

# SOUTHWEST VIRGINIA

## COMPREHENSIVE REGIONAL WASTEWATER STUDY

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Virginia Department of Environmental Quality



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FEBRUARY 2023



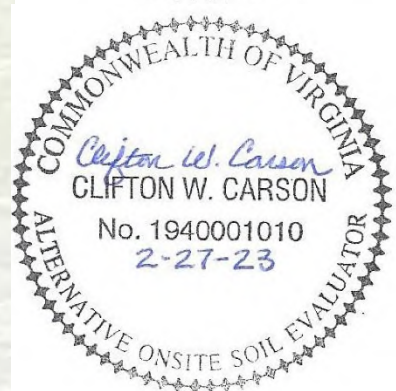
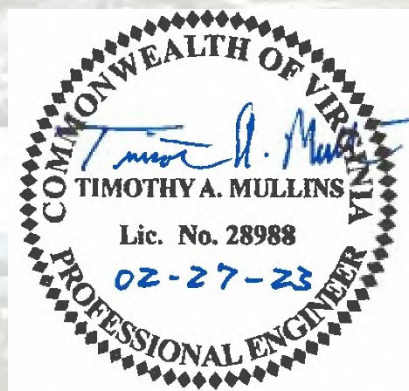
# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL WASTEWATER STUDY

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FEBRUARY 2023



# Southwest Virginia Comprehensive Regional Wastewater Study

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## 1.0 Executive Summary

The development of public wastewater collection, treatment and disposal infrastructure is one of the most challenging issues facing local governments within the LENOWISCO, Cumberland Plateau and Mount Rogers Planning District Commissions. Issues common to all of the localities include limited service area boundaries due to existing system capacities, aging systems that are becoming inadequate to serve the current customer base and an inability to serve adjacent areas of potential growth and development. Many areas have clusters of housing that currently have no acceptable means of wastewater treatment. In fact, many households are currently discharging into inadequate septic systems or discharging directly into streams, affecting environmental quality as well as public health.

The presence of approved wastewater collection and treatment systems is essential for the enhancement of public health, protection of the environment, successful economic development initiatives, and an increase in new housing production. Some of the most common problems resulting from the lack of this vital infrastructure include, but are not limited to, the following:

- Numerous environmental and public health problems stemming from the illegal discharge of raw sewage into surface waters and/or groundwater resources;
- Numerous environmental and public health problems arising from the use of failed, overstressed, and/or poorly maintained on-site septic tank/drain field systems;
- An inability to accommodate new housing production due to shallow depths of soil to bedrock and/or high groundwater conditions on potential building lots thereby preventing the approval of septic tank/drainfield systems;
- The lack of public wastewater collection and treatment systems limits the ability of planners and local officials to market Southwest Virginia to potential industrial prospects. Economic development activities are underway throughout Southwest Virginia in an effort to attract new industries, create jobs, and diversify the local economy. In many cases, the ability to market the region to a particular industrial prospect is directly linked to the availability of public wastewater collection and treatment services. Potential industries expect public wastewater collection and treatment to be available. Moreover, the prospect of developing mass septic tank/drainfield systems to accommodate industrial users is problematic due to costs and the resulting land area requirements.
- In some instances, building moratoriums are in effect for localities with existing wastewater collection and/or treatment systems that are hydraulically overloaded due to the impacts of I/I or existing average flows that exceed permitted capacities.

The sewer problems described in this Study affect many rural communities throughout the Commonwealth, however, the needs are more dramatic in Southwest Virginia due, in part to the steep topography, unique geology and several of the most bio-diverse rivers in the United States.

In 2005, The Southwest Regional Wastewater Study was completed, with its primary focus being to identify and prioritize those areas within the Cumberland Plateau, LENOWISCO, and Mount Rogers Planning Districts in need of sewer service. That 2005 Study prioritized and recommended fifty-nine (59) potential sewer projects with a total estimated cost of \$306,086,269.



The Virginia Department of Environmental Quality has provided funding to complete this Southwest Virginia Comprehensive Regional Wastewater Study Report in order to:

- a) Update the 2005 Study to quantify those needs which have been met and those areas which remain uncompleted.
- b) Inventory all existing public wastewater and collection systems within the Study area and identify those systems' needs.

Within the three PDC study areas, there were seventy-one (71) public wastewater collection systems identified, operated by forty (40) sewer service providers, serving nearly 59,000 customers:

Planning District	Estimated # of Sewer Customers	Daily Gallons Treated 2021	Daily Gallons Billed 2021	Percent Accountable	Overflows in 2021
Cumberland Plateau	10,613	6,352,047	1,695,213	26.7%	28
Lenowisco	15,550	6,562,597	5,646,750	51.6%	35
Mount Rogers	32,801	16,438,142	8,210,421	46.5%	97
<b>Totals</b>	<b>58,964</b>	<b>29,352,786</b>	<b>15,552,384</b>	<b>44.5%</b>	<b>160</b>

The percentage accountable is defined as the ratio of daily gallons billed to customers divided by the daily gallons treated. An accountability of 44.5% for the study area is low, indicating that Inflow/Infiltration (I/I) is a significant problem.

The existing sewer system customers within the study area were found to be paying very high sewer bills in an area of the State having Median Household incomes less than half of the Virginia state average MHI:

Planning District	Average Monthly User Cost – Based on 3,000 gallon Usage	2021 Median Household Income (MHI)	Sewer Bill as a Percentage of MHI
Cumberland Plateau	\$39.73	\$34,276	1.43 %
LENOWISCO	46.30	32,231	1.61
Mount Rogers	36.55	45,055	1.00
<b>Average</b>	<b>\$40.34</b>	<b>\$39,701</b>	<b>1.30</b>

There were eighty-one (81) VPDES permitted wastewater treatment plants identified within the study area, forth-four (44) of which are considered to be public community WWTP's:

Planning District	# of VPDES Discharges	Total Permitted Capacity, MGD	2021 Average Daily Discharge, MGD
Cumberland Plateau	31	19.946	10.297
LENOWISCO	20	14.832	7.357
Mount Rogers	30	22.199	10.444
<b>Totals</b>	<b>81</b>	<b>56.977</b>	<b>28.098</b>

As part of this Study's evaluations a total of ninety-six (96) Centralized Collection System, twenty-five (25) Decentralized, and seventy-three (73) Existing System Upgrade projects were identified and prioritized:

Planning District	Centralized Extensions	Decentralized Systems	Ex. System Upgrades
Cumberland Plateau	\$ 436,482,917	\$ 28,637,600	\$ 140,068,456
LENOWISCO	423,925,775	9,357,500	104,542,800
Mount Rogers	371,708,080	21,001,300	136,737,715
<b>Totals</b>	<b>\$1,232,116,772</b>	<b>\$ 58,996,400</b>	<b>\$ 381,348,971</b>

## 2.0 Introduction

The planning, design, construction, operation, and maintenance of public wastewater collection and treatment infrastructure is one of the most fiscally challenging issues facing local governments within Southwest Virginia. Many communities have sewerage systems that are aged, perhaps beyond their useful life. These same communities are finding it increasingly more difficult to adequately serve their existing customer base, much less expand to serve adjacent unserved areas where growth, development, and water quality issues warrant public sewer service. Rural Southwest Virginia includes clusters of residential development that currently have no acceptable means of wastewater treatment. These built-up areas either discharge into inadequate on-site systems or discharge directly to surface waters. Whereas extensions of existing centralized systems (expansion of existing collection systems to serve areas that are currently not served by a public wastewater system), are often considered viable alternatives, topography, rural setting, capacity of existing systems, existing service area boundaries, socio-economic factors unique to Southwest Virginia, and availability of affordable funding, make it difficult to coordinate service to constituents outside of current service area boundaries.

The existing Southwest Virginia Regional Wastewater Study was completed in 2005. Since then, a number of projects identified in the original study have been realized. However, this study is in need of revision, not only to identify and remove projects that have been partially or fully completed, but also to update feasibility, costs, and broadly identify needs of existing wastewater collection and treatment systems, particularly when considering expansion of centralized systems into areas where public wastewater collection and treatment is absent. An update to the Southwest Virginia Regional Wastewater Study is also needed to serve as a road map for the future implementation of sewer projects in Southwest Virginia, just as the Virginia Coalfields Regional Water Study (VCRWS) did in 1998 for drinking water projects, and because the Coalfield Water Development Fund is proposing to implement a wastewater demonstration project similar to the drinking water demonstration project. An updated study will also serve as a basis for need and costs for current and future Clean Watersheds Needs Survey efforts required by the Environmental Protection Agency for the Virginia Clean Water Revolving Loan Fund Program and for the upcoming Commonwealth Needs Assessment promulgated in 2021.

The Cumberland Plateau, LENOWISCO, and Mount Rogers Planning District Commissions (PDCs) received funding from the Virginia Department of Environmental Quality (DEQ) for the completion of a comprehensive regional wastewater study for Planning Districts One, Two, and Three. The PDCs procured the engineering team of The Lane Group, Inc. in association with Thompson & Litton and Onsite Systems Engineering to complete the Study.

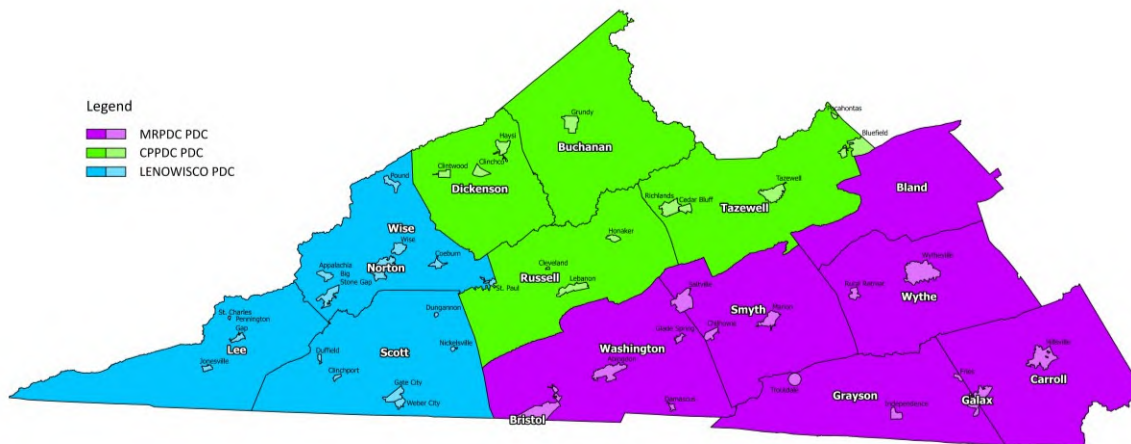


Figure 2.1 – Virginia – Planning Districts



## **2.1 Study Purpose and Scope**

The overall purpose of the Study is to develop a document to be utilized as a road map for the future implementation of sanitary sewer projects, both proposed new and existing systems and treatment facilities, in far Southwest Virginia. The Study will also serve as a basis for need and costs for current and future Clean Watersheds Needs Survey efforts required by the Environmental Protection Agency for the Virginia Clean Water Revolving Loan Fund Program and for the upcoming Commonwealth Needs Assessment promulgated in 2021.

This Study includes an inventory of existing public wastewater collection and treatment systems, including mapping. This inventory includes permit numbers, approximate number of service connections, owners, general age, physical condition, design flow, service area map, persistent permit violations and/or overflow issues, hydraulic limitations, and needs, including any repair/upgrade recommendations, and opinions of probable cost for the construction of any identified improvements.

This Study also identifies new projects and unserved areas in need of wastewater treatment service and will include an analysis of the ownership, operation and maintenance of public wastewater collection and treatment systems, including conventional and decentralized managed systems. All proposed new projects are evaluated using a rating matrix and ranked in order of recommended implementation. Opinions of Probable Cost have also been developed for each proposed project. Additionally, the Study updates the data contained in the existing 2005 study, identifies funding sources and strategies for implementing recommended projects, and develops general recommendations regarding future regionalization, public education and collaboration, and system operation and maintenance.

## **3.0 Challenges Faced by Far Southwest Virginia**

Providing and maintaining adequate sanitary sewer service is an enormous liability for any public entity. However, Southwest Virginia faces many unique challenges that compound the issues associated with sewer service. The following challenges must be recognized and addressed in order for this area of the Commonwealth to maintain, upgrade, and extend this essential service.

### **3.1 Depressed Economy**

For decades until the early to mid-1990s, the coal industry was booming in Southwest Virginia. Small towns and coal camps were thriving throughout the region. This resulted in a population explosion and the development of the necessary infrastructure, including sanitary sewer, to serve the coal miners and their families.

According to the first report issued by the Interagency Working Group on Coal and Power Plant Communities, Southwest Virginia is the fourth most coal-dependent area in the United States. The federal group, which consists of 11 federal agencies and the Appalachian Regional Commission and was created by President Joe Biden by executive order in January 2021, issued the report in April 2021 - [Federal group says Southwest Virginia is fourth most coal-dependent area in U.S. - Virginia Mercury](#)

### **3.2 Declining Population**

The decades long decline of the coal industry has had a devastating impact on the entire region. Table 3.2.1 illustrates some of the troubling trends for Southwest Virginia. According to the 2020 census data, every single county in far Southwest Virginia experienced a population decline over the past decade. The coalfield counties of Buchanan, Dickenson, Lee, Russell, Tazewell, and Wise all experienced double-digit percentage drops in population. The area's median household incomes are also only 40%-70% of the state average.

