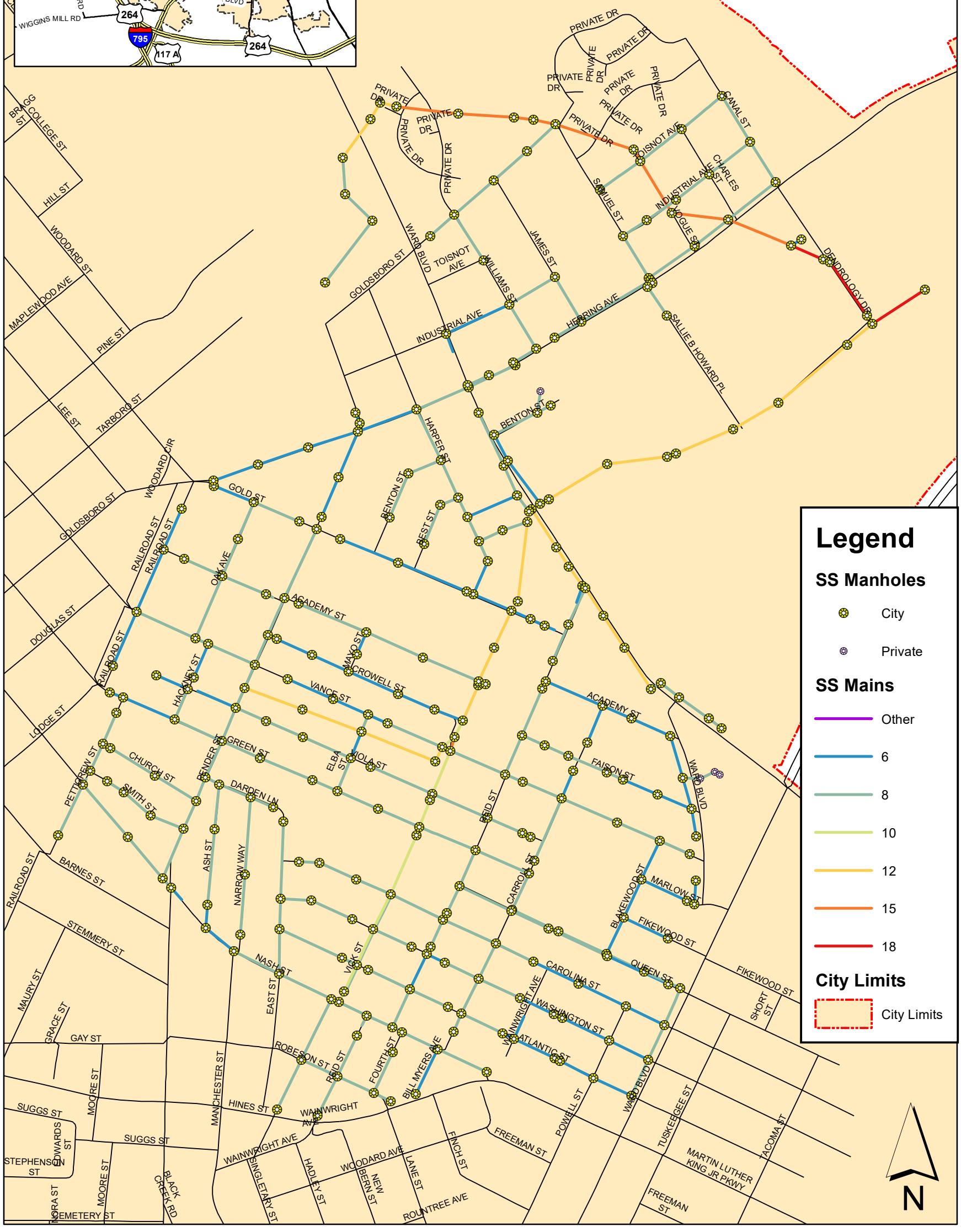
Based upon a vendor quote, the enhanced SSES services would cost approximately $2.25/LF. This pricing includes enhanced Level 1 NASSCO manhole inspections, micro-basin (<1000 ft) flow monitoring, and acoustic methods to identify sources of I/I. Construction costs from sub-basins analyzed with the enhanced SSES methods are estimated to be 20% less than the traditional methods. This is due to the ability of the enhanced method to identify the largest sources of I/I and a more targeted approach for eliminating them.

I/I rehab construction cost estimate is based upon a cost of $10/LF of the entire sub-basin. This is a composite cost to rehab 20% of all pipe and manholes within a sub-basin. It is estimated this will fix 80% of the I/I issues identified through the SSES process. This assumption will be revised based upon work done each fiscal year. Additionally, it is assumed I/I will be reduced to 2000 gpd/in-mile for the entire sub-basin.

Proposed Sewer I&I Work Area

Basin 14





Legend

SS Manholes

- City
- Private

SS Mains

- Other
- 6
- 8
- 10
- 12
- 15
- 18

City Limits

- City Limits

Proposed Sewer I&I Work Area - FM 8

ORTHO DR
NC 42
TARBORO ST
MONTGOMERY DR
WELLINGTON DR
WARD BLVD
SCYTHIA ST
BOSWELL ST
CHURCHILL AVE
PIKE ST
DELANO AVE
ARRINGTON AVE
WOOTEN BLVD
HUNTINGTON ST
CAMDEN ST
GLENDALE DR
HORTON BLVD
SAINT CHRISTOPHER CIR
BAYLEAF CIR
CHIPPENDALE PL
SHREVE ST
WOMBLE ST
CRESTVIEW AVE
POE ST
DALE ST
RUANN DR
WALTON ST
WINOCA RD
GREGORY LN
SAINT JOHN DR
ALBANY LN
WILLOWBROOK LN
MCNAIR ST
TRULL ST
DOWNING ST
MITCHELL PL
HUNTER ST
SILVER LEAF RD
CAMERON RD
TUNSTALL PL
REDWOOD DR
GARDENWOOD DR
COCKRAN ST
SMALLWOOD ST
MARY LN
KOVAL CT
BAREFOOT PARK LN
CRYSTAL DR
SQUIRE CT
WINDING CREEK DR
MARTIN ILLIS DR
FOREST HILLS RD
CHICKEN DR
DOWNING RD
METEOR DR
FURMAN CT