The area's infrastructure, particularly sanitary sewer systems and wastewater treatment plants, that was designed and constructed to serve and be maintained by much larger populations are now being operated and maintained by much fewer and increasingly economically challenged residents.

**Table 3.2.1 – Socioeconomic Trends of Southwest Virginia Compared to the Rest of the Commonwealth**

Source: U.S. Census Bureau, 2020 Census Results - [www.census.gov](http://www.census.gov)

<b>Cumberland Plateau PDC</b>	<b>Total Population</b>	<b>Population Change 2010-2020</b>	<b>Population 65 years and older</b>	<b>Median Household Income</b>
Buchanan County	20,355	-15.5%	23.1%	\$34,302
Dickenson County	14,124	-11.2%	23.0%	\$30,116
Russell County	25,781	-10.8%	22.5%	\$38,564
Tazewell County	40,429	-10.3%	23.1%	\$42,207
<b>LENOWISCO PDC</b>	<b>Total Population</b>	<b>Population Change 2010-2020</b>	<b>Population 65 years and older</b>	<b>Median Household Income</b>
City of Norton	3,687	-6.8%	Unknown	\$30,518
Lee County	22,173	-13.3%	22.2%	\$35,006
Scott County	21,576	-6.9%	24.9%	\$41,540
Wise County	36,130	-12.8%	19.2%	\$41,285
<b>Mount Rogers PDC</b>	<b>Total Population</b>	<b>Population Change 2010-2020</b>	<b>Population 65 years and older</b>	<b>Median Household Income</b>
Bland County	6,270	-8.1%	23.6%	\$50,365
Carroll County	29,155	-3.0%	25.4%	\$44,518
City of Bristol	17,219	-3.5%	21.5%	\$39,679
City of Galax	6,720	-4.6%	20.3%	\$35,184
Grayson County	15,333	-1.3%	25.3%	\$41,558
Smyth County	29,800	-7.5%	22.6%	\$41,088
Washington County	53,935	-1.7%	23.6%	\$50,928
Wythe County	28,290	-3.2%	22.1%	\$51,639
	<b>Total Population</b>	<b>Population Change 2010-2020</b>	<b>Population 65 years and older</b>	<b>Median Household Income</b>
<b>State of Virginia</b>	<b>8,631,393</b>	<b>7.9%</b>	<b>16.5%</b>	<b>\$76,398</b>

### 3.3 Environmental Justice Issues

The primary aim of environmental justice is to ensure that each and every person benefits from equal degree of protection from environmental and health hazards. Environmental injustice happens when people are disproportionately impacted by environmental factors because of discrimination. Data gathered from the EPA EIScreen Mapping Tool ([www.ejscreen.epa.gov/mapper](http://www.ejscreen.epa.gov/mapper)) indicates that a majority of the localities in Southwest Virginia rank in the 80 - 100 percentile in a multitude of socioeconomic indicators and health disparities. This underscores the importance of the provision and proper maintenance of sanitary sewer systems that protect public health and the environment of Southwest Virginia.

### 3.4 Aging Infrastructure

A significant number of the sanitary sewer systems in Southwest Virginia were constructed in the mid- 1900s and are well over 70 years old. Many of these systems contain large portions of concrete and terracotta lines, masonry brick manholes, and antiquated pump stations. As sewer systems age and surpass their design life, they begin to quickly deteriorate (Figure 3.4.1). This results in collapsed lines (Figure 3.4.2), root intrusion, line blockages, increased infiltration and inflow, and decreased system capacity. The aging systems quickly fill with rainwater runoff during wet weather periods and sewer system overflows are common. Sewer lines are often buried deeply beneath town streets, sidewalks, and other structures. The existing lines are also frequently adjacent to other utilities including water, gas, stormwater, and power, making excavation for repairs dangerous and expensive. Aging wastewater treatment facilities and pump stations contain outdated components that are difficult and costly to maintain. As with any infrastructure, sewer systems become more difficult and expensive to maintain as they age. Many of the region's systems are beyond rehabilitation and will require replacement. With each passing year, the cost of maintaining, rehabilitating, and replacing Southwest Virginia's aging sewer systems will continue to increase exponentially.

There are many conventional onsite septic systems (COSS) in Southwest Virginia that are reaching the end of their useful life, which is generally considered to be 30 to 40 years. The lifespan is dependent upon how the system was designed and installed, how it has been used (or abused), and if it has been serviced and maintained on a regular basis. Another problem with the older septic systems is they were installed under much less stringent regulations than today, and before the current requirement of having a 50% reserve area for repairs in case of system failure. As a result, repairs or replacement systems are very expensive.



Figure 3.4.1 – Deteriorated Section of Concrete Sewer Line





Figure 3.4.2 – Collapsed Section of Terracotta Sewer Line

### 3.5 User Costs

User costs are a direct correlation between the cost to operate and maintain the sewer system and the number of users billed for the use of the system. Because of the region’s declining population and aging infrastructure, most sewer system owners and operators in Southwest Virginia are faced with increasing costs and fewer customers to pay the bills. In addition, many of these customers earn well below the median household income in Virginia. Table 3.5.1 illustrates the average user cost in each of the three PDCs in far Southwest Virginia, based on information obtained for this study.

Table 3.5.1 Average User Cost

Planning District	Average Monthly User Cost – Based on 3,000 gallon Usage	2021 Median Household Income (MHI)	Sewer Bill as a Percentage of MHI
Cumberland Plateau	\$39.73	\$34,276	1.43 %
LENOWISCO	46.30	32,231	1.61
Mount Rogers	36.55	45,055	1.00
<b>Average</b>	<b>\$40.34</b>	<b>\$39,701</b>	<b>1.30</b>

Appendix I provides information about DEQ’s Clean Water State Revolving Fund program. DEQ has established affordability criteria based upon the locality’s median household income (MHI), average sewer cost as a percentage of MHI, the locality’s unemployment rate, and population trends.

The 2021 Median Household Income for the State of Virginia was \$80,963. All of far Southwest Virginia’s localities are well below the State’s MHI, most are less than half. Far Southwest Virginia has a declining population base and unemployment rates are typically higher than the State average. Using DEQ’s Affordability Criteria and an average MHI of \$39,701, a reasonable sewer cost would be expected to be within the category of 0.75% of MHI – equivalent to \$24.81/month. Currently, the average monthly residential sewer bill in the study area was found to be \$40.34.

### **3.6 Topography and Soil Conditions**

Southwest Virginia is known for towering mountains and deep valleys. The topography that gives the region such beauty also presents unique challenges for the construction and maintenance of sewer systems. For gravity sewers to operate, minimum grades must be maintained and because of the region's topography, this requires that many lines be constructed at significant depths. It is not uncommon in Southwest Virginia for sewer lines to be constructed over 15 feet in depth. This creates obvious issues with future maintenance. Most sewer collection systems in the region also contain multiple pumping stations to overcome topographic challenges. These pump stations are often expensive to construct and maintain.

Soil conditions in Southwest Virginia also present unique challenges to the development of sewer systems. Clayey soil is predominant in much of the region. Clay soil does not drain well and therefore is less than ideal for the construction of drip systems and septic systems that require percolation in order to function properly. Many locations in Southwest Virginia have significant issues with failing septic systems and are prevented from adding new septic systems because of these soil conditions.

Subsurface rock is also prevalent throughout the region. Rock excavation greatly increases the difficulty and the cost of sewer system construction. In addition, as with clay soil, the presence of subsurface rock can prevent the installation of decentralized systems and septic systems. Topographic and soil condition challenges alone can render a potential sewer extension project infeasible.

Physical features, landscape position, and soil characteristics all affect the ability of soil-based septic systems to treat and disperse sewage effluent. When selecting areas for placement of soil-based absorption systems, considerations include local hydrologic conditions, regional geology, and the physical properties of the soil being evaluated. Features that must be considered include soil depth, seasonal water table, topography/slope, drainage ways, fill material, rock outcrops, sink holes, flood plain, alluvial and colluvial deposits, shrink-swell soils, other soil restrictions, and free standing water. In the three planning districts, all of these features can prove problematic. In the more mountainous areas, shallow soil depth, rock outcroppings, steepness of slope, and shallow seasonal water tables are the main deterrents to siting soil-based systems. Valley floors underlain by limestone may contain sinkholes, shrink-swell soils, and rock outcroppings which must be avoided. In the coalfields, previously surfaced mined areas provide some of the best locations for residential and commercial development, but the presence of fill material prohibits the development of onsite septic systems.

### **3.7 Wastewater Treatment Plant Operators**

According to the EPA's America's Water Sector Workforce Initiative [America's Water Sector Workforce Initiative \(epa.gov\)](https://www.epa.gov/america-water-sector-workforce-initiative), "the nation is beginning to encounter critical and unprecedented staffing shortages in the water workforce that operates and maintains the country's essential drinking water and wastewater infrastructure. The median age of wastewater treatment employees is 48 years and 30 to 50 percent of these workers will be eligible to retire within the next 5 to 10 years. The Government Accountability Office (GAO) and Brookings Institution reports both came to similar conclusions in 2018 and utility leaders across the country are echoing this concern." The challenge of retaining existing and attracting new qualified operators is exacerbated in Southwest Virginia because of the socio-economic realities facing the region. In order to compete with the rest of Virginia for system operators, Southwest Virginia will need to offer competitive pay and benefits.

The onsite wastewater industry has the same operator shortage problems as the larger municipal wastewater systems. All VDH permitted alternative onsite sewage systems (AOSS), regardless of size and type, are required to have the treatment system operated and maintained by a licensed alternative onsite sewage system operator. Regular inspection visits to the system are required, along with sampling and reporting,

depending on the system size and type. And all VDH single family discharging systems with a VPDES permit are required to have a licensed operator (Class IV or higher wastewater works operator or alternative onsite sewage system operator), to ensure that monitoring and maintenance is occurring. There are approximately 900 active DEQ General Permit VPDES discharges (1,000 GPD or less) in the three Planning Districts, and coupled with the lack of certified operators, the result is routine service and maintenance is being neglected on many of these small discharging systems. Concern has been expressed by the local health departments that homeowners do not have adequate access to licensed operators to properly operate and maintain their systems to comply with regulatory requirements.

### **3.8 Straight Piping**

Straight piping is a type of sewage disposal that transports untreated or partially treated sewage directly to the ground surface or to a stream. It is not known how many straight pipe discharges there are in the three planning districts, as there has been no inventory or count made of them. They are more common in the coalfield counties due to topography and soil conditions, and in former coal camps due to very small house lots. Often they are not discovered until someone reports a problem or if the property is being sold. They are prohibited by the VDH *Sewage Handling and Disposal Regulations*, and enforcement is achieved today by the power company denying electrical service unless an approved septic system permit has been issued. In years past, however, straight pipe systems were often seen as the only option by residents in unsewered rural areas due to the site challenges discussed above such as soil conditions, rock, and limited area, as well as the cost for installing an approved onsite treatment and disposal system.

## **4.0 The Importance of Wastewater Collection and Treatment and Disposal Systems**

Essential for life, clean water is one of the most important natural resources on the planet. Wastewater contains many harmful substances and cannot be released back into the environment until it is treated. Thus, the importance of wastewater treatment is twofold: to restore the water supply and to protect people and animals from toxins. All communities need to ensure they have good wastewater treatment processes in place so that treated water can be safely returned to the water cycle.

### **4.1 Public Health**

Untreated, the pathogens in wastewater can contaminate drinking water and crops, affecting human health. Untreated wastewater can also harm the health of animals, plants and birds that live in or near the water. Humans "catch" diseases from wastewater in a variety of ways. Pathogens in wastewater may be transmitted by direct contact with sewage, by eating food or drinking water contaminated with sewage, or through contact with human, animal, or insect carriers. Pathogens in wastewater include bacteria, viruses and parasites. Diseases caused by bacteria in wastewater include typhoid, dysentery, bacterial gastroenteritis, and cholera. Viruses in wastewater cause Hepatitis A, polio, and viral gastroenteritis, while parasites in wastewater cause giardiasis and cryptosporidiosis.

In cases of inadequate wastewater treatment, excessive amounts of the nutrients nitrogen and phosphorus sometimes invade water sources causing algae blooms. Algae blooms are dangerous to fish because they use a lot of the oxygen in the water. They can also have a strong, objectionable smell and can affect the taste of water.

Metals, such as cadmium, copper, lead, nickel, and zinc, can also be found in wastewater. Some of these metals are needed in trace amounts by our bodies but can be harmful in larger doses. Other potentially toxic substances can enter wastewater from various sources, such as local business, industry, or storm water runoff. These substances can include pesticides and chemicals like chlorinated hydrocarbons, phenol, PCBs (polychlorinated biphenyls), and benzene.



Ensuring proper wastewater treatment and disposal is as important for protecting community health as drinking water treatment, garbage collection, and immunization programs.

## **4.2 Recreation and Tourism**

Recreational opportunities are a primary reason people choose to live by, or visit, the rivers and lakes of Southwest Virginia. The recreation demand is increasing every year and having clean water is a vital component to attracting visitors to our area.

Tourists use Southwest Virginia's rivers, lakes, and streams for many different forms of recreation. Some recreational activities take place in or on the water, such as swimming, boating, fishing, and whitewater rafting. Other activities are enhanced by being close to water, such as hiking, nature viewing, and hunting waterfowl.

The good condition of these rivers, lakes and streams is vital to attracting tourism to the region, but many of these water bodies contain pathogens, as well as other biological and chemical contaminants. The presence of these contaminants determine whether people can enjoy recreational activities without risk to human health. People can be exposed to contaminants if they swim in contaminated waters or near storm water or sewage outfall pipes, especially after a rainfall event.

People can be exposed to contaminants through skin contact, by swallowing water, or through eating recreationally-caught fish. Effects can range from minor illnesses to potentially fatal diseases. Children, the elderly, and people with compromised immune systems are most at risk.

## **4.3 Future Economic Growth**

The ability to grow the economy of Southwest Virginia is closely tied to wastewater. Without adequate wastewater capacity, and fully functioning collection and treatment systems in place, new businesses and industries won't be able to move here, and existing businesses and industries will not be able to expand. Southwest Virginia already has an excellent inventory of available land, good roads, and a robust electrical power and water infrastructure. But the key to attracting new industries and expanding existing, will be the ability and willingness to improve and extend the wastewater collection and treatment infrastructure to support new and expanding industries, businesses and residential development. It is important to note that...

- Properties that have public sewer available are far more attractive to economic development prospects than areas without that infrastructure.
- Water and wastewater infrastructure are interwoven into every aspect of the US economy. Reliable wastewater collection and treatment is an enabling force for economic growth and prosperity. Unreliable and deteriorating infrastructure, on the other hand, will put the region's communities and economy at risk.
- Improved wastewater resources management boosts regional economic growth and contributes greatly to poverty eradication.
- The economic benefits of improved water supply and – in particular – wastewater treatment, far outweigh the investment costs.
- Investing in wastewater is good business – improved water resources management and improved sanitation contributes significantly to increased production and productivity within economic sectors.

#### 4.4 303(d) Listed Impaired Waters

To meet US EPA requirements, the Virginia Department of Environmental Quality (DEQ) has to assess water quality monitoring data for Virginia’s surface waters every two years to determine if they contain pollutants at levels that exceed protective water quality standards. Water bodies and pollutants that exceed protective water quality standards are placed on the State’s 303(d) List. Placement of a water body and pollutant on the 303(d) List requires the development of a Total Maximum Daily Load (TMDL), a water quality improvement plan. In some cases, other regulatory programs will address the impairment instead of a TMDL, or the water quality may improve as a result of remedial actions or implementation of control measures. Each State is required to report on the condition of its surface water quality biennially to US EPA.

The six designated uses in Virginia against which water bodies are assessed include:

**Aquatic Life Use:** *supports the propagation, growth, and protection of a balanced indigenous population of aquatic life which may be expected to inhabit a waterbody. In Chesapeake Bay waters (mainstem and tributaries), this use is divided into sub-uses that target specific aquatic life assemblages*

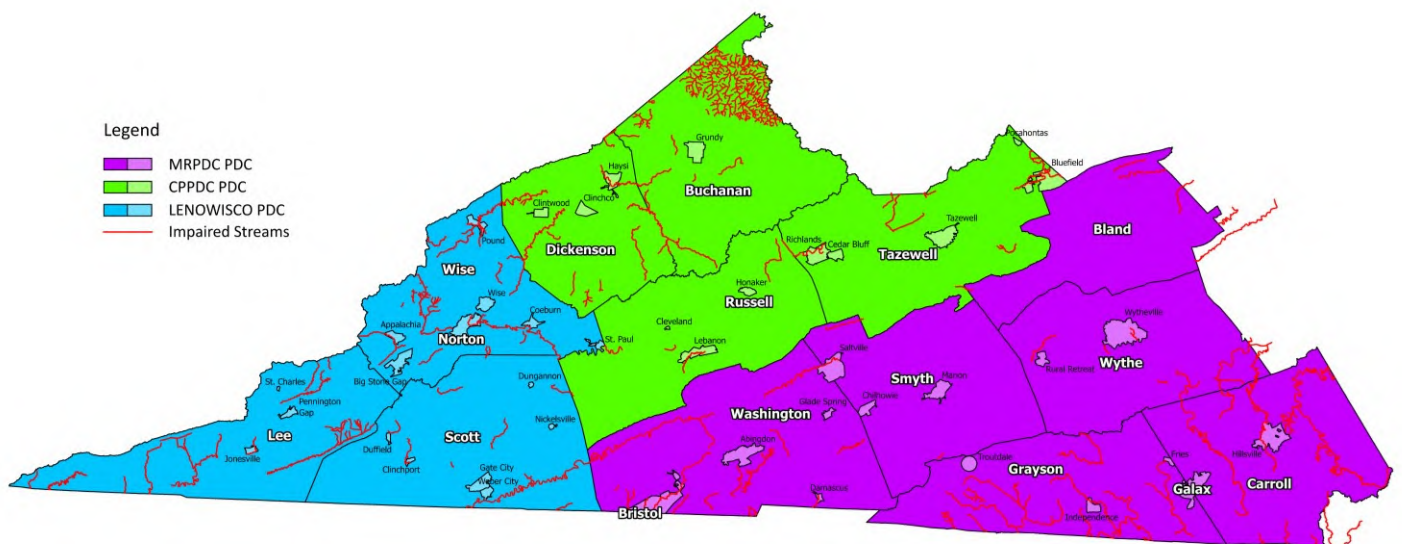
**Recreation Use:** *supports swimming, boating, and other water-contact recreational activities*

**Fish Consumption Use:** *supports game and marketable fish species that are safe for human health*

**Shellfishing Use:** *supports the propagation and marketability of shellfish (clams, oysters, and mussels)*

**Public Water Supply Use:** *supports safe drinking water*

**Wildlife Use:** *supports the propagation, growth, and protection of associated wildlife*



As part of this Study, consideration was given to DEQ’s Impaired Waters listing with respect to identification of areas where failing sewer systems or lack of sewer service could be contributing factors.

#### 5.0 Existing Wastewater Systems Inventory

The original 2005 Southwest Virginia Regional Wastewater Study considered primarily new sewer service extensions and did not evaluate the condition of existing wastewater collection or treatment systems. The scope of work for this Study update included an assessment of all existing municipal wastewater systems within the three PDC study area.

## 5.1 General Descriptions

### 5.1.1 Existing Collection Systems

Appendix A of this Study includes a description of all the municipal wastewater collection systems within the three PDC's. Each sewer service provider was requested to provide information pertaining to the number of customers served and their makeup, gallons billed and treated during calendar year 2021, number of system overflows reported during calendar year 2021, and other relevant data. System mapping is also provided for each collection system. Over seventy (70) municipal sewage collection systems identified within the three PDC study area.

### 5.1.2 Existing Treatment Facilities

Appendix A of this Study also includes a description of all the municipal wastewater treatment plants within the three PDC's. As part of the Study evaluation, DEQ was requested to provide the monthly Discharge Monitoring Reports (DMR's) for each of the facilities for all of calendar year 2021. A total of eighty-one (81) facilities have VPDES permitted discharges within the study area, forty-four (44) of which are public community WWTPs.

### 5.1.3 Existing Onsite Wastewater Systems

There are three classifications of onsite wastewater systems that are regulated by the Virginia Department of Health (VDH) and/or the Virginia Department of Environmental Quality (DEQ). These are described as follows:

1. Conventional Onsite Sewage System (COSS) – These are defined by VDH as a treatment works system consisting of one or more septic tanks with the effluent conveyed by gravity, pump, or siphon to a gravity distributed subsurface soil absorption drainfield, consisting of one or multiple trenches.
2. Alternative Onsite Sewage System (AOSS) – These are defined by VDH as any treatment works system that is not a conventional onsite sewage system and which does not result in a point source discharge. There are many types of alternative treatment systems, including aerobic treatment units, single pass or recirculating media filters (using various types of filter media), constructed wetlands, and others. There also are alternative disposal systems including pads or mounds, low pressure distribution, drip dispersal, and spray irrigation.

The approximate number of permitted alternative onsite systems in the three planning districts provided by the Health District offices were:

Cumberland Plateau = 100  
Lenowisco = 135  
Mt. Rogers = Number not Provided

3. DEQ General Permit Discharges – These are treatment systems that provide secondary (TL-2) or advanced (TL-3) wastewater treatment, along with disinfection, prior to discharging the effluent to a surface stream or to a dry ditch. These are permitted by DEQ under the VPDES General Permit program, which is for discharges less than or equal to 1000 GPD. DEQ and VDH issue a combined permit if the system is for a single family residence, and it is a DEQ regulated permit if it is for any other type of discharge, i.e. multi-family, church, commercial establishment, etc.

There are approximately 900 VPDES General Permits in the three Planning Districts, as follows:

Cumberland Plateau = 503  
Lenowisco = 304  
Mt. Rogers = 91

A complete list of VPDES General Permits in the three planning districts is included in Appendix F.

## 5.2 Overall Condition Assessment

### 5.2.1 Existing Collection Systems

Each wastewater utility within the three PDC study area was requested to provide a breakdown of the number and type of customers served by each system as well as volume of wastewater treated and billed for each month during calendar year 2021. A majority of the systems provided all of the requested information, but some did not. A summary table of the findings is presented as follows:

Planning District	Estimated # of Sewer Customers	Daily Gallons Treated 2021	Daily Gallons Billed 2021	Percent Accountable	Overflows in 2021
Cumberland Plateau	10,613	6,352,047	1,695,213	26.7%	28
Lenowisco	15,550	6,562,597	5,646,750	51.6%	35
Mount Rogers	32,801	16,438,142	8,210,421	46.5%	97
<b>Totals</b>	<b>58,964</b>	<b>29,352,786</b>	<b>15,552,384</b>	<b>44.5%</b>	<b>160</b>

Collectively within the study area, there were found to be about seventy-one (71) existing collection systems operated by forty (40) public sewer service providers with a total of 58,964 customers. Within each of the three PDC's, sewer system accountability was found to be a widespread problem. Accountability is defined to be the percentage of gallons billed to customers divided by the gallons treated. As a whole, the study area's sewer systems had an average accountability of about 44.5%. The unaccounted flow is largely comprised of inflow and infiltration (I/I).

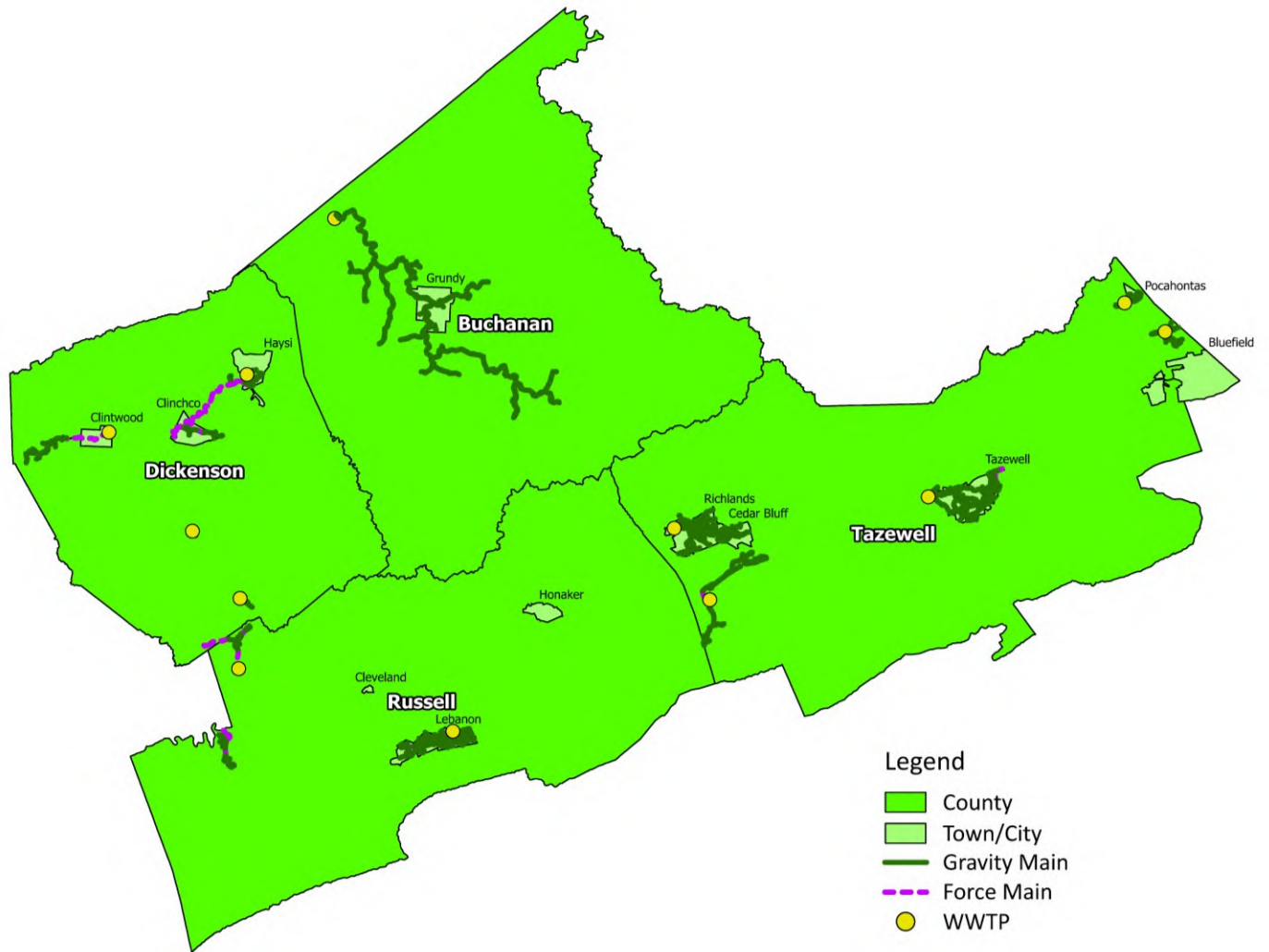
Summary information for those systems that provided an information response is provided for each Planning District. For the collection systems, Primary systems are those collection systems which also have a WWTP. Secondary systems are those which collect wastewater but convey to another system for treatment.