Legend

PS Pump Station

OWNER

City

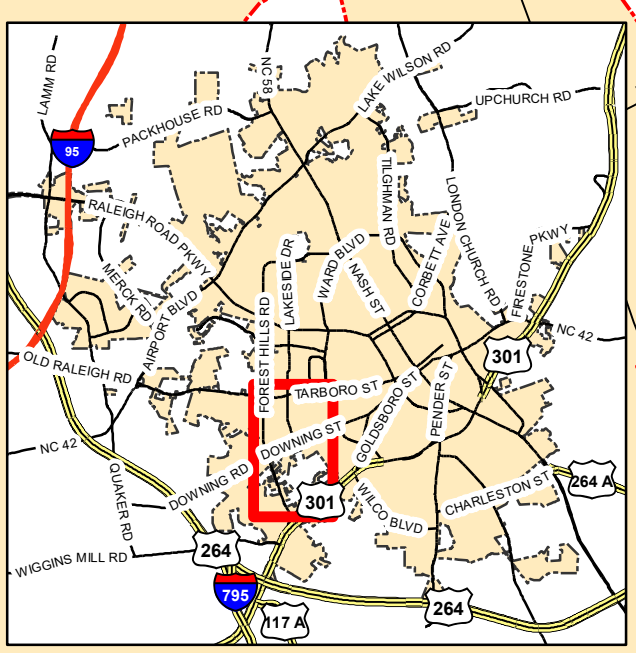
Private

DIAMETER

6
8
10
12
18
30

City Limits

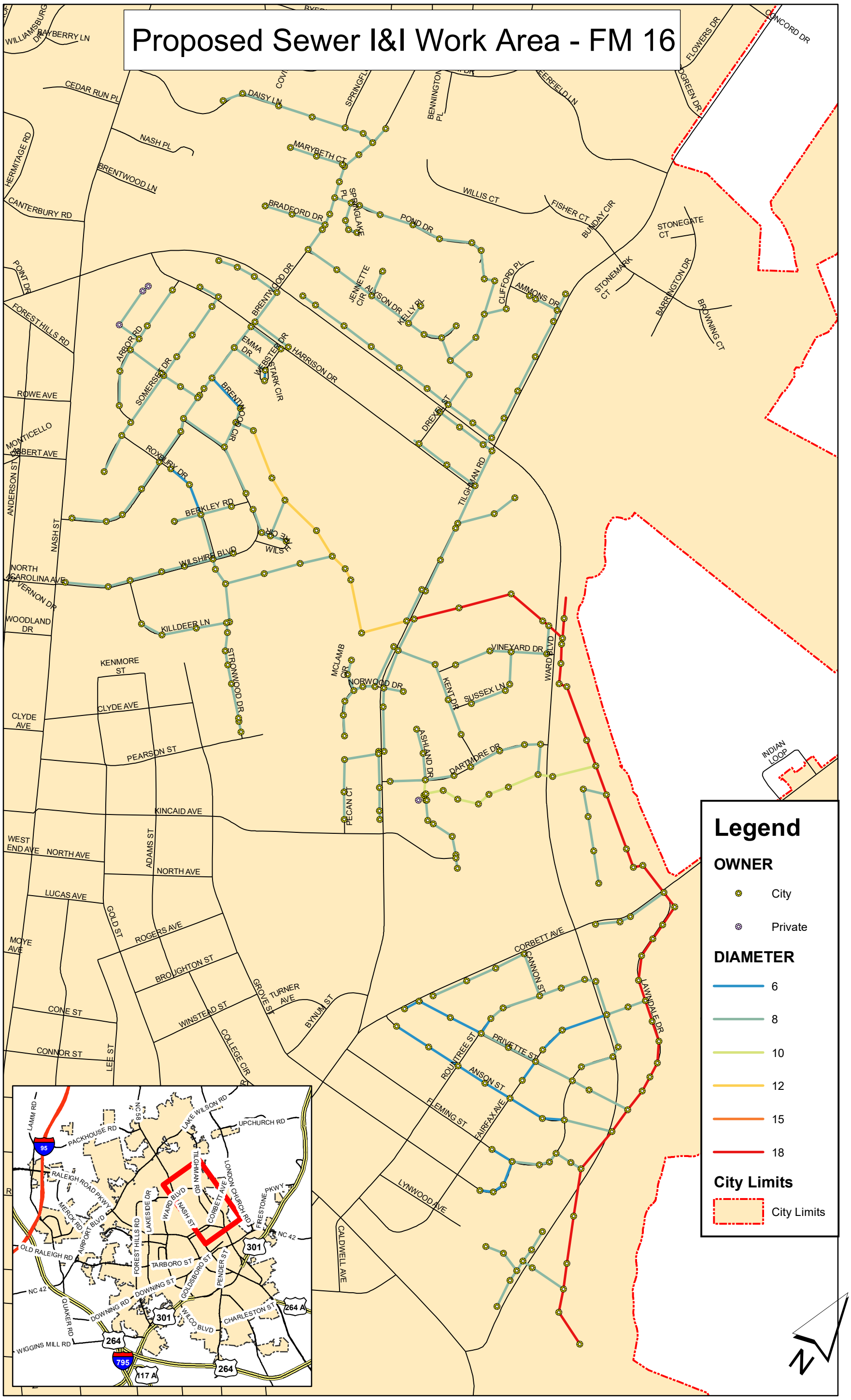
City Limits



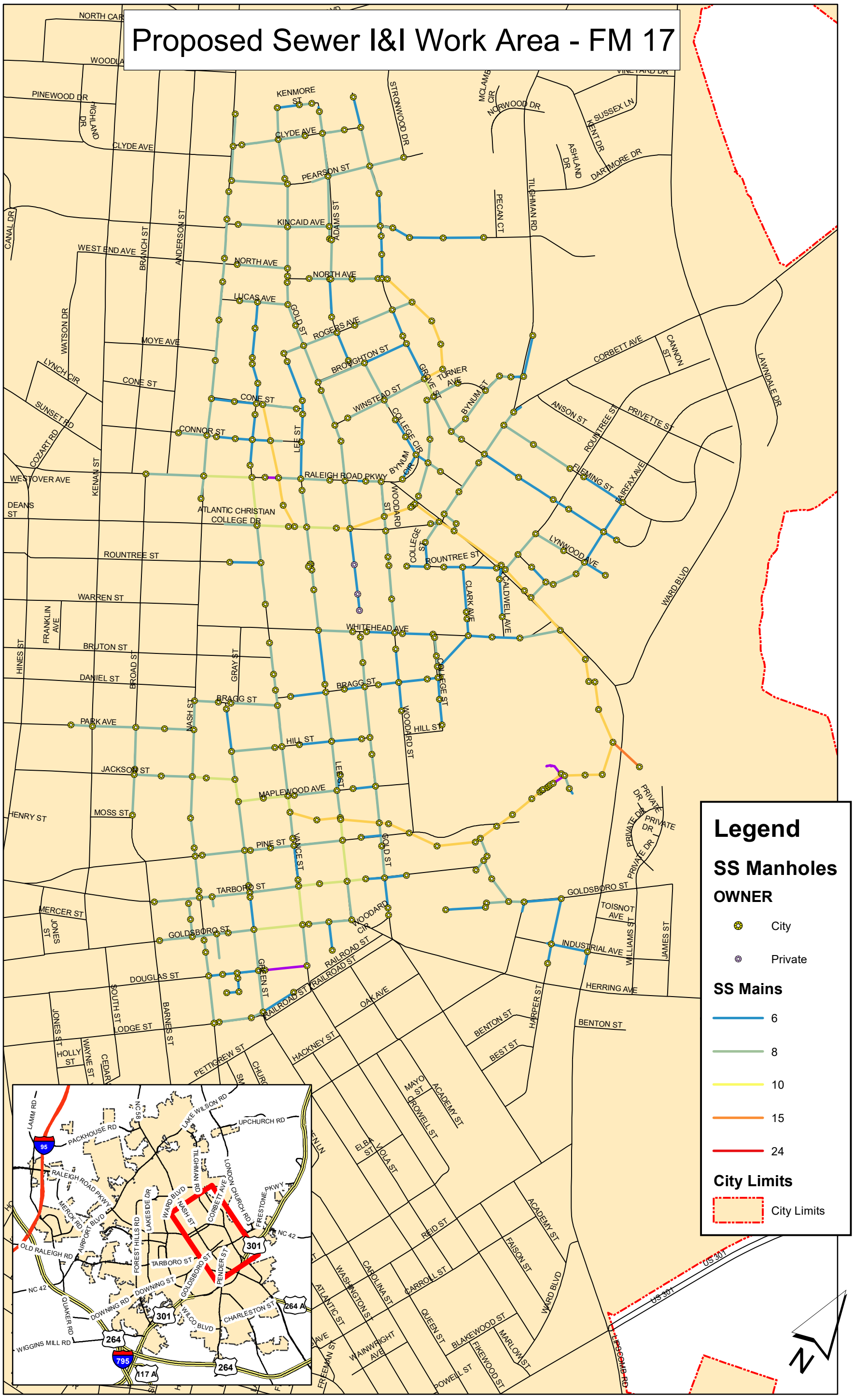
FOREST HILLS LOOP
US 301
HORACE WATSON RD
YUKON RD
CRABTREE ST

N

Proposed Sewer I&I Work Area - FM 16



Proposed Sewer I&I Work Area - FM 17



Legend

SS Manholes

OWNER

- City
- Private

SS Mains

- 6
- 8
- 10
- 15
- 24

City Limits

- City Limits

Proposed Sewer I&I Work Area - FM 23

BUCKINGHAM RD
BUCKINGHAM CIR
LITCHFORD LN
RUNNYMEADE RD
BAYBERRY LN
FOXCROFT RD
SULGRAVE DR
QUAIL RD
GREENWICH LN
CEDAR RUN PL
NASH PL
BRENTWOOD LN
MARYBETH CT
BRADFORD DR
HARRISON DR
CANTERBURY RD
HERMITAGE RD
WENTWORTH AVE
LINDEN LN
CANAL DR
POINT DR
FOREST HILLS RD
SIERRA DR
ARBOR RD
SOMERSET DR
ROXBURY DR
ROLLINGWOOD DR
GARRETT DR
DRYDEN PL
WEXFORD DR
DARIEN PL
WESTBROOK DR
ELLINGTON DR
CHAMBERLAIN DR
WILDWOOD CT
CARDINAL DR
WARD BLVD
BRANCH ST
ROWE AVE
ANDERSON ST
BRENTWOOD DR
CAVALIER CIR
ALBERT AVE
KENAN ST
MONTICELLO DR
MAYFLOWER
LAFAYETTE DR
ARLINGTON AVE
MT VERNON DR
MT VERNON DR
NORTH CAROLINA AVE
BROOKSIDE DR
MERE DR
OXFORD CIR
FERNDALE CT
TIMBERLAKE DR
BROOKSIDE DR
WOODLAND DR
CANAL DR
PINEWOOD DR
AZALEA LN
SALEM ST
RIPLEY RD
KINCAID AVE

Legend

SS Manholes

- City
- Private

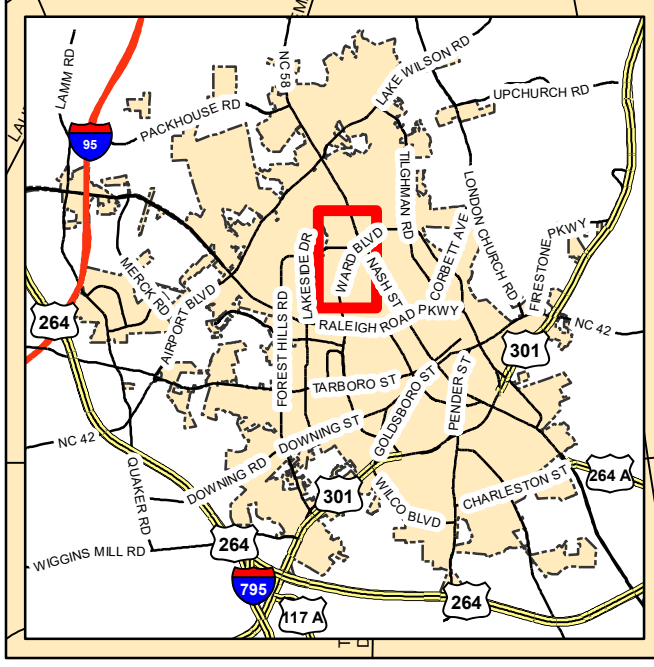
SS Mains

- 6
- 8
- 10
- 15
- 24

City Limits

- City Limits

N



Attachment 3

Reported Sanitary Sewer Overflows 2021 and 2022

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202100713

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 1300 Block of Canal St

Manhole #: 706 & 707

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 02/19/2021 (mm-dd-yyyy) Time: 8:00 am (hh:mm AM/PM) Incident End Dt: 02/19/2021 (mm-dd-yyyy) Time: 03:30 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 5,500 gallons Estimated Duration (Round to nearest hour): 7:30 hours

Describe how the volume was determined: 20gal min/30min, 10gal min/120min, 5gal min/ 300min after sand bags

Weather conditions during the SSO event: rain heavy at times

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 5500

Surface water name: Hominy Swamp

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed?

SPECIFIC cause(s) of the SSO:

☑ Severe Natural Conc

24 hour verbal notification (name of person contacted): Erin M Deck

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 02/19/2021 Time (hh:mm AM/PM): 01:31:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Severe Natural Condition

Describe the "severe natural condition" in detail?

rain, heavy at times. 4+ inches of rain for the week of 2/15/21

How much advance warning did you have and what actions were taken in preparatio for the event?

NA

Comments:

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Todd Young

Cert#

992492

Date visited:

02/19/2021

Time visited:

0800

How was the SSO remediated (i.e. Stopped and cleaned up)?

sand bags were placed on manholes to help slow down SSO. Cleaned with flusher/vac truck

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Todd Michael Young Date: 02/22/21 06:45 am

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

State of North Carolina
Department of Environment and Natural Resources
Division of Water Resources

Collection System Sanitary Sewer Overflow Reporting Form
Form CS-SSO

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202101741

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 35.718503, -77.973686

Manhole #:

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 08/11/2021 (mm-dd-yyyy) Time: 10:30 am (hh:mm AM/PM) Incident End Dt: 08/11/2021 (mm-dd-yyyy) Time: 01:30 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 13,500 gallons Estimated Duration (Round to nearest hour): 3:0 hours

Describe how the volume was determined: 75gal/min for 180min

Weather conditions during the SSO event: sunny

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 13500

Surface water name: Bloomery Swamp

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Other (Please explai ☑ Pipe Failure (Break)

24 hour verbal notification (name of person contacted): Chris Smith

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 08/12/2021 Time (hh:mm AM/PM): 08:30:00 am

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

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COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Other (Please explain in Part II)

Describe:

concrete pipe collapsed from the top causing a blockage in the pipe

Were adequate equipment and resources available to fix the problem? ☑ Yes ☐ No ☐ NA ☐ NE

If Yes, explain:

set up bypass pump and put in a section of PVC pipe

If the problem could not be immediately repaired, what actions were taken to lessen the impact of the SSO?

Comments:

Pipe Failure (Break)

Pipe size (inches)

15

What is the pipe material?

concrete

What is the approximate age of line/pipe? (years old)

44

Is this a gravity line? ☑ Yes ☐ No ☐ NA ☐ NE

Is this a force main line? ☐ Yes ☑ No ☐ NA ☐ NE

Is the line a "High Priority" line? ☑ Yes ☐ No ☐ NA ☐ NE

Last inspection date and findings

8/6/2021 no problems

If a force main then,

Was the break on the force main veritical? ☐ Yes ☐ No ☑ NA ☐ NE

Was the break on the force main horizantal? ☐ Yes ☐ No ☑ NA ☐ NE

Was the leak at the joint due to gasket failure? ☐ Yes ☐ No ☑ NA ☐ NE

Was the leak at the joint due to split bell? ☐ Yes ☐ No ☑ NA ☐ NE

When was the last inspection or test of the nearest air-release valve to determine of operable?

When was the last maintenace of the air release performed?

If gravity sewer then,

Does the line receive flow from a force main immediately upstream of the failed secti ☐ Yes ☑ No ☐ NA ☐ NE of pipe?

If yes, what measures are taken to control the hydrogen sulfide production?

When was the line last inspected or videoed?

If line collapsed, what is the condition of the line up and down stream of the failure?

pipe is thin on the top

What type of repair was made?

installed 1.5 sticks of 15" PVC

Is the repair temporary or permanent?

temporary

If temporary, when is the permanent repair planned?

plan on replacing from manhole to manhole on 8/16/2021 depending on the weather

Have there been other failures of this line in the past five years? ☑ Yes ☐ No ☐ NA ☐ NE

If so, then describe

found sinkholes, we dug them up and repaired.

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Todd Young

Cert#

992492

Date visited:

8/13/2021

Time visited:

1:30 pm

How was the SSO remediated (i.e. Stopped and cleaned up)?

repaired damaged section of pipe. used flusher truck to vac area and put out lime

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: _____ Date: _____

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202101927

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 403 Brentwood Drive 35.751646 -77.926160

Manhole #: 2501

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 09/16/2021 (mm-dd-yyyy) Time: 4:44 pm (hh:mm AM/PM) Incident End Dt: 09/16/2021 (mm-dd-yyyy) Time: 06:15 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 180 gallons Estimated Duration (Round to nearest hour): 1:31 hours

Describe how the volume was determined: 40GPH/3 HOLES @ 1/2"DIA

Weather conditions during the SSO event: OVERCAST

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 60

Surface water name: Toisnot Swamp

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Grease ☑ Debris in line

24 hour verbal notification (name of person contacted): Joshua S Brigham

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 09/17/2021 Time (hh:mm AM/PM): 10:20:00 am

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Grease

When was the last time this specific line (or wet well) was cleaned?

unknown

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☑ Yes ☐ No ☐ NA ☐ NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☑ Yes ☐ No ☐ NA ☐ NE

Explain.

Fog inspections are done on a monthly schedule

Have there been other SSOs or blockages in this area that were also caused by grease? ☐ Yes ☑ No ☐ NA ☐ NE

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☑ Yes ☐ No ☐ NA ☐ NE

Explain.

Have educational materials about grease been distributed in the past? ☑ Yes ☐ No ☐ NA ☐ NE

When?

bi-annually

and to whom?

residential customers and restaurants

Explain?

Flyers are sent out twice a year to all residential customers And restaurants are handed information when fog permits are issued

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation?