Within the Cumberland Plateau PDC, there are thirteen (13) sewer systems operated by ten (10) public sewer service providers. A summary of data provided by those systems follows:

**Summary Table of Wastewater Collection Systems - Cumberland Plateau PDC**

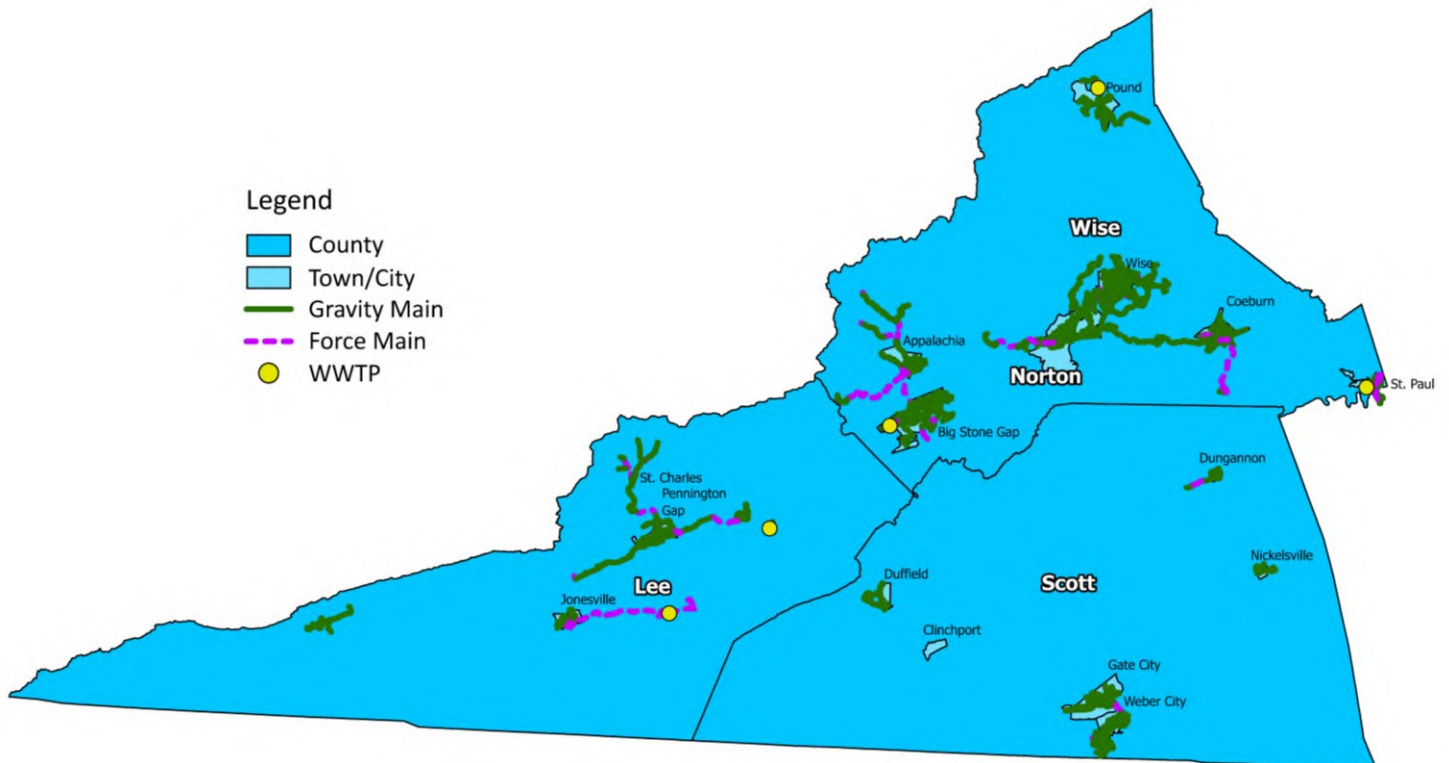
Sewer System	Primary Systems		Secondary Systems		Daily Gallons Billed, 2021	Percent Accountable	Overflows in 2021
	Number of Customers	Daily Gallons Treated, 2021	Number of Customers	Daily Gallons Treated, 2021			
Buchanan County PSA - Conaway	1,398	1,680,458			387,571	23.1%	5
Town of Cleveland	Not Provided	40,047			Not Provided	#VALUE!	N/A
Town of Clintwood	913	197,705			116,837	59.1%	0
Dickenson County PSA - Haysi	333	195,984			62,726	32.0%	4
Dickenson County PSA - Trammell	40	4,046			2,284	56.5%	0
Town of Honaker	630	112,975			131,074	116.0%	9
Town of Lebanon	1,653	562,213			230,026	40.9%	4
Town of Richlands	2,425	2,171,066			344,047	15.8%	N/A
Russell County PSA - Dante	Not Provided	32,173			Not Provided	#VALUE!	N/A
Tazewell County PSA - Claypool Hill	974	197,397			117,818	59.7%	0
Tazewell County PSA - Falls Mills / Hales Bottom	171	53,863			16,589	30.8%	0
Tazewell County PSA - Northern County	155	216,132			Not Provided	#VALUE!	6
Town of Tazewell	1,921	887,989			286,239	32.2%	0
<b>Totals</b>	<b>10,613</b>	<b>6,352,047</b>	<b>0</b>	<b>0</b>	<b>1,695,213</b>	<b>26.7%</b>	<b>28</b>



Within the Lenowisco PDC, there are twenty-nine (29) sewer systems operated by fourteen (14) public sewer service providers. A summary of data provided by those systems follows:

**Summary Table of Wastewater Collection Systems - LENOWISCO PDC**

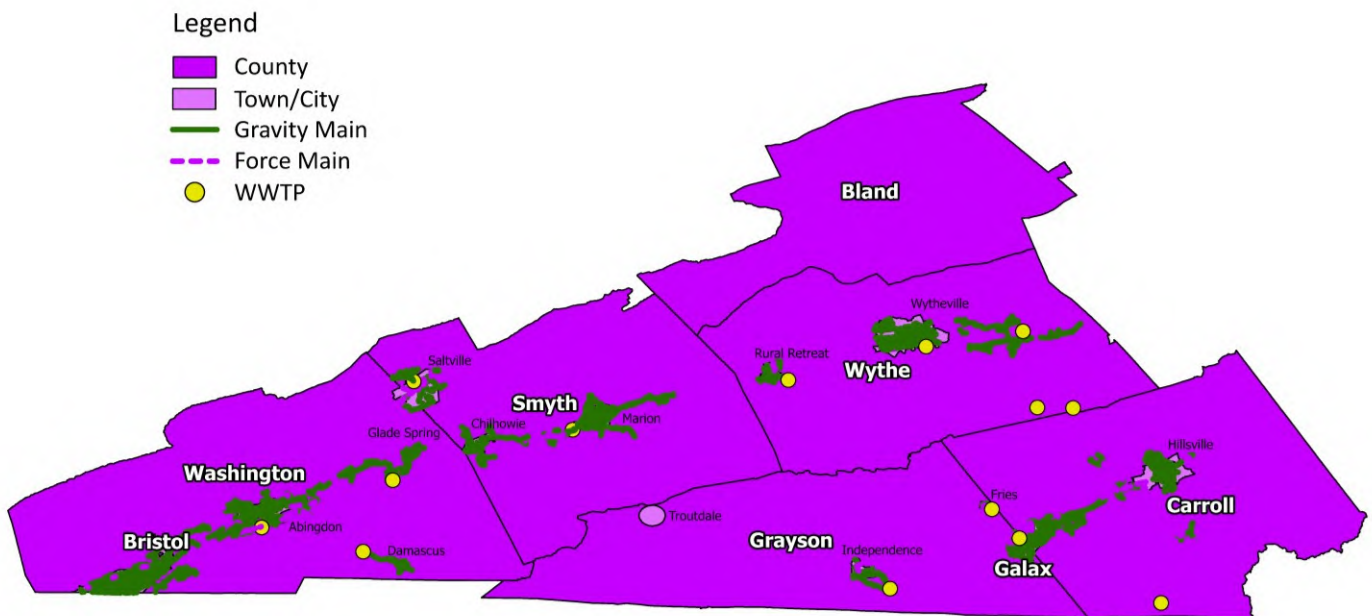
Sewer System	Primary Systems		Secondary Systems		Daily Gallons Billed, 2021	Percent Accountable	Overflows in 2021
	Number of Customers	Daily Gallons Treated, 2021	Number of Customers	Daily Gallons Treated, 2021			
Town of Appalachia			710	134,535	80,986	60.2%	0
Town of Big Stone Gap	2,573	1,239,252			362,322	29.2%	31
CNW Regional WW Treatment Authority	4	3,636,658			3,653,000	100.4%	0
Town of Coeburn			996	654,430	106,594	16.3%	0
Town of Dungannon	231	23,285			19,224	82.6%	0
Town of Gate City			939	319,345	112,602	35.3%	0
Town of Jonesville			510	44,055	Not Provided	#VALUE!	0
Lee County PSA - Ben Hur			87	55,000	23,393	42.5%	0
Lee County PSA - Cross Creek Subdivision	88	10,000			Not Provided	#VALUE!	0
Lee County PSA - Dryden			225	54,226	26,130	48.2%	0
Lee County PSA - Ewing			12	Not Provided	1,060	#VALUE!	0
Lee County PSA - Hickory Flats	23	287,386			238,932	83.1%	0
Lee County PSA - Rose Hill	143	59,852			12,897	21.5%	0
Lee County PSA - St. Charles			189	65,000	14,150	21.8%	0
City of Norton			2,195	2,289,249	300,763	13.1%	1
Town of Pennington Gap	983	286,989			Not Provided	#VALUE!	2
Town of Saint Paul	412	80,871			47,840	59.2%	0
Scott County PSA - Duffield	151	196,622			96,569	49.1%	0
Scott County PSA - Holston Regional	986	141,274			87,986	62.3%	1
Scott County PSA - Nickelsville	247	36,145			21,707	60.1%	0
Wise County PSA - Exeter / Imboden			152	Not Provided	9,487	#VALUE!	0
Wise County PSA - Fairgrounds			27	Not Provided	3,167	#VALUE!	0
Wise County PSA - Guest River			141	21,600	12,730	58.9%	0
Wise County PSA - Hamilton Town			72	15,840	6,940	43.8%	0
Wise County PSA - Josephine			77	12,960	9,138	70.5%	0
Wise County PSA - Pound	667	564,263			57,120	10.1%	A lot
Wise County PSA Roda / Osaka / Stonega / Derby			212	Not Provided	13,254	#VALUE!	0
Wise County PSA - Tacoma / Riverview			319	Not Provided	20,835	#VALUE!	0
Town of Wise			2,179	710,000	307,924	43.4%	0
<b>Totals</b>	<b>6,508</b>	<b>6,562,597</b>	<b>9,042</b>	<b>4,376,240</b>	<b>5,646,750</b>	<b>51.6%</b>	<b>35</b>



Within the Mount Rogers PDC, there are twenty-nine (29) sewer systems operated by sixteen (16) public sewer service providers. A summary of data provided by those systems follows:

**Summary Table of Wastewater Collection Systems - Mount Rogers PDC**

Sewer System	Primary Systems		Secondary Systems		Daily Gallons Billed, 2021	Percent Accountable	Overflows in 2021
	Number of Customers	Daily Gallons Treated, 2021	Number of Customers	Daily Gallons Treated, 2021			
Town of Abingdon	5,151	2,324,493			879,720	37.8%	16
Bland County - Bastian	411	97,225			Not Provided	#VALUE!	6
BVU Authority	7,900	6,471,000			2,027,057	31.3%	3
Carroll County PSA - I-77 Exit 1	3	8,734			12,702	145.4%	0
Carroll County PSA - Fancy Gap			76	9,369	9,568	102.1%	0
Carroll County PSA - Gladeville Cranberry			962	639,632	552,327	86.4%	2
Town of Chilhowie	1,180	261,641			285,730	109.2%	3
Town of Fries	310	84,321			21,069	25.0%	0
City of Galax	2,900	1,674,101			752,633	45.0%	11
Town of Hillsville	1,235	373,260			261,020	69.9%	13
Town of Independence	499	287,384			162,570	56.6%	0
Town of Marion	2,960	1,389,526			700,841	50.4%	0
Town of Rural Retreat	742	230,137			118,082	51.3%	2
Town of Saltville	947	329,005			75,223	22.9%	12
Smyth County - Adwolfe			70	10,466	10,438	99.7%	0
Smyth County - Allison Gap			116	16,587	8,046	48.5%	0
Smyth County - Atkins			85	174,277	58,316	33.5%	0
Smyth County - Green Hill			Not Provided	Not Provided	Not Provided	#VALUE!	0
Smyth County - Hall Addition			211	19,441	17,189	88.4%	0
Smyth County - Hungry Mother			205	57,136	22,449	39.3%	0
Smyth County - Staley Creek			82	88,814	6,798	7.7%	0
Wash. Co. Service Authority - BVU Area			429	149,765	92,402	61.7%	0
Wash. Co. Service Authority - Damascus	490	155,452			105,541	67.9%	1
Wash. Co. Service Authority - Exit 13 Area			379	65,408	81,632	124.8%	0
Wash. Co. Service Authority - Hall Creek	1,482	323,025			319,206	98.8%	3
Wythe County - Austinville	65	3,000			5,900	196.7%	0
Wythe County - Exit 24 / Poplar Camp	18	1,831			2,000	109.2%	0
Wythe County - Fort Chiswell / Max Meadows	674	361,790			507,000	140.1%	0
Town of Wytheville	3,219	2,062,216			1,114,962	54.1%	25
<b>Totals</b>	<b>30,186</b>	<b>16,438,142</b>	<b>2,615</b>	<b>1,230,895</b>	<b>8,210,421</b>	<b>46.5%</b>	<b>97</b>





The data indicates that the sum total of all collection systems includes a significant amount of unaccountable wastewater being collected and treated. For the Study area as a whole, the average daily volume of wastewater being treated in 2021 was about **29.4 MGD** with an average daily billing volume of about **15.5 MGD**, or only about **44.5 %** accountable.