Were the floats clean? ☐ Yes ☐ No ☐ NA ☐ NE

Comments:

Debris in line

What type of debris has been found in the line?

rags, wet wipes

Suspected cause or source of debris.

customers

Are manholes in the area secure and intact? ☑ Yes ☐ No ☐ NA ☐ NE

When was the area last checked/cleaned?

unknown

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☑ Yes ☐ No ☐ NA ☐ NE

Explain:

area is on a routine maintenance schedule

Are appropriate educational materials being developed and distributed to prevent futu similar occurrences? ☑ Yes ☐ No ☐ NA ☐ NE

Comments:

System Visitation

ORC ☐ Yes

Backup ☑ Yes

Name:

Fabian Padilla

Cert#

1005509

Date visited:

09172021

Time visited:

9:30 am

How was the SSO remediated (i.e. Stopped and cleaned up)?

Crew used flusher truck to remove grease clog no solids were present

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Fabian Fajardo Padilla Date: 09/20/21 01:07 pm

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

State of North Carolina
Department of Environment and Natural Resources
Division of Water Resources

Collection System Sanitary Sewer Overflow Reporting Form
Form CS-SSO

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202102039

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 1303 Crawford Street, Wilson NC 27893

Manhole #:

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 10/12/2021 (mm-dd-yyyy) Time: 12:00 pm (hh:mm AM/PM) Incident End Dt: 10/12/2021 (mm-dd-yyyy) Time: 12:15 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 20 gallons Estimated Duration (Round to nearest hour): 0:15 hours

Describe how the volume was determined: Estimated

Weather conditions during the SSO event: overcast

Did SSO reach surface waters? ☐ Yes ☑ No ☐ Unknown Volume reaching surface waters (gals): 0

Surface water name:

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Grease ☑ Debris in line

24 hour verbal notification (name of person contacted): Alys K Hannum

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 10/12/2021 Time (hh:mm AM/PM): 12:21:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Grease

When was the last time this specific line (or wet well) was cleaned?

10/12/2021

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☑ Yes ☐ No ☐ NA ☐ NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☑ Yes ☐ No ☐ NA ☐ NE

Explain.

The city performs monthly inspection of grease traps

Have there been other SSOs or blockages in this area that were also caused by grease? ☐ Yes ☑ No ☐ NA ☐ NE

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

Problem was causes by grease and debris from customer side of sewer service

Have educational materials about grease been distributed in the past? ☑ Yes ☐ No ☐ NA ☐ NE

When?

bi annually

and to whom?

residents and buisnesess

Explain?

residents and businesses receive information on the city's FOG program bi annually

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation?

Were the floats clean? ☐ Yes ☐ No ☑ NA ☐ NE

Comments:

Debris in line

What type of debris has been found in the line?

grease and feminine products

Suspected cause or source of debris.

homeowner

Are manholes in the area secure and intact? ☑ Yes ☐ No ☐ NA ☐ NE

When was the area last checked/cleaned?

10/12/2021

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☐ Yes ☑ No ☐ NA ☐ NE

Explain:

Are appropriate educational materials being developed and distributed to prevent futu similar occurrences? ☑ Yes ☐ No ☐ NA ☐ NE

Comments:

materials are distributed bi annually

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood bailey

Cert#

1010545

Date visited:

10/12/2021

Time visited:

12:15 pm

How was the SSO remediated (i.e. Stopped and cleaned up)?

Debris was cleaned from yard. lime and topsoil was applied and storm drain was flushed and cleaned with vactor truck

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Linwood Aaron Bailey Date: 10/13/21 01:10 pm

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202102088

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 1303 Crawford St.

Manhole #:

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 10/27/2021 (mm-dd-yyyy) Time: 8:30 am (hh:mm AM/PM) Incident End Dt: 10/27/2021 (mm-dd-yyyy) Time: 08:50 am (hh:mm AM/PM)

Estimated Volume of the SSO: 100 gallons Estimated Duration (Round to nearest hour): 0:20 hours

Describe how the volume was determined: 5 gal. min. for 20 min

Weather conditions during the SSO event: clear and sunny

Did SSO reach surface waters? ☐ Yes ☑ No ☐ Unknown Volume reaching surface waters (gals): 0

Surface water name:

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Grease

24 hour verbal notification (name of person contacted): Chris Smith

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 10/27/2021 Time (hh:mm AM/PM): 10:13:00 am

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Grease

When was the last time this specific line (or wet well) was cleaned?

10/12/2021

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☑ Yes ☐ No ☐ NA ☐ NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☑ Yes ☐ No ☐ NA ☐ NE

Explain.

Businesses with grease traps are inspected on a monthly basis

Have there been other SSOs or blockages in this area that were also caused by grease? ☑ Yes ☐ No ☐ NA ☐ NE

When?

10/12/2021

If yes, describe them:

Main was clogged with grease causing sewer tap to overflow

Have cleaning and inspections ever been increased at this location? ☑ Yes ☐ No ☐ NA ☐ NE

Explain.

Since 10/21/2021 the city has increased maintenance in the area

Have educational materials about grease been distributed in the past? ☑ Yes ☐ No ☐ NA ☐ NE

When?

bi annually

and to whom?

residents and buisnesess

Explain?

The City has FOG program that distributes educational information bi annually

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation?

Were the floats clean? ☐ Yes ☐ No ☐ NA ☐ NE

Comments:

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood Bailey

Cert#

1010545

Date visited:

10/27/2021

Time visited:

8:40 am

How was the SSO remediated (i.e. Stopped and cleaned up)?

SSO was contained in area. Cleanup was done by vactor/flusher truck and sewer main was flushed. Sewer service was a replaced.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: _____ Date: _____

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

State of North Carolina
Department of Environment and Natural Resources
Division of Water Resources

Collection System Sanitary Sewer Overflow Reporting Form
Form CS-SSO

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202102156

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 1716 Meadowbrook Lane

Manhole #: 763

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 11/14/2021 (mm-dd-yyyy) Time: 2:00 pm (hh:mm AM/PM) Incident End Dt: 11/14/2021 (mm-dd-yyyy) Time: 03:00 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 600 gallons Estimated Duration (Round to nearest hour): 1:0 hours

Describe how the volume was determined: 10 gal. min.fo 60 min.

Weather conditions during the SSO event: clear and sunny

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 600

Surface water name: Hominy Swamp

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Grease ☑ Debris in line

24 hour verbal notification (name of person contacted): Cheng Zhang

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 11/15/2021 Time (hh:mm AM/PM): 09:10:00 am

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Grease

When was the last time this specific line (or wet well) was cleaned?

11/15/2021

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☑ Yes ☐ No ☐ NA ☐ NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

Have there been other SSOs or blockages in this area that were also caused by grease? ☐ Yes ☑ No ☐ NA ☐ NE

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

Have educational materials about grease been distributed in the past? ☑ Yes ☐ No ☐ NA ☐ NE

When?

bi annually

and to whom?

residents and buisnesess

Explain?

All residents and businesses receive FOG info bi annually

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation?

Were the floats clean? ☐ Yes ☐ No ☑ NA ☐ NE

Comments:

Debris in line

What type of debris has been found in the line?

Grease, rags, wipes

Suspected cause or source of debris.

Are manholes in the area secure and intact? ☑ Yes ☐ No ☐ NA ☐ NE

When was the area last checked/cleaned?

11/15/2021

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☐ Yes ☑ No ☐ NA ☐ NE

Explain:

Are appropriate educational materials being developed and distributed to prevent futu similar occurrences? ☑ Yes ☐ No ☐ NA ☐ NE

Comments:

Educational materials will be distributed in area within the week.

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood bailey

Cert#

1010545

Date visited:

11/14/2021

Time visited:

02.00 pm

How was the SSO remediated (i.e. Stopped and cleaned up)?

Sewer main was flushed and blockage removed. Storm drains were pumped and flushed. Sewer main was thouroughly claened the following day.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: _____ Date: _____

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

State of North Carolina
Department of Environment and Natural Resources
Division of Water Resources

Collection System Sanitary Sewer Overflow Reporting Form
Form CS-SSO

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202102310

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 1901C Lipscomb Road

Manhole #:

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 12/28/2021 (mm-dd-yyyy) Time: 7:50 am (hh:mm AM/PM) Incident End Dt: 12/28/2021 (mm-dd-yyyy) Time: 08:20 am (hh:mm AM/PM)

Estimated Volume of the SSO: 150 gallons Estimated Duration (Round to nearest hour): 0:30 hours

Describe how the volume was determined: 5 gal min./30 min

Weather conditions during the SSO event: sunny

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 150

Surface water name: Toisnot Swamp (Toisnot Reservoir)

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Grease ☑ Debris in line ☑ Pipe Failure (Break)

24 hour verbal notification (name of person contacted): Mitchell S Hayes

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 12/28/2021 Time (hh:mm AM/PM): 08:50:00 am

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

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ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Grease

When was the last time this specific line (or wet well) was cleaned?

12/28/2021

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☑ Yes ☐ No ☐ NA ☐ NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☑ Yes ☐ No ☐ NA ☐ NE

Explain.

Grease traps citywide are inspected monthly

Have there been other SSOs or blockages in this area that were also caused by grease? ☐ Yes ☑ No ☐ NA ☐ NE

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

Have educational materials about grease been distributed in the past? ☑ Yes ☐ No ☐ NA ☐ NE

When?

bi annually

and to whom?

residents and businesses

Explain?

Educational materials are distributed to residents and business related to the City's FOG program bi annually

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation?

Were the floats clean? ☐ Yes ☐ No ☑ NA ☐ NE

Comments:

Debris in line

What type of debris has been found in the line?

debris and grease

Suspected cause or source of debris.

residential and pipe failure

Are manholes in the area secure and intact? ☑ Yes ☐ No ☐ NA ☐ NE

When was the area last checked/cleaned?

12/28/2021

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☐ Yes ☑ No ☐ NA ☐ NE

Explain:

Are appropriate educational materials being developed and distributed to prevent futu similar occurrences? ☑ Yes ☐ No ☐ NA ☐ NE

Comments:

Pipe Failure (Break)

Pipe size (inches)

6

What is the pipe material?

VC

What is the approximate age of line/pipe? (years old)

60

Is this a gravity line? ☑ Yes ☐ No ☐ NA ☐ NE

Is this a force main line? ☐ Yes ☑ No ☐ NA ☐ NE

Is the line a "High Priority" line? ☐ Yes ☑ No ☐ NA ☐ NE

Last inspection date and findings

12/28/2021 Blockage was discovered and upon further investigation a break in the line was discovered

If a force main then,

Was the break on the force main veritical? ☐ Yes ☐ No ☑ NA ☐ NE

Was the break on the force main horizantal? ☐ Yes ☐ No ☑ NA ☐ NE

Was the leak at the joint due to gasket failure? ☐ Yes ☐ No ☑ NA ☐ NE

Was the leak at the joint due to split bell? ☐ Yes ☐ No ☑ NA ☐ NE

When was the last inspection or test of the nearest air-release valve to determine of operable?

When was the last maintenace of the air release performed?

If gravity sewer then,

Does the line receive flow from a force main immediately upstream of the failed secti ☐ Yes ☐ No ☑ NA ☐ NE
of pipe?

If yes, what measures are taken to control the hydrogen sulfide production?

When was the line last inspected or videoed?

If line collapsed, what is the condition of the line up and down stream of the failure?

Failure was caused by previous repairs on a water service.

What type of repair was made?

Replaced an 8' section of main

Is the repair temporary or permanent?

permanent

If temporary, when is the permanent repair planned?

Have there been other failures of this line in the past five years? ☐ Yes ☑ No ☐ NA ☐ NE

If so, then describe

System Visitation

ORC ☐ Yes

Backup ☐ Yes

Name:

Linwood Bailey

Cert#

1010545

Date visited:

12/28/2021

Time visited:

8:00 am

How was the SSO remediated (i.e. Stopped and cleaned up)?

Line was flushed with vactor truck. spill contained in storm drain was vacuumed and storm drain flushed

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Linwood Aaron Bailey Date: 12/29/21 10:20 am

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200064

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): Little swape outfall

Manhole #: 1746 & 1744

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 01/06/2022 (mm-dd-yyyy) Time: 9:30 am (hh:mm AM/PM) Incident End Dt: 01/06/2022 (mm-dd-yyyy) Time: 09:40 am (hh:mm AM/PM)

Estimated Volume of the SSO: 300 gallons Estimated Duration (Round to nearest hour): 0:10 hours

Describe how the volume was determined: Estimated

Weather conditions during the SSO event: sunny

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 300

Surface water name: Toisnot Swamp

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Severe Natural Conc

24 hour verbal notification (name of person contacted): Eric S Rice

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 01/06/2022 Time (hh:mm AM/PM): 12:05:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

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COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Severe Natural Condition

Describe the "severe natural condition" in detail?