### 5.2.2 Existing Treatment Facilities

Within the three PDC study areas, there are a total of eighty-one (81) VPDES permitted WWTP discharges:

Planning District	# of VPDES Discharges	Total Permitted Capacity, MGD	2021 Average Daily Discharge, MGD
Cumberland Plateau	31	19.946	10.297
LENOWISCO	20	14.832	7.357
Mount Rogers	30	22.199	10.444
<b>Totals</b>	<b>81</b>	<b>56.977</b>	<b>28.098</b>

Of those systems, forty-four (44) of the facilities are considered to be public community WWTPs. The balance would be for smaller treatment plants serving individual schools, campgrounds, and other facilities. Collectively for the combined study area, the WWTPs operated at about 49.3% of their permitted discharge capacity during calendar year 2021.

As part of the Study, DEQ was requested to provide Discharge Monitoring Records (DMRs) for all of the permitted VPDES discharges for the entire calendar year 2021. Summary information is provided for all of those WWTPs within each Planning District.



There are thirty-one (31) active VPDES permitted WWTP discharges within the Cumberland Plateau Planning District, fifteen (15) of which are public community WWTPs:

**CUMBERLAND PLATEAU PLANNING DISTRICT COMMISSION**  
**PERMITTED WWTP DISCHARGE SUMMARIES FOR CALENDAR YEAR 2021**

<u>Facility</u>	<u>Permit No.</u>	<u>Permitted Flow Capacity, MGD</u>	<u>Average Daily Flow for 2021, MGD</u>	<u>Maximum Daily Flow for 2021, MGD</u>	<u>Highest 3-Consecutive Month Avg. Flow, MGD</u>
Buchanan Cnty PSA - Conaway WWTP	VA0090531	2.000	1.667	2.350	2.033
Buchanan Cnty PSA - Council Industrial Park STP	VA0087254	0.017	0.001	0.001	0.001
Buchanan Cnty PSA - Deskins STP	VA0090239	0.003	0.001	0.001	0.001
Buchanan Cnty Public Schools - Hurley High School	VA0026972	0.008	0.003	0.003	0.007
Buchanan Cnty Public Schools - Twin Valley H S STP	VA0068438	0.007	0.003	0.003	0.003
Buchanan Cnty Public Schools-Hurley Middle School	VA0067521	0.017	0.004	0.004	0.006
Breaks Interstate Park	VA0060275	0.010	0.000	0.000	0.000
Breaks Interstate Park Camp 1 STP	VA0023892	0.060	0.010	0.034	0.010
Camp Jacob Incorporated STP	VA0086274	0.006	0.000	0.000	0.000
Clintwood WWTP	VA0026565	0.495	0.153	0.449	0.238
Dickenson Cnty Public Schools - Ervinton E S STP	VA0027421	0.005	0.001	0.001	0.001
Dickenson Cnty Public Schools - Sandlick E S STP	VA0027464	0.010	0.001	0.001	0.003
Dickenson County Public Service Auth - Haysi STP	VA0067571	0.200	0.196	0.329	0.231
Dickenson County Public Service Authority STP 1	VA0082589	0.020	0.004	0.006	0.005
Dickenson Russell Contura - McClure River Prep Plt	VA0067032	0.006	0.003	0.003	0.003
Paramont Contura LLC - Deep Mine 41	VA0092576	0.015	0.009	0.009	0.009
Paramont Contura LLC -Deep Mine 44 STP	VA0092878	0.005	0.001	0.001	0.001
Ridgeview High and Middle School	VA0092681	0.035	0.000	0.000	0.000
Buchanan Cnty Public Schools - Council Elem & HS	VA0064751	0.023	0.003	0.003	0.005
Cleveland STP	VA0021016	0.039	0.040	0.137	0.063
Dante Community WWTP	VA0088935	0.125	0.032	0.127	0.068
DOC - Appalachian Comm Corr Alternative Prog	VA0020672	0.021	0.005	0.007	0.006
Honaker STP	VA0026387	0.400	0.113	0.189	0.152
Lebanon WWTP	VA0020745	0.999	0.564	1.126	0.798
Bluefield Westside WWTP	VA0025054	8.100	3.858	7.525	6.500
Claypool Hill Wastewater Treatment Plant	VA0064271	0.700	0.225	0.394	0.321
Northern Tazewell County WWTF	VA0091588	0.500	0.217	0.386	0.330
Richlands Regional WWTF	VA0021199	4.000	2.182	4.496	3.209
Tazewell County PSA - Amonate WWTP	VA0090620	0.012	0.002	0.003	0.002
Tazewell County PSA - Falls Mills Hales Bottom STP	VA0062561	0.108	0.104	0.168	0.103
Tazewell WWTP	VA0026298	<u>2.000</u>	<u>0.893</u>	<u>1.809</u>	<u>1.514</u>
<b>Combined Systems Totals, MGD</b>		<b>19.946</b>	<b>10.297</b>	<b>19.567</b>	<b>15.624</b>

*\* The largest WWTP within the Cumberland Plateau Planning District, Bluefield Westside, serves the Bluefield Sanitary Board's collection system – which is located primarily in West Virginia.*

There are twenty (20) active VPDES permitted WWTP discharges within the Lenowisco Planning District, twelve (12) of which are public community WWTPs:

**LENOWISCO PLANNING DISTRICT COMMISSION**  
**PERMITTED WWTP DISCHARGE SUMMARIES FOR CALENDAR YEAR 2021**

<u>Facility</u>	<u>Permit No.</u>	<u>Permitted Flow Capacity, MGD</u>	<u>Yearly Average Flow, MGD</u>	<u>Yearly Maximum Flow, MGD</u>	<u>Highest 3-Consecutive Month Avg. Flow, MGD</u>
Lee County PSA - Hickory Flats WWTP	VA0089397	0.800	0.287	0.437	0.316
Lee County Public Service Authority - Cross Creek	VA0075515	0.030	0.010	0.010	0.010
Lee County Public Service Authority-Rose Hill WWTP	VA0088111	0.060	0.060	0.129	0.074
Pennington Gap STP	VA0029599	0.600	0.287	0.657	0.386
Beeline Mobile Home Park LLC	VA0064009	0.004	0.001	0.002	0.001
Bellamy Manufacturing and Repair Company STP	VA0029084	0.004	0.002	0.002	0.002
Duffield Industrial Park WWTP	VA0029564	0.400	0.199	0.332	0.278
Dungannon STP	VA0070670	0.039	0.023	0.062	0.034
Nickelsville WWTP	VA0087955	0.070	0.035	0.071	0.053
Scott County PSA - Holston Regional WWTP	VA0067351	1.250	0.453	1.287	0.680
Scott County Schools - Hilton Elementary	VA0021083	0.004	0.003	0.001	0.007
Scott County Schools - Twin Springs High	VA0066311	0.015	0.007	0.001	0.009
Appalachia Elementary School STP	VA0060798	0.012	0.000	0.000	0.000
Big Stone Gap Regional WWTP	VA0020940	4.000	1.678	3.594	2.604
Coeburn Norton Wise Regional WWTP	VA0077828	6.500	3.651	7.749	5.307
DOC - Wise Correctional Unit 18 STP WWTP	VA0023477	0.030	0.012	0.018	0.013
Empire Mobile Home Park STP	VA0065471	0.004	0.004	0.004	0.007
Pound WWTP	VA0061913	0.500	0.564	1.162	0.719
Robinette Mobile Home Park WWTP	VA0092045	0.010	0.001	0.001	0.001
St Paul Wastewater Treatment Plant	VA0026221	0.500	0.081	0.148	0.103
<b>Combined Systems Totals, MGD</b>		<b>14.832</b>	<b>7.357</b>	<b>15.669</b>	<b>10.603</b>

There are thirty (30) active VPDES permitted WWTP discharges within the Mount Rogers Planning District, seventeen (17) of which are public community WWTPs:

**MOUNT ROGERS PLANNING DISTRICT COMMISSION**  
**PERMITTED WWTP DISCHARGE SUMMARIES FOR CALENDAR YEAR 2021**

<b>Facility</b>	<b>Permit No.</b>	<b>Permitted Flow Capacity, MGD</b>	<b>Yearly Average Flow, MGD</b>	<b>Yearly Maximum Flow, MGD</b>	<b>Highest 3-Consecutive Month Avg. Flow, MGD</b>
VDOC - Bland Correctional Center ESU WWTP	VA0020729	0.150	0.084	0.118	0.102
Bastian WWTP	VA0089583	0.200	0.098	0.233	0.154
Hillsville WWTP	VA0089443	1.250	0.375	0.633	0.427
I-77 Exit 1 WWTP	VA0092312	0.020	0.009	0.013	0.011
Olde Mill Golf Resort	VA0088498	0.040	0.002	0.004	0.002
Deer Creek Motorcoach Resort WWTP	VA0092461	0.004	0.002	0.002	0.004
Fries WWTP	VA0067881	0.220	0.085	0.244	0.118
Galax WWTP	VA0078484	3.000	1.678	2.694	1.678
Independence STP	VA0064424	0.465	0.287	0.445	0.325
Oak Hill Academy STP	VA0065714	0.010	0.287	0.445	0.325
Chilhowie Regional Wastewater Treatment Plant	VA0026379	0.999	0.264	0.595	0.440
Marion WWTP	VA0086304	3.400	1.383	2.963	2.067
Saltville Town - WWTP	VA0026808	0.990	0.331	0.627	0.535
Smyth County Public Schools - Northwood Middle	VA0029688	0.009	0.004	0.004	0.004
USDA - Forest Service - Grindstone Recreation Area	VA0022993	0.017	0.010	0.017	0.009
Callebs Cove Campground STP	VA0087882	0.007	0.000	0.001	0.000
Damascus WWTP	VA0021130	0.250	0.156	0.348	0.270
The Old Farm Golf Club	VA0090182	0.005	0.000	0.000	0.000
Washington Cnty Service Authority -Hall Creek WWTP	VA0087378	0.630	0.324	0.489	0.410
Washington County Public Schools - Holston High	VA0026778	0.008	0.002	0.002	0.002
Washington County Public Schools - Watauga Elem	VA0065315	0.012	0.002	0.002	0.002
Washington County Public Schools- Rhea Valley Elem	VA0065323	0.012	0.001	0.001	0.001
Washington County Public Schools -Valley Institute	VA0026786	0.006	0.001	0.001	0.001
Wolf Creek Water Reclamation Facility	VA0026531	4.950	2.332	4.240	3.593
Fort Chiswell WWTP	VA0074161	1.250	0.419	0.610	0.549
Foster Falls WWTP	VA0092509	0.005	0.001	0.001	0.001
Rural Retreat Wastewater Treatment Plant	VA0021326	0.250	0.233	0.414	0.463
Shorts Creek WWTP	VA0092843	0.020	0.002	0.004	0.002
Wythe Cnty Water and Wastewater - Austinville STP	VA0067059	0.020	0.003	0.003	0.003
Wytheville WWTP	VA0020281	<u>4.000</u>	<u>2.070</u>	<u>3.152</u>	<u>3.066</u>
<b>Combined Systems Totals, MGD</b>		<b>22.199</b>	<b>10.444</b>	<b>18.304</b>	<b>14.562</b>

### 5.2.3 Existing Onsite Wastewater Systems

Onsite wastewater systems are a viable and cost-effective method for the treatment and disposal of wastewater for homes and other small flow sources in the study area, particularly in rural areas where public sewer service is not available. They do have a finite lifetime, however, and as discussed in Section 3.4, there are many older systems that are reaching the end of their useful life and will need to be either upgraded or replaced to prevent system failures. And although more expensive than conventional onsite sewage systems, there are a number of alternative treatment system options available today for upgrades, replacements, or new systems. Onsite septic systems that are properly sited, designed, constructed and maintained in accordance with the VDH *Sewage Handling and Disposal Regulations* will provide years of trouble free sewer service.

The three Health Districts for the study area were requested to provide the total number of permitted, active septic systems within their respective jurisdictions. This information was not readily available for a variety of reasons; digital file records generally only available after 2002, limited availability of paper files earlier than 2002, limited records for former septic systems that have connected to public sewer or moved away, etc. A summary of the information obtained follows:

**Cumberland Plateau Health District** - # of permitted systems prior to 2002 not provided. The number of new septic systems permitted and repair permits issued since 2002 was provided:

Buchanan County – 2,813 total septic permits issued of which 697 were repair permits

Dickenson County – 2,511 total septic permits issued of which 525 were repair permits

Russell County – 3,537 total septic permits issued of which 455 were repair permits

Tazewell County – 3,209 total septic permits issued of which 371 were repair permits

**CPHD Totals – 12,070 total septic permits of which 2,048 were repair permits**

**LENOWISCO Health District** -

Lee County – Estimate 7,700 +/- total permitted septic systems w/ 1,263 systems installed since 2002

Scott County – Estimate 8,500 +/- total permitted septic systems w/ 2,483 systems installed since 2002

Wise County – Estimate 9,227 +/- total permitted septic systems

**LHD Totals – Estimate 25,427 total permitted septic systems w/ 3,746 systems installed in Lee and Scott Counties since 2002**

**Mount Rogers Health District** - # of permitted systems prior to 2002 not provided. The number of new septic systems permitted and repair permits issued since 2002 was provided:

Bland County – 1,080 new systems and 155 repairs

Carroll County – 4,369 new systems and 483 repairs

Grayson County – 1,993 new systems and 340 repairs

Smyth County – 2,307 new systems and 339 repairs

Washington County – 5,410 new systems and 676 repairs

Wythe County – 3,186 new systems and 406 repairs

Bristol City – 5 new systems and 4 repairs

Galax City – 17 new systems and 2 repairs

**MRHD Totals – 18,367 new systems and 2,405 repairs**

## **5.3 Identified Needs**

### **5.3.1 Infiltration and Inflow**

The 2021 calendar year flow records compiled for all collection systems within the study area revealed that inflow and infiltration (I/I) is a significant problem in many of the collection systems. As a combined whole for the entire study area, the collections were found to be only about 44.5% accountable. I/I into the sewer systems reduces the available treatment capacities and often leads to system overflows. In fact, there were over 160 reported overflows within the study area during calendar year 2021.

### 5.3.2 Existing Collection Systems

The most significant need identified within the existing collection systems would be I/I reduction. DEQ initiated a pilot program in 2020 to help fund sewer system SSES studies within the three far southwest PDC's. Under the DEQ SSES pilot program, DEQ funded 75% of the SSES cost and the applicant provided a 25% cost share. To date, two funding cycles have been completed with a total of twenty-nine (29) SSES studies having been funded. The average cost of each SSES report was about \$103,862. As a followup to the SSES studies, DEQ has also funded a significant portion of the recommended I/I reduction measures. The first round of Phase 2 (construction) funding following completion of the Phase 1 SSES reports totaled \$12,909,117 for seven (7) projects, which averaged about \$1.844 Million per project. The second round of Phase 2 (construction) funding applications totaled \$43,540,411 for fifteen (15) projects, equivalent to about \$2.90 Million per project. Appendix H provides additional information about DEQ's Southwest Virginia Pilot Program.

In addition to I/I reduction measures, a number of other needs were found to be commonplace amongst the study area's sewer utilities:

- Old, terra cotta sewer line replacement or lining
- Brick manhole rehabilitation or replacement
- Pump station rehabilitation or upgrade

### 5.3.3 Existing Treatment Facilities

The majority of the existing wastewater treatment plants within the study area are 40 years or older. The typical life expectancy of major equipment items within those plants would be 25 years or less. Accordingly, a number of the plants are in need of equipment replacement and rehabilitation. Additionally, a number of plants are at or near their permitted capacities during 2021.

The following wastewater treatment plants were found to be operating at greater than 80% of their permitted capacity (average daily flow):

Treatment Plant/System	Permitted Capacity, MGD	2021 Average Daily Flow, MGD	% of Capacity
Conaway – Buchanan County PSA	2.0 MGD	1.667 MGD	83.3
Haysi – Dickenson County PSA	0.2	0.196	98.0
Town of Cleveland	0.039	0.04	102.6
Falls Mills – Tazewell County PSA	0.108	0.104	96.3
Rose Hill – Lee County PSA	0.06	0.06	100.0
Pound – Wise County PSA	0.5	0.564	112.8
Town of Rural Retreat	0.25	0.233	93.2

### 5.3.4 Existing Onsite Wastewater Systems

Several needs have been identified during the course of development of this study related to the use of onsite wastewater systems. These are as follows:

- Education – Homeowner awareness is critical for a trouble-free septic system. Homeowners often do not have their septic tank pumped on a regular basis (VDH recommends 3 to 5 years), so they wait until sewage is backing up into the home or on the ground, creating a health hazard. In addition, they are not aware of what should not go into their septic system. EPA has recognized this need for better homeowner awareness of septic systems, and has developed a program called SepticSmart,



that is a nation-wide initiative to share information on the proper care and maintenance of septic systems. Information on SepticSmart can be found at the EPA website ([www.epa.gov/septic](http://www.epa.gov/septic)).

- Operators – This is addressed in Section 3.7 in more detail, but the lack of licensed and qualified operators in Southwest Virginia is a growing problem. With any type of alternative onsite sewage system (AOSS), whether it is a permitted discharge system or an in-ground disposal system, a licensed operator is required to make periodic site visits. But due to the lack of operators, many of the AOSS systems are not receiving the attention and maintenance that they require.
- Funding – There is a need for more funding programs for both the installation and the maintenance of onsite systems. For many homeowners in Southwest Virginia, particularly low-income and those on a fixed income, a new onsite system or an upgrade of an existing system can be cost prohibitive. This is illustrated by a current VDH statewide program called SWAP (Septic and Well Assistance Program), which was overwhelmed in 2022 with applications from low-income families for funding assistance, far outpacing the allocated funding.
- Septage – Septage is the waste material that is pumped out of a septic tank, and is then transported by a pumper truck to a municipal wastewater treatment facility for treatment and disposal. A major problem in Southwest Virginia is the lack of municipal wastewater treatment plants that are willing to accept and treat septage. Longer transportation routes for the pumper/hauler increase the cost for a pump-out, which in turn is passed on to the homeowner.

### **5.3.5 Discharging Systems (Non-Municipal)**

There are 81 active VPDES permitted WWTP discharges in the three Planning Districts, classified as municipal, meaning those with design flows larger than the VPDES General Permit flow limit of 1,000 gal/day. These are listed in Section 5.2.2, Existing Treatment Facilities, where they are broken out by planning district. Flows for these 81 treatment plants range from 3,200 GPD to 8,100,000 GPD, but approximately one-half of them are 40,000 GPD and under. The larger plants, 40,000 GPD and over, are typically owned and operated by responsible management entities (RME) such as cities, towns, counties, PSA's, and service authorities. However, many of the plants that are 40,000 GPD and below are under a variety of ownership arrangements, and are not being properly operated and maintained. Some of the reasons are discussed below.

Many of these smaller treatment plants are beyond their useful life and/or have not been properly maintained to the point that they need either replacement of major components or a total replacement of the plant itself. There have been great advances in treatment technologies in recent years for treatment plants in this size range (40,000 GPD and under), and there are treatment systems available today that provide better treatment, are more efficient and use less power, and require much less maintenance than the package plants that were installed 25 to 50 years ago. A source of funding for the replacement or upgrading of these older plants is needed, however, as that is generally not a priority consideration by the owner/operator of the plant.

Many of the treatment plants are not functioning properly due to the lack of knowledgeable operators and/or the lack of attention for proper operation of the plant. For example, there are fifteen (15) school treatment plants, and the assigned operator may be a maintenance employee who has numerous other responsibilities that require attention. Also, the types of treatment systems range from the need for minimal operator attention such as a lagoon to complex systems such as a SBR (sequencing batch reactor) plant that requires a very skilled operator. The lack of licensed treatment system operators in Southwest Virginia has been identified in Section 3.7 as a challenge that needs to be addressed to insure better operation and maintenance of the plants.

Additional training opportunities along with possibly funding to make it affordable has been discussed as a means to encourage more licensed operators in the region. The three community colleges in the planning districts would be the logical locations for such training, and an apprenticeship type program offering on-the-job experience has been suggested. Also, the formation of a regional type authority in each planning district to operate and maintain the smaller treatment plants is recommended for consideration (see Section 8.1).

Also, with the treatment and disposal options that are available today, it may be possible to convert some of the discharging plants to in-ground disposal systems and eliminate the VPDES discharge permit. This is currently being done with some of the school systems in Washington County.

#### **5.4 Cost Estimates for Improvement Needs**

Uniform cost estimating methodology was developed to prepare estimates for the projects studied herein. Recognizing that construction costs may vary to some degree within the study area, uniform unit pricing has been used to justify cost estimates. Unit pricing was developed by averaging recent bid data from the study region. The uniform cost estimating data utilized in the study is presented in Appendix D.

##### **5.4.1 Existing Collection Systems**

The cost information presented for the existing collection systems studied herein is based on costs developed for and presented in sanitary sewer evaluation studies, preliminary engineering reports, capital improvement plans, and asset management plans, where available. If cost estimates were not available from the aforementioned documents, uniform unit pricing has been utilized to develop costs.

##### **5.4.2 Existing Treatment Facilities**

The cost information presented for the existing treatment facilities studied herein is based on costs developed for and presented in projects that have been designed, preliminary engineering reports, capital improvement plans, and asset management plans, where available. If cost estimates were not available from the aforementioned documents, uniform pricing has been utilized to develop costs.

##### **5.4.3 Onsite Wastewater Systems**

The cost information for the onsite systems studied herein is based on the installation costs for various types of systems that have been recently installed in Southwest Virginia, and also from consultation with system equipment manufacturer representatives and local licensed installers/contractors.

##### **5.4.4 Present Worth / Inflation / Pandemic**

**Present Worth** - The cost of sewer system ownership can be separated into two categories. The first category is capital cost, which is the measure of the cost to install a new system. Capital costs are composed of hard costs and soft costs. Hard costs include the price of new materials and the cost to install them, while soft capital costs are those that are related to the construction costs such as engineering, legal, rights, and administrative costs. A second cost of ownership of sewer systems is the annual operation and maintenance (O&M) costs. This is the continuous cost of operating the system and keeping it in good repair. The present worth analysis provides a convenient mechanism for accounting for all of the costs in the system analysis. Present Worth, as used in this report, is defined as the amount of money that must be placed on deposit today at 8% interest for 30 years to pay all of the capital and O&M costs for the planning period.

**Inflation** - According to U.S. Labor Department data published November 10, 2022, the annual inflation rate for the United States is 7.7% for the 12 months that ended October 2022. The significantly increased inflation rates that we are all experiencing have impacted the construction industry resulting in increased construction costs. These rates are driven by a broad based escalation in material prices, material shortages, material

delivery issues, and labor shortages. These price increases are being passed on to Owners with current bids for multi-million dollar projects locally varying from 10 to 50% over-budget. With this in mind, the cost estimates for these projects attempt to reflect these conditions, but future bidding and economic climates are difficult to forecast.

Pandemic - Per the study, *Impact of COVID-19 on the US Construction Industry as Revealed in the Purdue Index for Construction*, by JungHo Jeon, Suyash Padhye, Arkaprabha Bhattacharyya, Hubo Cai and Makarand Hastak, "The coronavirus disease 2019 (COVID-19) pandemic has brought unprecedented impacts (e.g., labor shortage, suspension and cancellation of projects, and disrupted supply and logistics) on the US construction industry." These impacts have been realized within the study area with fewer contractors bidding projects, bids being over budget, the start of projects being delayed due to material supply, and contractors requesting allowances for material price increases due to the volatility of material supply/cost.

## **6.0 2005 Southwest Virginia Regional Wastewater Study**

### **6.1 Study Purpose**

The 2005 Southwest Virginia Regional Wastewater Study was intended to serve as a road map for future implementation of sanitary sewer collection, treatment and disposal projects in Southwest Virginia. The Study's goals included identifying the need for sewer service in the region, identifying and prioritizing projects, finding and identifying funding sources for these projects, and eliminating the health hazards and environmental problems associated with inadequate septic systems and straight pipe discharges to streams. The study also identified projects that, due their remote location, topographic situations, small size or soil conditions, would benefit from non-traditional de-centralized managed wastewater systems (DMWS).

During the course of the 2005 Study, the Design Team examined over 136 projects. These projects were analyzed and prioritized based on the degree of health hazard, the severity of environmental problems, the number of customers served, construction cost per connection, construction feasibility, as well as residential, commercial and industrial growth potential. The project rankings led to a recommendation to pursue 43 centralized projects, 12 de-centralized projects and 3 hybrid projects combining new de-centralized sewer collection with existing central systems. The projects identified in the 2005 Study were all related to establishing new sewer service areas. The 2005 Study did not include existing system improvements or rehabilitation.

### **6.2 Projects Identified and Realized / Successes**

The municipalities, public service authorities, and PDCs within the study area of the 2005 Southwest Virginia Regional Sewer Study have successfully completed twenty-seven (27) of the targeted projects. The breakdown of the projects constructed by Planning District is four (4) in the Mount Rogers PDC, thirteen (13) in the LENOWISCO PDC, and ten (10) in the Cumberland Plateau PDC. Refer to Table below for a list of the completed projects, as well as a list of twelve (12) projects that have been partially completed to date.