Above average rainfall occurred earlier in the week. SSO was not active when it was discovered.

How much advance warning did you have and what actions were taken in preparatio for the event?

This line is a high priority line and is inspected on a regular basis.

Comments:

SSO had already occurred and stopped when it was discovered.

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood Bailey

Cert#

1010545

Date visited:

01/06/2022

Time visited:

10:00 am

How was the SSO remediated (i.e. Stopped and cleaned up)?

SSO was not active when visited. Solids cleaned up and lime spread on affected areas.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: _____ Date: _____

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

State of North Carolina
Department of Environment and Natural Resources
Division of Water Resources

Collection System Sanitary Sewer Overflow Reporting Form
Form CS-SSO

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200087

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 313 Hackney dr

Manhole #:

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 01/11/2022 (mm-dd-yyyy) Time: 1:00 pm (hh:mm AM/PM) Incident End Dt: 01/11/2022 (mm-dd-yyyy) Time: 01:30 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 150 gallons Estimated Duration (Round to nearest hour): 0:30 hours

Describe how the volume was determined: 5gpm/30min.

Weather conditions during the SSO event: clear and sunny

Did SSO reach surface waters? ☐ Yes ☑ No ☐ Unknown Volume reaching surface waters (gals): 0

Surface water name:

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Debris in line

24 hour verbal notification (name of person contacted): Colleen Cohn

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 01/11/2022 Time (hh:mm AM/PM): 02:08:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

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PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Debris in line

What type of debris has been found in the line?

Feminine products and baby wipes

Suspected cause or source of debris.

Apartments at the location

Are manholes in the area secure and intact? ☑ Yes ☐ No ☐ NA ☐ NE

When was the area last checked/cleaned?

1/11/2022

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☐ Yes ☑ No ☐ NA ☐ NE

Explain:

Are appropriate educational materials being developed and distributed to prevent futu similar occurrences? ☑ Yes ☐ No ☐ NA ☐ NE

Comments:

FOG materials are distributed biannually.

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood Bailey

Cert#

1010545

Date visited:

01/11/2022

Time visited:

1 pm

How was the SSO remediated (i.e. Stopped and cleaned up)?

Lateral was flushed and debris cleaned up. Storm drain was vacuumed and flushed.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Linwood Aaron Bailey Date: 01/13/22 09:15 am

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200093

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 3100 Stantonsburg Rd

Manhole #:

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 01/12/2022 (mm-dd-yyyy) Time: 9:30 am (hh:mm AM/PM) Incident End Dt: 01/12/2022 (mm-dd-yyyy) Time: 10:00 am (hh:mm AM/PM)

Estimated Volume of the SSO: 600 gallons Estimated Duration (Round to nearest hour): 0:30 hours

Describe how the volume was determined: 20gpm/30min.

Weather conditions during the SSO event: clear and sunny

Did SSO reach surface waters? ☐ Yes ☑ No ☐ Unknown Volume reaching surface waters (gals): 0

Surface water name:

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Pipe Failure (Break)

24 hour verbal notification (name of person contacted): Marianne Nicolaycen

☐ DWR ☑ Emergency Mgmt Date (mm-dd-yyy): 01/13/2022 Time (hh:mm AM/PM): 09:00:00 am

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

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COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Pipe Failure (Break)

Pipe size (inches)

20

What is the pipe material?

ductile and pvc

What is the approximate age of line/pipe? (years old)

45

Is this a gravity line? ☐ Yes ☑ No ☐ NA ☐ NE

Is this a force main line? ☑ Yes ☐ No ☐ NA ☐ NE

Is the line a "High Priority" line? ☑ Yes ☐ No ☐ NA ☐ NE

Last inspection date and findings

Line is currently being upgraded and is expected to be up and running in 4-6 weeks

If a force main then,

Was the break on the force main veritical? ☐ Yes ☑ No ☐ NA ☐ NE

Was the break on the force main horizantal? ☐ Yes ☑ No ☐ NA ☐ NE

Was the leak at the joint due to gasket failure? ☐ Yes ☑ No ☐ NA ☐ NE

Was the leak at the joint due to split bell? ☐ Yes ☑ No ☐ NA ☐ NE

When was the last inspection or test of the nearest air-release valve to determine of operable?

When was the last maintenace of the air release performed?

If gravity sewer then,

Does the line receive flow from a force main immediately upstream of the failed secti ☐ Yes ☐ No ☐ NA ☐ NE of pipe?

If yes, what measures are taken to control the hydrogen sulfide production?

When was the line last inspected or videoed?

If line collapsed, what is the condition of the line up and down stream of the failure?

What type of repair was made?

Repairs are currently still under way. Caps have been ordered to kill old force main

Is the repair temporary or permanent?

temporary

If temporary, when is the permanent repair planned?

New force main should be operational by March 2022

Have there been other failures of this line in the past five years? ☑ Yes ☐ No ☐ NA ☐ NE

If so, then describe

Several breaks in line due to age of line.

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood Bailey

Cert#

1010545

Date visited:

1/12/2022

Time visited:

09:30am

How was the SSO remediated (i.e. Stopped and cleaned up)?

Pipe was dug up and spill contained. Roadside ditch damned and spill removed with vactor truck.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Linwood Aaron Bailey Date: 01/18/22 04:30 pm

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200108

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 2658 Tilghman Rd, Wilson NC

Manhole #: 3220

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 01/18/2022 (mm-dd-yyyy) Time: 8:00 am (hh:mm AM/PM) Incident End Dt: 01/18/2022 (mm-dd-yyyy) Time: 08:30 am (hh:mm AM/PM)

Estimated Volume of the SSO: 215 gallons Estimated Duration (Round to nearest hour): 0:30 hours

Describe how the volume was determined: 12'x30'x1" Area

Weather conditions during the SSO event: OVERCAST

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 50

Surface water name: Toisnot Swamp (Toisnot Reservoir)

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Severe Natural Conc

24 hour verbal notification (name of person contacted): Jane Bernard

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 01/18/2022 Time (hh:mm AM/PM): 12:45:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

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COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Severe Natural Condition

Describe the "severe natural condition" in detail?

Rain

How much advance warning did you have and what actions were taken in preparatio for the event?

no warning just regular rainfall did have any preparation for this event

Comments:

rain water resided and made are Little Swamp Outfall line surge

System Visitation

ORC ☐ Yes

Backup ☑ Yes

Name:

Fabian Fajardo Padilla

Cert#

1005509

Date visited:

01/18/2022

Time visited:

08:00am

How was the SSO remediated (i.e. Stopped and cleaned up)?

Manhole lid was pushed up by sewer going to raise manhole to prevent this from happing in the future, site was cleaned u and lime was spread out over area.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Fabian Fajardo Padilla Date: 01/21/22 09:51 am

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

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Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200116

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): Merc and Bloomery Swamp Outfall

Manhole #: MH-2038

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 01/19/2022 (mm-dd-yyyy) Time: 8:00 am (hh:mm AM/PM) Incident End Dt: 01/19/2022 (mm-dd-yyyy) Time: 02:00 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 3,000 gallons Estimated Duration (Round to nearest hour): 6:0 hours

Describe how the volume was determined: 480 gal/hr x 6 hr

Weather conditions during the SSO event: Sunny

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 3000

Surface water name: Contentnea Creek

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Pipe Failure (Break)

24 hour verbal notification (name of person contacted): Alys K Hannum

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 01/19/2022 Time (hh:mm AM/PM): 03:30:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

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(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Pipe Failure (Break)

Pipe size (inches)

15

What is the pipe material?

Rcp

What is the approximate age of line/pipe? (years old)

44

Is this a gravity line?	☑ Yes	☐ No	☐ NA	☐ NE
Is this a force main line?	☐ Yes	☑ No	☐ NA	☐ NE
Is the line a "High Priority" line?	☑ Yes	☐ No	☐ NA	☐ NE

Last inspection date and findings

Line is inspected daily. The city is trying to secure funding for reoplacement.

If a force main then,

Was the break on the force main veritical?	☐ Yes	☐ No	☑ NA	☐ NE
Was the break on the force main horizantal?	☐ Yes	☐ No	☑ NA	☐ NE
Was the leak at the joint due to gasket failure?	☐ Yes	☐ No	☑ NA	☐ NE
Was the leak at the joint due to split bell?	☐ Yes	☐ No	☑ NA	☐ NE

When was the last inspection or test of the nearest air-release valve to determine of operable?

When was the last maintenace of the air release performed?

If gravity sewer then,

Does the line receive flow from a force main immediately upstream of the failed secti of pipe?	☐ Yes	☑ No	☐ NA	☐ NE

If yes, what measures are taken to control the hydrogen sulfide production?

When was the line last inspected or videoed?

01/19/2021

If line collapsed, what is the condition of the line up and down stream of the failure?

Line is in poor condition. In mitigation for upgrades.

What type of repair was made?

Manhole was sealed

Is the repair temporary or permanent?

Temporary

If temporary, when is the permanent repair planned?

Repairs will begin week of 01/24/2021

Have there been other failures of this line in the past five years? ☑ Yes ☐ No ☐ NA ☐ NE

If so, then describe

Line is in poor shape. Pipe collapse has occurred at several locations.

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood Bailey

Cert#

1010545

Date visited:

01/19/2021

Time visited:

8:30 am

How was the SSO remediated (i.e. Stopped and cleaned up)?

Manhole was sealed and samples for fecal and ammonia taken upstream and downstream from spill.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Linwood Aaron Bailey Date: 01/20/22 10:50 am

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

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Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200124

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): Merc and Bloomery Swamp Outfall

Manhole #: MH-2038 ,2057,2058

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 01/20/2022 (mm-dd-yyyy) Time: 8:00 am (hh:mm AM/PM) Incident End Dt: 01/20/2022 (mm-dd-yyyy) Time: 02:00 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 9,000 gallons Estimated Duration (Round to nearest hour): 6:0 hours

Describe how the volume was determined: 1500 gal/hr x 6 hrs

Weather conditions during the SSO event: Overcast

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 9000

Surface water name: Contentnea Creek

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Pipe Failure (Break)

24 hour verbal notification (name of person contacted): Alys K Hannum

☑ DWR ☐ Emergency Mgmt Date (mm-dd-yyy): 01/20/2022 Time (hh:mm AM/PM): 03:55:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

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(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Pipe Failure (Break)

Pipe size (inches)

15

What is the pipe material?

RCP

What is the approximate age of line/pipe? (years old)

44

Is this a gravity line?	☑ Yes	☐ No	☐ NA	☐ NE
Is this a force main line?	☐ Yes	☑ No	☐ NA	☐ NE
Is the line a "High Priority" line?	☑ Yes	☐ No	☐ NA	☐ NE

Last inspection date and findings

Line is inspected daily. Line in poor condition. Currently trying to secure funding for upgrades

If a force main then,

Was the break on the force main veritical?	☐ Yes	☐ No	☑ NA	☐ NE
Was the break on the force main horizantal?	☐ Yes	☐ No	☑ NA	☐ NE
Was the leak at the joint due to gasket failure?	☐ Yes	☐ No	☑ NA	☐ NE
Was the leak at the joint due to split bell?	☐ Yes	☐ No	☑ NA	☐ NE

When was the last inspection or test of the nearest air-release valve to determine of operable?

When was the last maintenace of the air release performed?

If gravity sewer then,

Does the line receive flow from a force main immediately upstream of the failed secti of pipe?	☐ Yes	☑ No	☐ NA	☐ NE

If yes, what measures are taken to control the hydrogen sulfide production?

When was the line last inspected or videoed?

Easement is inspected dailey

If line collapsed, what is the condition of the line up and down stream of the failure?

Line is in poor condition. Currently in mitigation for upgrades.

What type of repair was made?

Bypass set up and repairs are scheduled for the week of 01/24/2021

Is the repair temporary or permanent?

Temporary

If temporary, when is the permanent repair planned?

The City is currently in the process of securing funding. Preliminary plans are 1 year at out.

Have there been other failures of this line in the past five years? ☑ Yes ☐ No ☐ NA ☐ NE

If so, then describe

At least 4 pipe failures in past 5 years due to pipe collapse.

System Visitation

ORC ☑ Yes

Backup ☐ Yes

Name:

Linwood bailey

Cert#

1010545

Date visited:

01/20/2021

Time visited:

8 am

How was the SSO remediated (i.e. Stopped and cleaned up)?

Bypass was set up and repairs will begin Monday 01/24/2021

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Linwood Aaron Bailey Date: 01/21/22 11:00 am

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200192

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 4308 Cam Strader Rd.

Manhole #:

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 02/06/2022 (mm-dd-yyyy) Time: 3:15 pm (hh:mm AM/PM) Incident End Dt: 02/06/2022 (mm-dd-yyyy) Time: 05:30 pm (hh:mm AM/PM)

Estimated Volume of the SSO: 196 gallons Estimated Duration (Round to nearest hour): 2:15 hours

Describe how the volume was determined: 87gph x 2.25hrs (3/4"x1/2" Hole)

Weather conditions during the SSO event: clear sky, sunny

Did SSO reach surface waters? ☑ Yes ☐ No ☐ Unknown Volume reaching surface waters (gals): 196

Surface water name: Hominy Swamp

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed? 0

SPECIFIC cause(s) of the SSO:

☑ Grease

24 hour verbal notification (name of person contacted): Todd Green

☐ DWR ☑ Emergency Mgmt Date (mm-dd-yyy): 02/06/2022 Time (hh:mm AM/PM): 06:15:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

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WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Grease

When was the last time this specific line (or wet well) was cleaned?

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☑ Yes ☐ No ☐ NA ☐ NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

There is no restaurants or other nonresidential grease contributors in this area.

Have there been other SSOs or blockages in this area that were also caused by grease? ☐ Yes ☑ No ☐ NA ☐ NE

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

Sewer Mains and taps are pvc and there has not been any repeated grease issue in this area.

Have educational materials about grease been distributed in the past? ☑ Yes ☐ No ☐ NA ☐ NE

When?

bi-annually

and to whom?

Explain?

All City of Wilson customer's receive broachers and educational information on Fats, oils and grease twice a year

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation?

Were the floats clean? ☐ Yes ☐ No ☐ NA ☐ NE

Comments:

System Visitation

ORC ☐ Yes

Backup ☑ Yes

Name:

Fabian Fajardo Padilla

Cert#

1005509

Date visited:

02/06/2022

Time visited:

04:00pm

How was the SSO remediated (i.e. Stopped and cleaned up)?

Grease blockage was cleared up with combo truck and spill was also cleaned up with combo truck.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Fabian Fajardo Padilla Date: 02/09/22 07:50 am

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

PART I:

This form shall be submitted to the appropriate DWQ Regional Office within five business days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS00021 (WQCS# if active, otherwise use WQCSD#)

Facility: Wilson Collection System Incident #: 202200435

Owner: City of Wilson

City: Wilson County: Wilson Region: Raleigh

Source of SSO (check applicable): ☑ Sanitary Sewer ☐ Pump Station / Lift Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc): 1703 Woodside Drive west

Manhole #: 1923

Latitude (Decimal Degrees): Longitude (Decimal Degrees):

Incident Started Dt: 03/19/2022 (mm-dd-yyyy) Time: 11:44 pm (hh:mm AM/PM) Incident End Dt: 03/20/2022 (mm-dd-yyyy) Time: 03:08 am (hh:mm AM/PM)

Estimated Volume of the SSO: 412 gallons Estimated Duration (Round to nearest hour): 3:24 hours

Describe how the volume was determined: 122gph x 3.38hrs

Weather conditions during the SSO event: Clear sky at night time

Did SSO reach surface waters? ☐ Yes ☐ No ☑ Unknown Volume reaching surface waters (gals):

Surface water name:

Did the SSO result in a fish kill? ☐ Yes ☑ No ☐ Unknown If Yes, what is the estimated number of fish killed?

SPECIFIC cause(s) of the SSO:

☑ Grease

24 hour verbal notification (name of person contacted): Rich Berman

☐ DWR ☑ Emergency Mgmt Date (mm-dd-yyy): 03/20/2022 Time (hh:mm AM/PM): 02:28:00 pm

If an SSO is ongoing, please notify the appropriate Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 or more of untreated wastewater to surface waters shall issue a press release within 24-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the reference statute for further detail.

The Director, Division of Water Resources, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

1) the discharge was cause by sever natural conditions and there were no feasible alternative to the discharge; or
2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis

WHETHER OR NOT PART III IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM

PART II:

ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I
(In the check boxes below, NA = Not Applicable and NE = Not Evaluated)

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWR REGIONAL OFFICE UNLESS IS

Grease

When was the last time this specific line (or wet well) was cleaned?

unknown

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☐ Yes ☑ No ☐ NA ☐ NE

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

No restaurants or nonresidential grease contributors are tied in to this sewer main.

Have there been other SSOs or blockages in this area that were also caused by grease? ☐ Yes ☑ No ☐ NA ☐ NE

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☐ Yes ☑ No ☐ NA ☐ NE

Explain.

No previous causes for increased inspections or cleanings have occurred in this area.

Have educational materials about grease been distributed in the past? ☑ Yes ☐ No ☐ NA ☐ NE

When?

bi-annually

and to whom?

residential customers

Explain?

The City of Wilson FOG program send pamphlets with information about fats, oils and greases disposal and the harm it does to the sewer system and environment. This information is distributed through the utility billing twice a year.

If the SSO occurred at a pump station, when was the wet well and pumps last checked for grease accumulation?

Were the floats clean? ☐ Yes ☑ No ☐ NA ☐ NE

Comments:

System Visitation

ORC ☐ Yes

Backup ☑ Yes

Name:

Fabian Fajardo Padilla

Cert#

1005509

Date visited:

03/20/2022

Time visited:

01:30 am

How was the SSO remediated (i.e. Stopped and cleaned up)?

Grease blockage was removed with combo truck. All area that was affected was washed down and vacuumed up with combo truck, including storm drains and catch basins.

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: _____ Date: _____

Signature: _____ Title: _____

Telephone Number: _____

Any addition information desired to be submitted should be sent to the appropriate Division Regional Office within five days of t knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of th form is completed, if used).

Attachment 4

Affordability Calculator

NC Division of Water Infrastructure Spring 2022 Affordability Calculator

← Complete data entry cells in yellow

Updated 2/14/2022. This tool can be used by Applicants to determine eligibility for grant/principal forgiveness funding and to complete the affordability calculations in the application for funding.

Enter Name of Applicant: City of Wilson

STEP 1: Applicant's Designation and Assessment Criteria Score

Select Applicant from menu	Wilson
Designated as "Distressed" in accordance with NCGS 159G-45?	No
VUR Assessment Criteria Score:	1
Wholesale-only service provider?	No

If applying for a project with more than one local government unit, select the local government that is either designated as distressed or has the greatest VUR Assessment Criteria score.

STEP 2: Residential Connections

How many residential connections does your system contain? 20,671

Enter number of residential connections for the water system or the wastewater system, depending on your application's project (DW or WW).

STEP 3: Local Government Unit (LGU) Economic Indicators

Enter your local government unit parameters and service area coverage as shown below. Select local government(s) in your service area.

Push to Clear All

	Select LGU from menu →	Wilson	Black Creek	Saratoga	Sims	Total:		State Benchmarks are:	Worse than State Benchmark?
	Enter name of LGU (if not listed above) →								
	LGU Coverage (% of service area)	93%	5%	1%	1%	100%			
	Population:	49,272	890	413	599				
	Population Change	-0.42%	38.63%	-16.23%	79.88%	2.18%	<=	4.26%	Yes
	Poverty Rate	23.2	21.2	13.6	23.4	23.006	>=	14.7	Yes
	Median Household Income	$42,036	$46,667	$53,750	$49,079	$42,455	<=	$54,602	Yes
	Unemployment Rate	5.8	5.8	5.8	5.8	5.8	>=	3.9	Yes
	Total Appraised Value of Property	$4,211,958,171	$30,711,369	$24,233,976	$19,755,198				
	Calculated Prop. Val. per Capita	$85,484	$34,507	$58,678	$32,980	$82,142	<=	$119,594	Yes
							# of Indicators worse than State Benchmark →		5

STEP 4: Existing Revenues

Enter the following information below.

Operating Revenues$_{Water\ \&\ Sewer}$:	$28,215,709
Total Expenditures$_{Water\&Sewer}$:	$18,264,013
Debt Principal$_{Water\&Sewer}$:	$3,542,700
Interest$_{Water\&Sewer}$:	$404,651
Project Cost:	$80,000,000
Calculated Operating Ratio$_{Future}$:	**1.08**

Step 5: Water/Sewer Utility Information

		Current monthly bill for 5,000 gallons:	
Combined water and sewer provider, or single service? Is your project a water or wastewater project?	Combined water and sewer provider	Water Rate	Sewer Rate
		$38.16	$45.45

"Effective" combined water & sewer bill for 5,000 gallons:	$83.61
Number of non-residential connections:	2,242
Calculated total number of connections:	22,913
Project cost per connection per month:	$14.55

Eligibility for American Rescue Plan Act (ARPA) Grant Funding

ARPA grants are administered through the Viable Utility Reserve and the State Reserves. All local government utilities and non-profit water corporations are eligible recipients of ARPA grants for planning/study projects and construction projects. More funds are available for, and higher grant limits apply to, ARPA construction grants from the Viable Utility Reserve and for At-Risk Systems than for All Other Systems as described in the ARPA Administration Plan. See your eligibility below. ARPA funding is up to 100% grant and is not subject to the percentage limits of the Affordability Criteria for SRF Principal Forgiveness/SRP grant eligibility. ARPA funds are subject to availability and limits specified in the Administration Plan.

See the ARPA Administration Plan on the Division's website for more details.

Local government utility or non-profit water corporation is eligible for ARPA project construction grants for 'All Other Systems' (not Viable Utility Reserve or At-Risk Systems) and for planning/study grants from the State Reserves. Eligible for ARPA project construction grants for At-Risk Systems if project is primarily to connect residences in disadvantaged, underserved areas to the water/wastewater system.

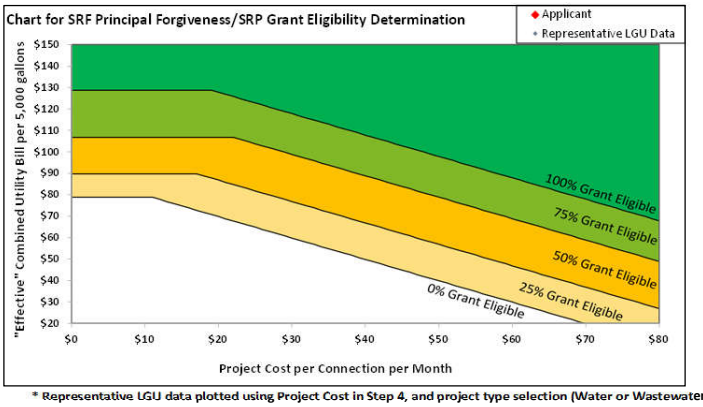
Eligibility for State Revolving Fund (SRF) Principal Forgiveness and State Reserve Program Grants (not ARPA-funded)

Eligibility is limited by the percentage below, funding request amount, caps on SRF principal forgiveness or SRP grants based on project type, and PF or grant availability.

Percentage of funding request amount eligible for SRF Principal Forgiveness or SRP grant:

You are not eligible for SRF Principal Forgiveness/SRP grant (non-ARPA). You are eligible for a 100% loan.

Limit not applicable to ARPA grants.



Graph is truncated:
$0-$80 (X-axis), $20-$150 (Y-axis)

* Representative LGU data plotted using Project Cost in Step 4, and project type selection (Water or Wastewater) in Step 5.