<b>Projects Completed from the 2005</b>		
<b>Southwest Virginia Regional Wastewater Study</b>		
<b>County</b>	<b>PDC</b>	<b>Project</b>
Buchanan	CP	Poplar Creek
Dickenson	CP	Rt 83/Georges Fork
Dickenson	CP	Birchleaf
Russell	CP	Castlewood
Russell	CP	Hansonville
Tazewell	CP	Baptist Valley East
Tazewell	CP	Gratton
Tazewell	CP	Tazewell to Divides
Tazewell	CP	Birmingham
Tazewell	CP	Dry Town
Lee	LEN	Rose Hill
Lee	LEN	Red Hill/Poor Valley
Lee	LEN	Woodway
Scott	LEN	Daniel Boone
Scott	LEN	Yuma
Scott	LEN	Hiltons
Wise	LEN	Tacoma
Wise	LEN	Esserville
Wise	LEN	Stonega
Wise	LEN	Josephine
Wise	LEN	Osaka/Roda
Wise	LEN	Riverview
Wise	LEN	Fairgrounds
Carroll	MTR	I-77/Route 620
Washington	MTR	West Central (Beaver Creek)
Washington	MTR	Spring Creek
Washington	MTR	Washington County Industrial Park

<b>Projects Partially Completed from the 2005 Southwest Virginia Regional Wastewater Study</b>			
<b>County</b>	<b>PDC</b>	<b>Project</b>	<b>Status</b>
Lee	LEN	Woodway	PER/ER completed and approved by RD only
Scott	LEN	Daniel Boone	Phase 1 only completed – Phase 2 & 3 remaining
Scott	LEN	Yuma	Phase 1 complete
Scott	LEN	Yuma	Phase 2, 3 & 4 design complete, advertise 2023
Scott	LEN	Hiltons	Design complete, advertise 2023
Wise	LEN	South Coeburn/Sheffield Acres	Partially completed
Wise	LEN	Banner	Design complete, advertise 2023
Carroll	MTR	Cana / I-77	I-77 Exit 1 Partially Complete
Washington	MTR	West Central (Beaver Creek)	Partially completed
Washington	MTR	Spring Creek	Design complete. Planning to advertise 2023
Washington	MTR	Wash Co Industrial Park	PER/ER Completed Approved by RD
Wythe	MTR	Poplar Camp / Foster Falls	Poplar Camp Only Completed

## **7.0 Evaluation of Unserved Areas in Need of Wastewater**

The sanitary sewer projects that were identified in the 2005 Study to provide sewer service to unserved areas and were not realized have been updated in this Study. Additionally, any new projects that have been identified by the project team to provide sewer service to unserved areas have also been included in this Study. The basis for the determination of the need for wastewater service includes areas of environmental concern based on existing water quality impairments, poor soils and/or inadequate disposal including failing on-site septic systems and straight piping. The local Health Departments provided information for this Study with regards to areas with failing on-site septic systems and straight piping.

### **7.1 Categorizing Proposed Projects by Type**

#### **7.1.1 Extensions of Existing Systems – Conventional**

As shown previously in this Study, there are approximately seventy-one (71) existing public conventional wastewater systems located within the study area. These are the most common type of publicly owned wastewater systems and contain collection lines and a centralized treatment facility. They are used to collect and treat large volumes of wastewater. The collection system typically requires large diameter deep pipes, major excavation and frequent manhole access. At the treatment facility, the wastewater is treated to standards required for discharge to a surface water body. The large amounts of biosolids (sludge) generated in treatment are treated and either land-applied, placed on a surface disposal site or incinerated. When unserved areas are within relatively close proximity to an existing conventional system, extension of the existing system is usually the most economically feasible way to provide sewer service.



### **7.1.2 Development of New Conventional Systems**

For unserved areas that are isolated or require a cost prohibitive amount of collection system to be constructed to connect to an existing conventional system, construction of a new conventional system has been proposed which would include both the collection system and a wastewater treatment facility.

### **7.1.3 Development of New Decentralized Wastewater Systems**

Decentralized wastewater systems are an option in areas of the three Planning Districts where there are problems with existing onsite wastewater treatment systems, such as straight piping or failing systems, and where access to municipal wastewater service is not a cost-effective solution. These problem areas have been identified in letters from each of the Environmental Health Managers in their respective health districts (See Appendix E).

Decentralized managed wastewater systems (DMWS) are managed onsite sewage systems, that in simplest terms means sewage that is collected, treated, and disposed of at or near its source. The concept of DMWS has slowly been gaining acceptance over the last 25 years or so as a cost-effective solution for less densely populated areas. The Environmental Protection Agency (EPA) validated the concept in 1997 in a report to Congress with the statement:

*Adequately managed decentralized wastewater systems are a cost-effective and long term option for meeting public health and water quality goals.*

Since then, EPA has formed a Decentralized Wastewater Partnership which is a collaboration between EPA and national organizations (20 at present) representing practitioners in the decentralized wastewater industry. It is designed to improve the overall performance and management of decentralized wastewater systems. Information on this partnership can be found on the EPA website ([www.epa.gov/septic](http://www.epa.gov/septic)).

Decentralized wastewater systems (DWS) typically have lower capital costs and operation and maintenance costs than municipal wastewater systems, while still providing protection of the environment, public health, and water quality. DWS in many cases use the natural treatment properties of the soil by taking into account basic principles in nature, resulting in the wise use of energy and land. In doing so, DWS can be considered a 'green' technology when treated effluent is dispersed into the ground, which recharges local groundwater aquifers. Thus, DWS are a way to 'get back to nature' by using today's onsite treatment and disposal technologies.

DWS include a variety of approaches for the collection, treatment, and disposal of wastewater, and can be designed to serve individual homes, clusters of homes (and businesses), or entire communities. An evaluation of site specific soil conditions is required to determine the appropriate type of DWS for a particular location. They can then become a part of a permanent infrastructure system, when managed by a responsible management entity (RME).

EPA has prepared several position papers that include information on the uses and benefits of decentralized wastewater treatment, along with examples of locations where it has played an effective role in a community's wastewater treatment infrastructure. Two of these position papers discuss community systems in Virginia, and copies are included in Appendix G.

#### **7.1.3.1 Methodology for Determining Cost Effectiveness of Decentralized Wastewater Systems**

Decentralized wastewater systems (DWS), as described in the previous section, can be a cost-effective solution for providing sewer service in certain areas of the three planning districts, especially in lesser populated areas. The methodology used for determining cost effectiveness is similar to the methodology used

for the extension of municipal wastewater systems: an evaluation based on total project cost, cost per connection, present worth analysis, and the monthly user cost to the customer. An additional component, however, for consideration with decentralized systems is the management of them. This is discussed in the following Section 7.1.3.2.

The present worth analysis or life cycle cost analysis of a project is a method that accounts for both the initial capital cost plus the annual operation and maintenance costs over the projected life of the system. The operation and maintenance costs for onsite systems differ somewhat from municipal systems as components typically are on a smaller scale both in terms of collection and treatment. For example, sewer lines are generally designed to convey pre-settled septic tank effluent with no solids to a treatment system, so sewer line clogging is rare. And effluent sewer lines are smaller and are typically installed like water lines along roads, and not in or near streams and rivers like larger municipal collection systems. The result is infiltration and inflow problems that are common with the larger municipal systems are minimized with DWS. In addition, treatment plants in the onsite industry are much smaller in comparison to municipal plants, and today's DWS plants use energy efficient technology and are designed to require minimal operator attention, some even allowing remote monitoring with telemetry systems. Routine maintenance tasks are still required, however, such as the pumping of septic tanks, and treatment plant visits by a licensed operator are required on a regular schedule, varying from monthly to quarterly to annually depending on the size and type of the treatment system. Effluent sampling and testing is also required for the treatment system, with the frequency and parameters to be tested varying based on the size of the plant and whether it is discharging to a stream or into the ground.

#### **7.1.3.2 Analysis of Ownership, Operation and Maintenance of Decentralized Wastewater Systems**

An important consideration when evaluating the cost-effectiveness of decentralized wastewater systems (DWS) is that they be owned and operated by what EPA defines as a responsible management entity (RME). This can be a town, city, or county service authority, but there has been a reluctance on the part of some of the sewer providers in the study area to assume ownership and operation of DWS. There are other options for RME's, however, such as a privately owned operating company, a public-private partnership (PPP), or a separate regional authority. See Section 8.1 for further discussion of this last option. However, regardless of who the RME is, management costs must be included when determining the cost effectiveness of a DWS project.

### **7.2 Undeveloped Projects from 2005 Study**

Appendix B includes individual project sheet descriptions and updated cost estimates for potential sewer extension projects that were identified in the 2005 Study but have not yet been completed.

## 7.2.1 Cumberland Plateau Planning District

Thirty-one (31) of the centralized collection system projects identified for the CP Planning District in the 2005 Study have not been developed. The 2005 CP Planning District project ranking list follows:

County	PDC	Project	Public Water Available?	Equivalent Customers Served	Present Worth Per Connection	Elimination of Health Hazards	Constr. Feasibility	Residential Growth Potential	Industrial Commercial Growth Potential	Total	
				<b>25</b>	<b>25</b>	<b>20</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>100</b>	
1	Tazewell	CP	Bluefield to Divides Ph 2&3	Y	25	20	20	5	10	10	90
2	Tazewell	CP	Baptist Valley West	Y	25	25	10	10	5	0	75
3	Buchanan	CP	Leemaster/Lovers Gap	Y	15	25	10	10	5	5	70
4	Tazewell	CP	Tazewell to Claypool Alt 1	some	20	10	10	10	5	10	65
5	Tazewell	CP	Abbs Valley	proposed	20	25	10	5	5	0	65
6	Buchanan	CP	Lower Mill Branch	1/3	10	15	10	10	10	5	60
7	Buchanan	CP	Lynn Camp/Looney Creek	N	10	25	10	10	5	0	60
8	Tazewell	CP	Red Ash	N	10	25	10	10	5	0	60
9	Dickenson	CP	Lockhart Flats	Y	5	25	10	10	5	0	55
10	Russell	CP	Drill	Y	15	10	20	5	5	0	55
11	Russell	CP	Swords Creek	Y	20	15	10	5	5	0	55
12	Tazewell	CP	Tazewell to Claypool Alt 2	some	20	5	10	5	5	10	55
13	Tazewell	CP	Bishop	Y	10	25	10	5	5	0	55
14	Tazewell	CP	Rt. 639 (Clifffield to Baptist Valle	Y	10	25	10	0	5	0	50
15	Tazewell	CP	Jewell Ridge	Y	15	15	10	5	5	0	50
16	Tazewell	CP	Wright's Valley/Wittens Mill to T	Y	20	20	0	0	5	0	45
17	Tazewell	CP	Rt. 637	Y	0	20	10	5	5	0	40
18	Tazewell	CP	Forest Hills	N	5	20	0	10	5	0	40
19	Tazewell	CP	Wright's Valley/TipTop to St Cla	some	15	15	0	5	0	0	35
20	Tazewell	CP	Mill Creek	N	10	15	0	10	0	0	35
21	Tazewell	CP	Wardell	Y	5	15	0	10	5	0	35
22	Tazewell	CP	Rt. 699	Y	5	15	10	0	5	0	35
23	Tazewell	CP	Kents Ridge North	Y	5	10	10	10	0	0	35
24	Tazewell	CP	Road Ridge	Y	5	10	10	10	0	0	35
25	Tazewell	CP	Willow Springs Phase 3	Y	0	15	10	10	0	0	35
26	Tazewell	CP	Witten Valley (Bundys Chapel-	N	10	10	0	10	5	0	35
27	Tazewell	CP	Kents Ridge South	Y	5	0	10	10	0	0	25
28	Tazewell	CP	Willow Springs Phase 2	Y	0	0	10	10	0	0	20
29	Tazewell	CP	Green's Chapel	Y	0	0	0	10	5	0	15
30	Tazewell	CP	Witten Valley (Bundys Chapel-V	N	5	0	0	0	5	0	10
31	Tazewell	CP	Witten Valley (Bundys Chapel-I	N	0	0	0	0	5	0	5

Five (5) of the decentralized system projects evaluated in the 2005 Study have not been developed in the Cumberland Plateau Planning District. They are as follows, along with their 2005 project ranking.