Attachment 5

Water & Sewer Maps

City Of Wilson
Sewer Distribution

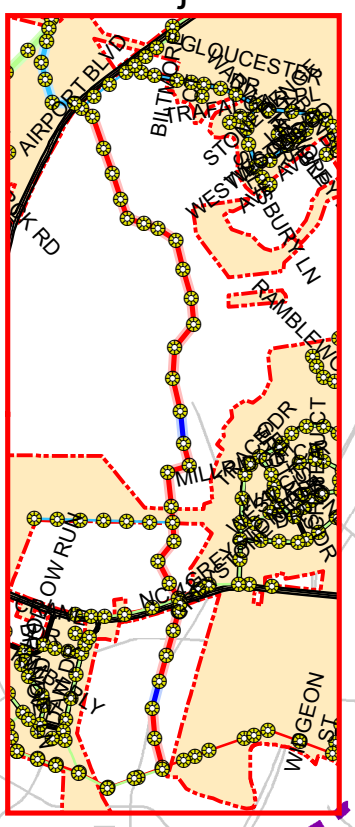
Date: March 2022

N
W E
S

Legend

- 1920 - 1982
- 1983 - 1992
- 1993 - 2002
- 2003 - 2012
- 2013 - 2022
- Force Main Valve
- Air Release Valve
- Manhole
- Pump Stations (PS)
- Waste Water Treatment Plant (WTP)
- Extra Territorial Jurisdiction
- City Boundary

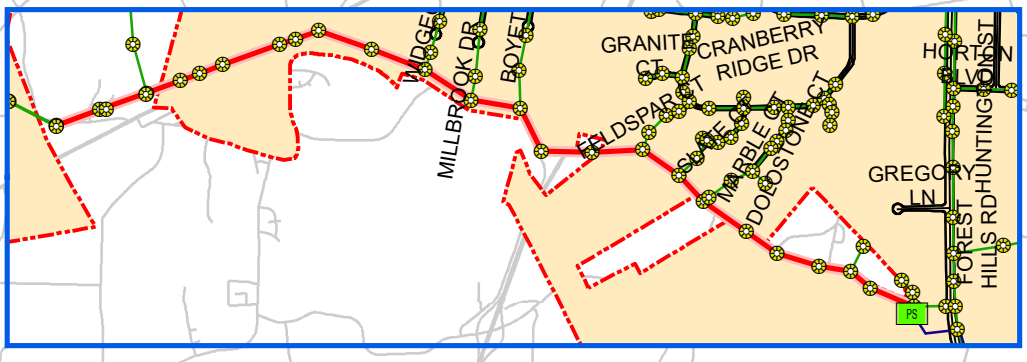
Inset A: Project Area 1



Project Area 1
See Inset A

Project Area 2
See Inset B

Inset B: Project Area 2



City Of Wilson
Sewer Distribution

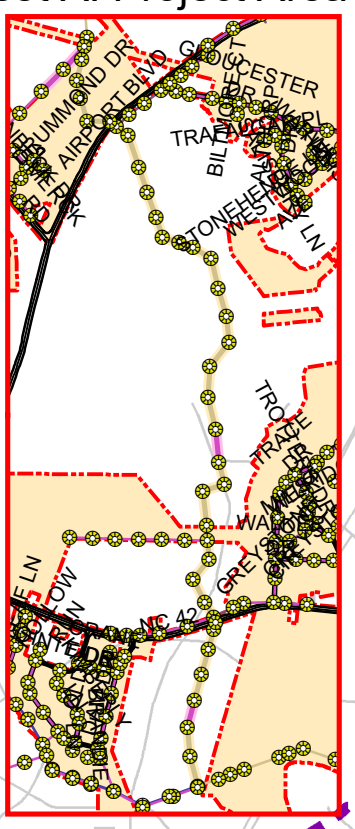
Date: March 2022

N
W E
S

Legend

- ABS
- CI
- CRS
- DI
- HDPE
- INST
- PVC
- RCP
- STEEL
- VC
- Force Main Valve
- Air Release Valve
- Manhole
- Pump Stations (PS)
- Waste Water Treatment Plant (WTP)
- Extra Territorial Jurisdiction
- City Boundary

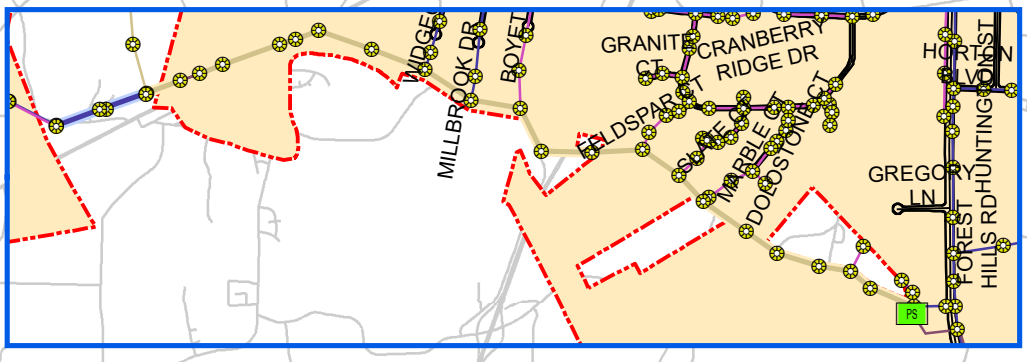
Inset A: Project Area 1



Project Area 1
See Inset A

Project Area 2
See Inset B

Inset B: Project Area 2



City Of Wilson
Water Distribution

Date: March 2022

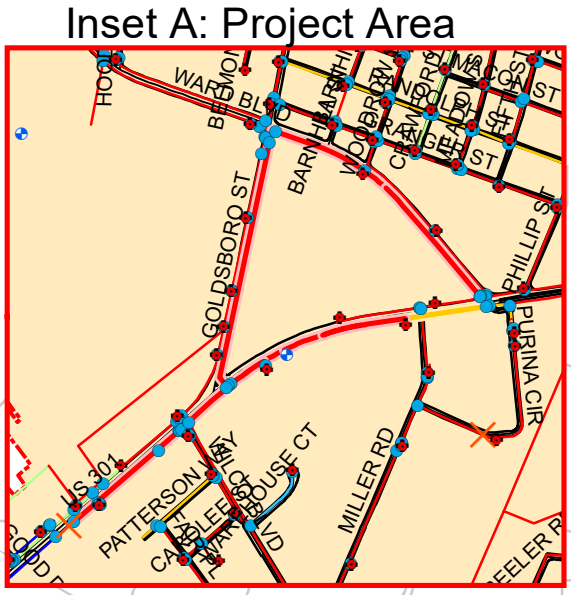
N W E S

Legend

Year Installed

- 1920 - 1982
- 1983 - 1992
- 1993 - 2002
- 2003 - 2012
- 2013 - 2022
- Fire Hydrant
- Gate Valve
- Butterfly Valve
- WTP — Water Treatment Plants
- PS — Water Pump Stations
- Water Storage Tanks
- Extraterritorial Limits
- City Boundary

Inset A: Project Area



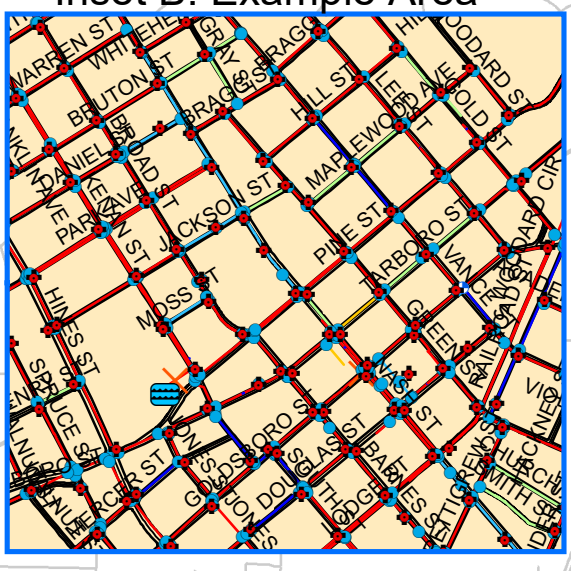
PS

WTP

Example Area
See Inset B

Project Area
See Inset A

Inset B: Example Area



City Of Wilson
Water Distribution

Date: March 2022

N
W E
S

Legend

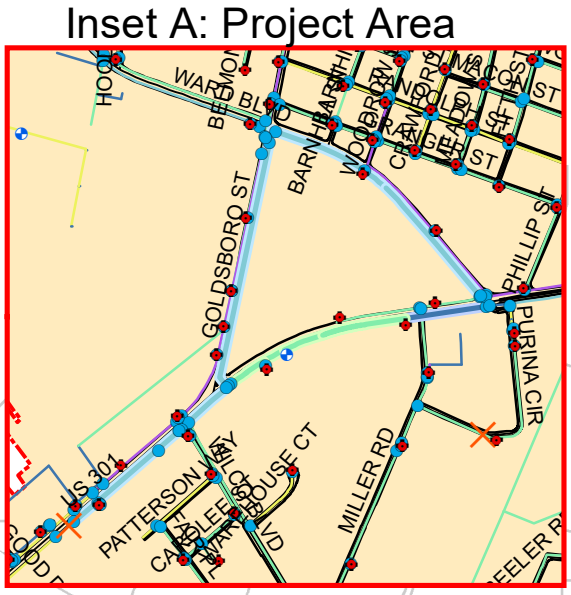
MATERIAL

- AC
- CI
- CU
- DI
- GALV
- HDPE
- PEX
- PVC
- STL
- Fire Hydrant
- Gate Valve
- Butterfly Valve
- WTP — Water Treatment Plants
- PS — Water Pump Stations
- Water Storage Tanks
- Extraterritorial Limits
- City Boundary

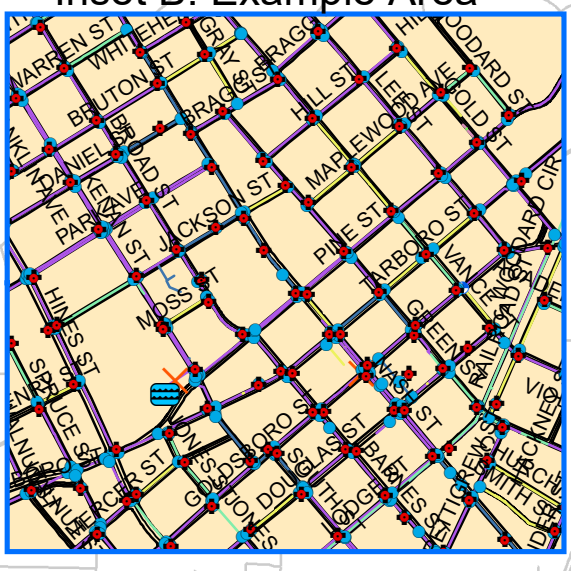
Example Area
See Inset B

Project Area
See Inset A

Inset A: Project Area



Inset B: Example Area



Attachment 6

Capital Improvement Plan and Supporting Documentation

PROJECT	Project Funding and Capital Outlay Breakdown		Prior Years	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Funding Balance
NUMBER	Future Funding -														
WR-01	Wiggins Mill Exapnsion 12 to 16 MGD, 2300V to 480V		$1,900,000	$6,500,000	$20,000,000	$14,000,000	$0	$0	$0	$0	$0	$0	$0	$0	**$42,400,000**
WR-02	Old Fields Outfall Sewer Lines - Contentnea Pump Station to Merck Split		$150,000	$2,750,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,900,000**
WR-03	The Lower Bloomery - Merck Split to Airport		$800,000	$2,500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,300,000**
WR-04	24" Replace - Main Goldsboro - Phase II (Loop)		$0	$3,450,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,450,000**
WR-05	Hominy Creek WWTP Expansion from 14 to 17.3 MGD		$0	$0	$6,000,000	$17,000,000	$30,000,000	$27,000,000	$0	$0	$0	$0	$0	$0	**$80,000,000**
WR-06	Little Swamp Upgrade - Tilghman Outfall		$0	$238,500	$1,590,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,828,500**
WR-07	WCC Sewer Outfall		$0	$325,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$325,000**
WR-08	Annual Sewer Rehab		$0	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	**$5,500,000**
WR-09	Sewer - Investigation (Smoke Testing, etc.)		$100,000	$250,000	$250,000	$350,000	$250,000	$250,000	$250,000	$250,000	$250,000	$350,000	$250,000	$250,000	**$3,050,000**
WR-10	Southpoint Pump Station Forcemain Rehab or Replace		$0	$193,200	$1,288,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,481,200**
WR-11	Contentnea Pump Station Mechanical Bar Screen		$0	$0	$0	$800,000	$0	$0	$0	$0	$0	$0	$0	$0	**$800,000**
WR-12	20" Replace - Goldsboro to Tarboro - Phase III		$0	$0	$250,000	$2,000,000	$0	$0	$0	$0	$0	$0	$0	$0	**$2,250,000**
WR-13	Longview Pump Station Forcemain Rehab or Replace		$0	$0	$0	$210,000	$1,400,000	$0	$0	$0	$0	$0	$0	$0	**$1,610,000**
WR-14	Reinforcement/Support of 30" DIP Outside WWTP		$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$200,000**
WR-15	Upgrade of Contentnea Pump Station and Forcemain		$0	$0	$0	$465,000	$3,100,000	$0	$0	$0	$0	$0	$0	$0	**$3,565,000**
WR-16	Herring Avenue 12" AC Watermain Replacement		$0	$0	$0	$0	$280,000	$1,875,000	$0	$0	$0	$0	$0	$0	**$2,155,000**
WR-17	Raleigh Road 6" AC Watermain Replacement		$0	$0	$0	$0	$0	$120,000	$800,000	$0	$0	$0	$0	$0	**$920,000**
WR-18	Relocate 18" DIP from Brentwood to Ward (stream impacts)		$0	$0	$0	$0	$0	$0	$150,000	$1,000,000	$0	$0	$0	$0	**$1,150,000**
WR-19	Replace/Rehab 10" CI Watermain from Ward to Tilghman		$0	$0	$0	$0	$0	$0	$95,000	$625,000	$0	$0	$0	$0	**$720,000**
WR-20	Replace or Rehab VCP along Suggs, Moore, and Pender		$0	$0	$0	$0	$0	$0	$0	$300,000	$0	$0	$0	$0	**$300,000**
WR-21	I-95 Region Pump Station Upgrades		$0	$0	$0	$0	$0	$0	$0	$500,000	$3,250,000	$0	$0	$0	**$3,750,000**
WR-22	I-95 Pressure Zone and Water Tower		$0	$0	$0	$0	$0	$0	$0	$0	$375,000	$2,500,000	$0	$0	**$2,875,000**
WR-23	Relocation of 30" CRS Pipe at 6776 Ward Blvd (stream impacts)		$0	$0	$0	$0	$0	$0	$0	$0	$0	$60,000	$400,000	$0	**$460,000**
WR-24	16" Water Main Extension from Campus 587 to Charleston St on MLK		$0	$0	$0	$0	$0	$0	$0	$0	$0	$500,000	$3,375,000	$0	**$3,875,000**
WR-25	Replace all Utilities (water, raw, and sewer) on Lodge (partner with Electric)		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$525,000	$3,500,000	**$4,025,000**
WR-26	Westwood Avenue 15" Outfall Extension		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$325,000	$2,125,000	**$2,450,000**
WR-27	Extend Water & Sewer along road between I-95 to Sweet Williams		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$400,000	$2,700,000	**$3,100,000**
	Capital Fund Reserve - Rolling Projects		**$2,950,000**	**$16,906,700**	**$29,878,000**	**$35,325,000**	**$35,530,000**	**$29,745,000**	**$1,795,000**	**$3,175,000**	**$4,375,000**	**$3,910,000**	**$5,775,000**	**$9,075,000**	**$178,439,700**

CITY OF WILSON

City Council
Meeting Agenda

Remote Communications Technology & Live Stream

(May be Viewed Live on Wilson's Channel 8 on Greenlight and Other Local Cable Systems or by Live Stream from the City's Website, www.WilsonNC.org)

Due to public health concerns, out of an abundance of caution and pursuant to the authority contained in GS 166A-19.24, the Wilson City Council hereby gives notice that the format and the traditional meeting process for the April 21, 2022 Council meeting is being altered to accommodate and encourage positive public health practices and reduce the risk of spreading Covid-19. The April 21, 2022 Council meeting will incorporate virtual meeting practices and remote communications technology. The public is encouraged to watch the business meeting streamed live at 7:00 p.m. on the City's website www.wilsonnc.org or on Wilson's Channel 8 on Greenlight and other local cable systems. The meeting will begin at 6:30 pm with a closed session pursuant to GS 143-318.11(a)(3). Anyone wishing to speak during the public comment period of the meeting or during any public hearing may submit written comments or contact the City Clerk by 12:00 noon on Thursday, April 21, 2022 at twest@wilsonnc.org or (252) 399-2302.

April 21, 2022 – 7:00 p.m. **Closed Session – 6:30 p.m.**

1. Invocation

2. Pledge of Allegiance

3. Proclamation Proclaiming Thursday, May 5, 2022, as "National Day of Prayer" in Wilson, North Carolina

4. **Consent Agenda** ***(All matters listed are considered to be routine and non-controversial by City Council and will be enacted by one motion. There will be no separate discussion unless a Council member so requests, in which case the item will be removed from the Consent Agenda and will be considered separately.):***

4a. Consideration of Approval of Proposed Special City Council Meeting Minutes of March 2, 2022 and Regular City Council Meeting Minutes of March 3, 2022 and March 17, 2022

4b. Consideration of Approval of Tax Collections Report for February 2022

4c. Consideration of Resolution Proposing to Dispose of Surplus Equipment by Public Auction

Public Hearings

5. Public Hearing Items - Regular

This agenda can be viewed on the City of Wilson home page at www.WilsonNC.org

5a. Consideration of Approval of an Ordinance Directing Demolition and that the Building Inspector Place a Notice Thereon that the Property is Unfit for Human Habitation and that the Same May Not Be Occupied for the Property Located at 1310 Nash Street, South East; PIN # 3721-77-1443-000

Public Hearing Items – Planning & Design Review Board

5b. Consideration of Approval of Ordinance for Zoning Change Request; Approximately 0.21 acres located at 5333 NC HWY 58, Just North of 5232 NC HWY 58; Wilson Parcel # 3714-08-6461.000 (PIN); Present Use –Vacant; Present Zone – LI (Light Industrial); Requested Zone – GC (General Commercial); Requested by Ron Sutton, Herring-Sutton & Associates, P.A. as agent for 3 CORDS, LLC; (Project # 22-32)

5c. Consideration of Approval of Ordinance for Zoning Change Request; Approximately 4.13 acres located at 1300 Tobacco Road, South, Located on Tobacco Road, abutting the Norfolk & Southern Railway; Wilson Parcel # 3721-34-0872.000 (PIN); Present Use – Warehouse; Present Zone – HI (Heavy Industrial); Requested Zone LI (Light Industrial); Requested by Roy Harrington on behalf of Harrington Companies, LLC (Project # 22-79)

5d. Consideration of Approval of Ordinance for Zoning Text Change Request – Technical Amendments to Chapter 16 of the UDO and Updates to Areas of the UDO to Comply with State Statutes (Project # 22-119)

End of Public Hearings

6. Consideration of Approval of Budget Amendment Ordinances for 2021-2022 Budget

7. Consideration of Approval of Updated Fiscal Guidelines and Budget Policies

8. Consideration of Support of Adoption of a 10-Year Capital Improvement Plan (CIP) for Water and Sewer Infrastructure

9. Consideration of Approval of a Resolution Authorizing an Application for Loan/Grant Funds for the Clean Water State Revolving Fund (CWSRF)

10. Report(s)

11. Call on the Audience

EXCERPT OF MINUTES OF THE
APRIL 21, 2022 MEETING OF THE CITY COUNCIL
OF THE CITY OF WILSON, NORTH CAROLINA

Certification

I, Tonya A. West, City Clerk of the City of Wilson, North Carolina, do hereby certify that the foregoing is an excerpt of the minutes of the April 21, 2022 meeting of the City Council of the City of Wilson, North Carolina, as prepared by the City Clerk.

Item 8 **Consideration of Support of Adoption of a 10-Year Capital Improvement Plan (CIP) for Water and Sewer Infrastructure**

Mayor Stevens read Item 8, included with the Consent Agenda items, and called for a motion. Councilmember Evans made a motion to approve the Consent Agenda, including Agenda Item 8. Councilmember Liles seconded the motion, which passed unanimously.

(See Exhibit 6 – Staff Notes for Item 8)

WITNESS MY HAND AND THE SEAL OF THE CITY OF WILSON, NORTH CAROLINA, this the 25th day of April, 2022.

CITY OF WILSON INCORPORATED 1849 WILSON COUNTY, N.C.

(SEAL)

Tonya A. West, City Clerk
City of Wilson
Wilson, North Carolina

CITY OF WILSON

Agenda Item 8

Meeting Date April 21, 2022

City Council Agenda Item Cover Sheet

To:	Honorable Mayor, Members of City Council and City Manager
From:	W. T. Bass, IV, P.E., Director of Public Works
Subject:	Request by Public Works Department in Support of Adoption of a 10 CIP for Water and Sewer Infrastructure

Issue: Adoption of a 10 CIP plan for Water and Sewer System.

Background / Summary: As the city pursues grants for infrastructure improvements, a 10-year CIP provides additional points in the scoring process.

Fiscal or Other Impact: As our infrastructure ages and demand increases, the need to replace and upgrade grows. The ability to apply and receive grants is important to maintain our infrastructure.

Recommendation: Public Works recommends approval of adoption of a 10-year CIP for water and sewer infrastructure.

Coordination: Public Works Department

Attachments: 10 year CIP

Attachment 7

Utility Asset Team Members

Utility Asset Management Team

Division	Name	Position/Title	Years of Experience	Key Role	Certifications
Engineering	Kyle F. Manning	Civil Engineer	11	Primary project manager	Professional Engineer, M.S.
	Tim Blanchard	GIS Technician	3	Primary GIS technician to update utility assets	M.S.
	Beverly Baily	GIS Technician	14	Back-up GIS technician to update utility assets	
	Brandon Galloway	Construction Inspector	25	Oversee any construction projects, ensuring standards are followed	NASSCO Certification
	Johnnie Webb	Construction Inspector	5	Oversee any construction projects, ensuring standards are followed	NASSCO Certification
Public Works Leadership	W.T. "Bill" Bass	Public Works Director/City Engineer	31	Key leadership contact within City for council approval	Professional Engineer
	Scott Hedgepeth	Assistant Public Works Director	20	Provide assistance to project manager	
Water Infrastructure	Noah Parsons	Division Manager	8	Primary contact for city field work, assist project manager	
	Brooks Bunn	Division Coordinator	20	Assist with identified construction projects by city staff	
	Fabian Padilla	Construction Superintendent	21	Assist with identified construction projects by city staff	
	Aaron Baily	Maintenance Superintendent	19	Assist with identified construction projects by city staff	
	Donnei Petway	Stormwater Technician	6	Assist with identified construction projects by city staff	NASSCO Certification
	John Williamson	Special Project Technician	6	Assist with identified construction projects by city staff	NASSCO Certification
	John Bissette	GIS Technician	21	Update hydraulic model	
	Jason Parris	Water Resource Technician	9	Assist with identified construction projects by city staff	NASSCO Certification
	Wayne Sawrey	Sewer Monitoring Technician	25	Responsible for City CCTV services	NASSCO Certification
Finance	Amy Stanton	Chief Financial Officer	25	Update CIP and Budgets and seek approval form council	
	Bernard Mclean	Senior Financial Analyst	5	Update budget projections	
	Lannette Pridgen	Financial Analyst for Grants	5	Assist with grant compliance	
GIS Services	Joe Ausby	GIS Manager	17	Manage City's GIS infrastructure	M.S. GISP, CGCIO
	Leigh Parker	GIS Programmer/Analyst	17	Assist GIS Manager	
	Jeff Webb	GIS Specialist	17	Create tools/applications to assist staff	
External Firms	Green Engineering	N/A	N/A	Design and Survey	N/A
	Hydrostructures	N/A	N/A	Flow Monitoring, Manhole Inspections, Smoke Testing, and Modeling	N/A
	Raftelis	N/A	N/A	Financial Modeling	N/A
	HDR	N/A	N/A	Grant Applications and Asset Management Plan	N/A

Attachment 8

Water and Sewer Financial Information

North Carolina Department of Environmental Quality
Division of Water Infrastructure
Water & Sewer Financial Information Form

(Updated: February 2022)

Complete the following information related to your utility's water/sewer Enterprise Fund. If your Enterprise Funds are separate for water and sewer, *please provide sheets for the appropriate fund.* For expenditures, use only absolute values (i.e., no negative values). *Do note modify this form.*

1. Supply the required information below.

☒ Combined System ☐ Water System ☐ Sewer System

Unit Name: City of Wilson

Fund Name: Water Resources Operating Fund

2. Provide the following information for the past three fiscal years *for which an audit has been completed* and submitted to the Local Government Commission.

	Fiscal Years		
	2021	2020	2019
Operating Revenues			
Customer Charges	27,300,990	27,200,430	26,109,904
Connection Fees			
Other Operating Revenues	914,719	808,803	665,105
Total Operating Revenues	**28,215,709**	**28,009,233**	**26,775,009**
Expenditures			
Administration			
Salaries	298,277	286,173	272,785
Other	3,497,403	3,421,827	3,463,813
Operations			
Salaries	7,268,836	6,965,330	6,734,038
Other	7,199,497	7,344,944	6,665,299
Total Expenditures	**18,264,013**	**18,018,324**	**17,135,935**
Other (do not include depreciation)			
Debt principal	3,542,700	3,543,324	3,462,925
Interest	404,651	509,557	602,750
Capital outlay	4,762,411	8,241,895	5,669,758
Capital reserve	0	67,090	492,450
Transfer from (to) other funds			
Other (list):			
Total Other	**8,709,762**	**12,361,866**	**10,227,883**
Net Income (Loss)	**1,241,934**	**(2,370,957)**	**(588,809)**

(OVER)

3. Certification. Please read and sign below.

I attest that the fiscal information provided in this form, to the best of my knowledge, is accurate, complete, true, and matches audits for the past three years. I further attest that, to the best of my knowledge, if City of Wilson has made any transfers within the past three years, these transfers are shown
(Local government unit)
in Item #2 of this form.

Amy G. Staton — **SIGNATURE OF FINANCE OFFICER**

4-7-2022 — **DATE**

Amy G. Staton — **TYPED NAME**

Chief Financial Officer — **TYPED TITLE**

North Carolina Department of Environmental Quality
Division of Water Infrastructure
Fund Transfer Certification
(Not needed for CDBG-I only projects)

(revised February 2022)

§ 159G-37(b) requires that all local governments applying for funding from the Clean Water State Revolving Fund, the Wastewater Reserve, the Drinking Water State Revolving Fund, the Drinking Water Reserve, or the Viable Utility Reserve for water or wastewater projects certify that no funds received from water or wastewater utility operations have been transferred to the local government's general fund for the purpose of supplementing the resources of the general fund since July 1, 2014. The prohibition contained in § 159G-37(b) shall not be interpreted to include payments made to the local government to reimburse the general fund for expenses paid from that fund that are reasonably allocable to the regular and ongoing operations of the utility, including, but not limited to, rent and shared facility costs, engineering and design work, plan review, and shared personnel costs. **Note:** A payment in lieu of taxes (PILOT) is not exempt from this certification unless the PILOT is calculated to reimburse for these specific expenses.

Applicant's Certification:

I, as a representative of City of Wilson (Local Government Unit), hereby certify that since July 1, 2014, funds received from the water and/or wastewater utility have: (***CHOOSE ONE***)

☐ been transferred from the water and/or sewer enterprise fund to the general fund **AND** were reasonably allocable to the regular and ongoing operations of the utility in accordance with § 159G-37(b),

OR

☒ not been transferred from the water and/or sewer enterprise fund to the general fund.

Any transfers must be consistent with the information provided in the Division of Water Infrastructure's Water & Sewer Financial Information Form and must be accurately reflected in the audits as reported by the Local Government Unit to the Local Government Commission since July 1, 2014.

Amy G. Staton — 4-7-2022

SIGNATURE OF AUTHORIZED REPRESENTATIVE OR FINANCIAL OFFICER | **DATE**

Amy G. Staton | Chief Financial Officer

TYPED NAME | **TYPED TITLE**

	Fiscal Years				
	2021	2020	2019	2018	2017
Operating Revenues					
Customer Charges	27,300,990	27,200,430	26,109,904	24,757,229	24,463,603
Impact Fees	0	0	0	0	0
Other Revenue	914,719	808,803	665,105	1,809,589	599,886
Total Operating Revenues	**28,215,709**	**28,009,233**	**26,775,009**	**26,566,818**	**25,063,489**
Expenditures					
Administration					
Salaries	298,277	286,173	272,785	165,469	146,591
Other	3,497,403	3,421,827	3,463,813	3,431,572	3,302,046
Operations					
Salaries	7,268,836	6,965,330	6,734,038	6,756,588	6,726,855
Other	7,199,497	7,344,994	6,665,299	6,799,795	6,598,044
Total Expenditures	**18,264,013**	**18,018,324**	**17,135,935**	**17,153,424**	**16,773,536**
Other (do not include depreciation)					
Debt principal	3,542,700	3,543,324	3,462,925	3,451,300	3,447,425
Interest	404,651	509,557	602,750	725,683	843,393
Capital outlay	4,762,411	8,241,895	5,669,758	3,436,954	4,987,089
Capital reserve	0	67,090	492,450	156,780	456,600
Transfer from (to) other funds					
Other (list):					
Total Other	**8,709,762**	**12,361,866**	**10,227,883**	**7,770,717**	**9,734,507**
Net Income (Loss)	**1,241,934**	**(2,370,957)**	**(588,809)**	**1,642,677**	**(1,444,554)**

	1.046	0.924	0.996	1.073	0.962

Operating Revenues ÷ (Total Expenditures + Debt Principal + Interest + Capital Outlay)

1.000

Calculation not including transfer to Capital reserve in denominator

Attachment 9

Certified Utility Rates

CITY OF WILSON
WATER SCHEDULE

1.0 AVAILABILITY:

1.1 This schedule is available to all domestic, commercial and industrial water services, subject to all City regulations and policies including those contained in Chapter 21 and 32 of the City Code and under the various applicable provisions contained hereunder.

2.0 APPLICABILITY:

2.1 This schedule is applicable to all water supplied to customer premises at one point of delivery through one water meter.

3.0 TYPE OF SERVICE:

3.1 The volume of water flow and pressure at the point of delivery, location of the meter, minimum specifications for connections and all other technical requirements shall be in accordance with the City's practices and procedures.

4.0 INSIDE CITY LIMITS:

4.1 Inside Rate Schedule

0	**-**	**50 ccf**	**@**	**$ 3.91 Per 100 cf**
51	**-**	**10,000 ccf**	**@**	**$ 3.50 Per 100 cf**
Over		**10,000 ccf**	**@**	**$ 2.82 Per 100 cf**

4.2 Inside Minimum Charges

Meter Size	**Cost Per Month**
5/8, 3/4 or 1	**$ 12.00 Per Month**
1 & ½	**$ 22.08 Per Month**
2	**$ 34.19 Per Month**
3	**$ 62.39 Per Month**
4	**$102.72 Per Month**
6	**$203.52 Per Month**
8	**$324.47 Per Month**
10	**$505.92 Per Month**

5.0 OUTSIDE CITY LIMITS:

An additional charge equal to one hundred percent (100%) of the inside rate schedule determined in Section 4.0 above shall be added to the monthly water charge for outside customers as an availability charge as follows:

5.1 Availability Rate Schedule (200% of Inside Rate Schedule)

0	**-**	**50 ccf**	**@**	**$ 7.82 Per 100 cf**
51	**-**	**10,000 ccf**	**@**	**$ 7.00 Per 100 cf**
Over		**10,000 ccf**	**@**	**$ 5.64 Per 100 cf**

CITY OF WILSON
WATER SCHEDULE

1.0 AVAILABILITY:

1.1 This schedule is available to all domestic, commercial and industrial water services, subject to all City regulations and policies including those contained in Chapter 21 and 32 of the City Code and under the various applicable provisions contained hereunder.

2.0 APPLICABILITY:

2.1 This schedule is applicable to all water supplied to customer premises at one point of delivery through one water meter.

3.0 TYPE OF SERVICE:

3.1 The volume of water flow and pressure at the point of delivery, location of the meter, minimum specifications for connections and all other technical requirements shall be in accordance with the City's practices and procedures.

4.0 INSIDE CITY LIMITS:

4.1 Inside Rate Schedule

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51	**-**	**10,000 ccf**	**@**	**$ 3.50 Per 100 cf**
Over		**10,000 ccf**	**@**	**$ 2.82 Per 100 cf**

4.2 Inside Minimum Charges

Meter Size	**Cost Per Month**
5/8, 3/4 or 1	**$ 12.00 Per Month**
1 & ½	**$ 22.08 Per Month**
2	**$ 34.19 Per Month**
3	**$ 62.39 Per Month**
4	**$102.72 Per Month**
6	**$203.52 Per Month**
8	**$324.47 Per Month**
10	**$505.92 Per Month**

5.0 OUTSIDE CITY LIMITS:

An additional charge equal to one hundred percent (100%) of the inside rate schedule determined in Section 4.0 above shall be added to the monthly water charge for outside customers as an availability charge as follows:

5.1 Availability Rate Schedule (200% of Inside Rate Schedule)

0	**-**	**50 ccf**	**@**	**$ 7.82 Per 100 cf**
51	**-**	**10,000 ccf**	**@**	**$ 7.00 Per 100 cf**
Over		**10,000 ccf**	**@**	**$ 5.64 Per 100 cf**

CITY OF WILSON
WASTEWATER RATE SCHEDULE

1.0 AVAILABILITY:

1.1 This schedule is available to all domestic, commercial and industrial sewer services, subject to all City regulations and policies including those contained in Chapter 31 and 32 of the City Code and under the various applicable provisions contained hereunder.

2.0 APPLICABILITY:

2.1 This schedule is applicable to all sewer collected from the customers premises whether or not the same is metered. All users shall participate in the Users Charge/Industrial Cost Recovery (UC/ICR) provisions as applicable, pursuant to federal regulation 40 CFR Sections 35.925-11, 35.925-12, 35.928, and Appendix B, and as approved by the United States Environmental Protection Agency.

3.0 TYPE OF SERVICE:

3.1 The volume of sewer flow, location of any meters, minimum specifications for connection, and all other technical requirements shall be in accordance with the City's practices and procedures.

4.0 SEWER RATE FOR BASIC SERVICE:

4.1 The sewer rental hereby imposed shall be a monthly charge based upon the volume of water supplied for the then current calendar month or such less period as may be covered by the water bill to such premises. The rate of charge shall be calculated at **ninety percent (90%)** of the water consumption by volume times **$ 5.40** per 100 cubic feet. Such rate of charge shall be subject to change by the City Council from time to time.

4.2 An additional charge equal to one hunderd percent (100%) of the monthly sewer rental determined in Section 4.1 above shall be added to the monthly charge for outside customers as an availability charge.

5.0 MONTHLY CAPACITY CHARGE:

5.1 In addition to the monthly sewer charge set forth in section 4.1 above, there shall also be assessed against every customer a monthly capacity charge based upon the size of each meter serving customer's premises. The monthly capacity charge until changed by City Council, shall be the monthly charge for sewer service and shall be as follows:

CITY OF WILSON
WASTEWATER RATE SCHEDULE
(Continued)

Meter Size (Inside)	Capacity Charge (Inside)
5/8	$ 13.00 Per Month
3/4	$ 13.00 Per Month
1	$ 13.00 Per Month
1 ½	$ 24.00 Per Month
2	$ 37.18 Per Month
3	$ 67.95 Per Month
4	$111.90 Per Month
6	$221.78 Per Month
8	$353.64 Per Month
10	$551.43 Per Month

An additional charge equal to one hundred percent (100%) of the monthly capacity charge determined above shall be added to the monthly capacity charge for outside customers as an availability charge, such that the monthly capacity charge for outside customers shall be as follows:

Meter Size (Availability)	Capacity Charge (Availability)
5/8	$ 26.00 Per Month
3/4	$ 26.00 Per Month
1	$ 26.00 Per Month
1 & ½	$ 48.00 Per Month
2	$ 74.36 Per Month
3	$135.90 Per Month
4	$223.80 Per Month
6	$443.56 Per Month
8	$707.28 Per Month
10	$1102.86 Per Month

6.0 MONTHLY SURCHARGE:

6.1 The monthly sewage charges described in Sections 4.1 and 5.1 above are the base volume and capacity charges for the discharge of domestic waste into the City's waste water treatment system. In addition to the charges set forth in Sections 4.1 and 5.1 above, all persons discharging industrial waste into the City sanitary sewer system shall be rendered a monthly bill as a surcharge representing the entire cost incurred by the City to treat all waste containing pollutants whose quantity or quality is in excess of the level normally found in domestic waste as set forth in Section 32-55 of the City Code. The monthly surcharges are as follows:

CITY OF WILSON

North Carolina

INCORPORATED 1849

Office of the City Clerk

Certification

I, Tonya A. West, City Clerk of the City of Wilson, North Carolina, do hereby certify that the foregoing is a true and accurate copy of the City of Wilson Water and Sewer Rate Tables that went into effect July 1, 2021.

WITNESS MY HAND AND THE SEAL OF THE CITY OF WILSON, NORTH CAROLINA, this the 30th day of September, 2021.

Tonya A. West, City Clerk – City of Wilson
Wilson, North Carolina

(SEAL)

P.O. BOX 10 | WILSON, NORTH CAROLINA 27894-0010 | TELEPHONE (252) 399-2302 | twest@wilsonnc.org