1. McClure/Stratton (# 2) – Dickenson County
2. Nora (# 3) – Dickenson County (partially completed)
3. Greenbrier (# 14) – Buchanan County
4. Rosedale (# 19) – Russell County
5. Hurley (# 20) – Buchanan County

## 7.2.2 LENOWISCO Planning District

Twenty-two (22) of the centralized collection system projects identified for the LENOWISCO Planning District in the 2005 Study have not been developed. The 2005 LENOWISCO Planning District project ranking list follows:

	County	PDC	Project	Public Water Available?	Equivalent Customers Served	Present Worth Per Connection	Elimination of Health Hazards	Constr. Feasibility	Residential Growth Potential	Industrial Commercial Growth Potential	Total
					25	25	20	10	10	10	100
1	Lee	LEN	Woodway	Y	25	25	10	10	10	5	85
2	Lee	LEN	Sandy Ridge/N. Jonesville	Y	15	25	10	10	10	5	75
3	Wise	LEN	East Stone Gap/Cracker Neck	Y	20	20	20	5	10	0	75
4	Lee	LEN	Dryden Hts/Cross Creek	Y	15	20	20	5	10	0	70
5	Wise	LEN	Wildcat/Irondale	Y	20	15	10	10	10	5	70
6	Wise	LEN	Coeburn Mountain	Y	20	20	20	0	5	0	65
7	Wise	LEN	Powell Valley	Y	20	10	20	5	10	0	65
8	Scott	LEN	Route 871	Y	5	25	10	10	5	5	60
9	Wise	LEN	Crab Orchard/Dry Fork/Bull Ru	Y	20	15	10	5	5	0	55
10	Scott	LEN	Wadlow East Carter	Y	10	15	0	10	10	5	50
11	Wise	LEN	Indian Creek (Wise to Pound)	Y	15	10	10	5	5	5	50
12	Wise	LEN	South Fork	Y	15	15	10	5	5	0	50
13	Lee	LEN	Caylor/Elydale	Y	10	15	10	5	5	5	50
14	Scott	LEN	Manville Williams Mill	1/3	15	15	0	10	5	0	45
15	Lee	LEN	Cedar/Flatwoods	Y	10	0	20	0	5	5	40
16	Lee	LEN	Keokee/Darnelltown/Rawhide	Y	15	20	0	5	0	0	40
17	Wise	LEN	Dorchester	Y	10	15	10	5	0	0	40
18	Wise	LEN	Thacker's Branch	Y	5	15	10	5	5	0	40
19	Scott	LEN	Dungannon West	Y	0	0	10	5	5	10	30
20	Wise	LEN	Timberville Acres	Y	0	10	10	0	5	0	25
21	Wise	LEN	North Fork	Y	5	0	10	5	5	0	25
22	Wise	LEN	Hoot Owl Hollow	Y	0	0	10	5	0	0	15

Five (5) of the decentralized system projects evaluated in the 2005 Study have not been developed in the LENOWISCO Planning District. They are as follows, along with their 2005 project ranking.

1. Dotson Fork/Meade Fork (# 4) – Wise County
2. Cranes Nest (# 6) – Wise County
3. Dunbar (# 12) – Wise County
4. Mill Creek (# 23) – Scott County
5. Bishoptown (# 25) – Scott County

### 7.2.3 Mount Rogers Planning District

Thirty-three (33) of the centralized collection system projects identified for the MR Planning District in the 2005 Study have not been developed. The 2005 MR Planning District project ranking list follows:

County	PDC	Project	Public Water Available?	Equivalent Customers Served	Present Worth Per Connection	Elimination of Health Hazards	Constr. Feasibility	Residential Growth Potential	Industrial Commercial Growth Potential	Total
				<b>25</b>	<b>25</b>	<b>20</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>100</b>
1	Grayson	MTR	Fairview	Y	20	5	20	10	10	75
2	Smyth	MTR	Groseclose	Y	15	15	15	10	10	75
3	Smyth	MTR	Pleasant Heights	Y	10	15	20	10	5	70
4	Washington	MTR	Benhams Road	Y	20	15	15	10	0	70
5	Smyth	MTR	Watson Gap	Y	10	10	20	10	5	65
6	Washington	MTR	East Central	Y	25	0	20	5	10	65
7	Bland	MTR	Bland Sewer System	Y	15	15	10	5	10	60
8	Grayson	MTR	Providence	N	15	15	10	5	10	60
9	Grayson	MTR	Stevens Creek	N	15	20	10	10	5	60
10	Washington	MTR	Larwood	Y	10	15	10	5	10	60
11	Bland	MTR	Rocky Gap	Y	5	20	10	10	5	55
12	Washington	MTR	High Meadows	Y	10	15	10	5	10	55
13	Carroll	MTR	Canal-77	Y	20	5	0	5	10	50
14	Grayson	MTR	Independence N/S	N	10	10	0	10	10	50
15	Smyth	MTR	Hungry Mother	Y	0	20	20	10	0	50
16	Smyth	MTR	Curran Valley	Y	5	15	20	5	0	45
17	Wythe	MTR	Cripple Creek	N	5	15	0	5	10	45
18	Washington	MTR	Wyndale	Y	0	15	0	10	10	40
19	Washington	MTR	Clinchburg	Y	5	10	10	5	5	35
20	Wythe	MTR	Barren Springs	N	10	20	0	5	0	35
21	Wythe	MTR	Rt. 21 South	1/2	5	15	0	10	5	35
22	Bristol	MTR	Andover Road	Y	0	10	5	5	10	30
23	Grayson	MTR	Elk Creek	N	5	0	0	5	10	30
24	Washington	MTR	Mock Hollow	Y	0	20	0	5	0	30
25	Washington	MTR	Seven Springs	Y	0	0	10	15	5	30
26	Bristol	MTR	Terrace Dr/W. Circle Dr.	Y	0	0	10	5	10	25
27	Smyth	MTR	Cruesenberry Hollow	Y	0	10	5	5	0	20
28	Wythe	MTR	Wytheville East	Y	0	5	0	10	0	20
29	Washington	MTR	Buchanan Road	Y	0	0	10	0	5	15
30	Washington	MTR	Damascus	Y	0	0	0	5	5	15
31	Washington	MTR	Old Mill Road	Y	0	0	10	0	5	15
32	Washington	MTR	Spoon Gap Road	Y	0	0	10	0	5	15
33	Washington	MTR	Rush Creek	Y	0	0	10	0	0	10

Eight (8) of the decentralized system projects evaluated in the 2005 Study have not been developed in the Mount Rogers Planning District. They are as follows, along with their 2005 project ranking.

1. Clinchburg (# 10) – Washington County (also evaluated as a centralized collection project)
2. St. Clair Creek (# 11) – Smyth County
3. Flat Ridge/Sugar Grove (# 13) – Smyth County
4. Walker Creek (# 15) – Smyth County
5. Hutton Branch (# 16) – Smyth County
6. Rush Creek (# 18) – Washington County
7. Ivanhoe (# 21) – Wythe County
8. Troutdale (# 22) – Grayson County



### 7.3 New Projects Identified for Evaluation

For the purpose of this Study, potential wastewater projects were identified, cost estimates were prepared, and a priority ranking was established. Potential projects identified were categorized into one of three project types; Centralized Collection System Extensions, Existing System Upgrades, and Decentralized Systems. The Centralized Collection System Extensions and Decentralized Systems include both those uncompleted projects identified in the 2005 Study and new projects identified in this Study. All potential projects were ranked using the criteria discussed in Section 7.4 of this Study. The potential projects for each category/type were grouped by their respective Planning District locations.

It is noteworthy that the majority of all Centralized Collection and Decentralized System projects considered remain uncompleted from the 2005 Study. Very few of public sewer service providers identified new potential service areas. Instead, most of the public sewer service providers placed more emphasis on Existing System Upgrade Projects – highlighting the need for assistance just to maintain existing systems.

#### 7.3.1 Cumberland Plateau Planning District

A total of thirty-three (33) potential Centralized collection system projects were identified within the Cumberland Plateau Planning District, thirty-one (31) of which are uncompleted from the 2005 Study and two (2) new projects. Descriptions of these projects are provided in Appendix B. An Individual scoring matrix printout for each project is provided in Appendix J. A summary table of the project ranking follows:

<b>Overall Project Ranking - Centralized Projects Cumberland Plateau Planning District</b>										
<u>County</u>	<u>Project Name</u>	<u>Health Hazards, &amp; Water Quality Problems</u>	<u>Affordable/ Project Cost/ Connection</u>	<u>Regional Effort</u>	<u>Equiv. # of Residential Connections Served</u>	<u>Avg Sewer Bill as a % of Project Area's MHI</u>	<u>Environment. Justice - EPA EJScreen Report for Project Area</u>	<u>Total Points</u>	<u>Estimated Project Cost</u>	
Russell	Dante to St. Paul	30	25	8	6	10	4	83	3,219,713	
Tazewell	Abbs Valley	25	16	0	10	5	3	59	13,287,732	
Russell	Swords Creek	25	10	0	10	10	3	58	20,012,980	
Tazewell	Bluefield to Divides Phases 2 and 3	25	16	0	10	5	2	58	24,253,944	
Russell	Castlewood Phase 2 (Mew Road)	20	10	8	6	10	2	56	7,962,175	
Tazewell	Route 639 (Clifffield to Baptist Valley)	25	16	0	6	5	2	54	4,448,860	
Tazewell	Baptist Valley West	25	10	0	10	5	3	53	53,249,703	
Buchanan	Lynn Camp / Looney Creek	25	10	0	6	8	3	52	7,250,100	
Dickenson	Lockhart Flats	25	10	0	6	8	2	51	3,505,060	
Russell	Drill Mountain	25	5	0	8	10	3	51	16,811,080	
Tazewell	Red Ash	25	10	0	6	5	5	51	5,199,025	
Buchanan	Leemaster/Lovers Gap/ Dry Fork	20	10	0	8	8	4	50	14,381,380	
Tazewell	Wrights Valley/ Witten Mill to Tiptop	25	7	0	10	5	2	49	20,376,688	
Tazewell	Jewell Ridge Sewer Extension	25	7	0	8	5	3	48	14,978,275	
Tazewell	Tazewell to Claypool Hill - Alternative 1	25	5	0	10	5	3	48	51,313,080	
Tazewell	Wrights Valley/ Tiptop to St. Clair's Crossing	25	7	0	8	5	2	47	15,322,450	
Buchanan	Lower Mill Branch / Elkins Branch	25	5	0	6	8	2	46	8,312,525	
Tazewell	Forest Hills	25	7	0	4	5	3	44	5,226,975	
Tazewell	Kents Ridge North	25	5	0	4	5	5	44	7,370,090	
Tazewell	Kents Ridge South	25	5	0	4	5	5	44	6,157,060	
Tazewell	Mill Creek	25	5	0	6	5	3	44	8,193,250	
Tazewell	Road Ridge	25	5	0	4	5	5	44	8,799,765	
Tazewell	Willow Springs Phase 3	25	7	0	4	5	3	44	2,006,342	
Tazewell	Witten Valley (Bundys Chapel - Tazewell)	25	5	0	6	5	3	44	14,506,960	
Tazewell	Route 637	25	7	0	4	5	2	43	2,921,880	
Tazewell	Wardell	25	5	0	4	5	4	43	9,246,900	
Tazewell	Greens Chapel	25	5	0	4	5	3	42	4,111,510	
Tazewell	Route 699	25	5	0	4	5	3	42	4,178,135	
Tazewell	Willow Springs Phase 2	25	5	0	4	5	3	42	785,525	
Tazewell	Witten Valley (Bundys Chapel - Liberty)	25	5	0	4	5	3	42	7,714,850	
Tazewell	Witten Valley (Bundys Chapel - Wardell)	25	5	0	4	5	3	42	16,695,250	
Tazewell	Bishop	0	16	0	6	5	3	30	6,916,975	
Tazewell	Tazewell to Claypool Hill - Alternative 2	0	5	0	10	5	3	23	47,766,680	
								<b>Total</b>	<b>\$ 436,482,917</b>	

A total of fourteen (14) potential Existing System Upgrade projects were identified within the Cumberland Plateau Planning District. Descriptions of these projects are provided in Appendix C. A summary table of the project ranking follows:

<b>Overall Project Ranking - Existing System Upgrade Projects Cumberland Plateau Planning District</b>									
<b>County</b>	<b>Project Name</b>	<b>Targeted Project Types &amp; Outcomes</b>	<b>Environment.</b>	<b>Enforcement</b>	<b>COLG</b>	<b>Potential</b>	<b>Readiness to Proceed</b>	<b>Total Points</b>	<b>Estimated Project Cost</b>
			<b>Concerns - Priority Watersheds</b>	<b>/ Compliance History</b>	<b>Composite Fiscal Stress Index</b>	<b>Bonus Points for Towns or Cities</b>			
Buchanan	Buchanan County PSA - Conaway WWTP Upgrades	41	0	1	12	0	4	58	29,437,946
Russell	Town of Cleveland WWTP Expansion	25	15	1	12	0	0	53	1,000,000
Buchanan	Buchanan County PSA - SSES	33	0	1	12	0	1	47	5,065,000
Dickenson	Dickenson County PSA - Haysi Sewer Replacement	33	0	1	12	0	1	47	1,910,094
Russell	Town of Lebanon SSES Rehabilitation	8	15	4	12	0	1	40	2,921,700
Russell	Town of Lebanon WWTP Improvements	8	15	4	12	0	1	40	6,715,000
Tazewell	Town of Richlands - WWTP Improvements	16	0	1	12	2	8	39	12,653,797
Tazewell	Town of Tazewell - WWTP Improvements	16	0	1	12	2	8	39	15,645,000
Russell	Town of Honaker SSES Rehabilitation	8	15	1	12	0	1	37	4,725,000
Tazewell	Town of Cedar Bluff SSES Rehabilitation	8	15	1	12	0	0	36	1,987,500
Tazewell	Tazewell County PSA - Falls Mills SSES	16	0	1	12	2	1	32	19,708,054
Tazewell	Town of Tazewell - SSES	8	0	1	12	2	0	23	22,891,448
Russell	Town of Honaker WWTP Improvements	8	0	1	12	0	1	22	2,612,704
Tazewell	Town of Richlands SSES	8	0	1	12	0	0	21	12,795,213
								<b>Total</b>	<b>\$ 140,068,456</b>

Within the Cumberland Plateau Planning District, twelve (12) potential decentralized community wastewater projects were identified, five (5) of which are uncompleted from the 2005 Study and seven (7) new projects. A summary table of the project ranking follows:

<b>Overall Project Ranking - Decentralized Projects - Cumberland Plateau Planning District</b>									
<b>County</b>	<b>Project Name</b>	<b>Health</b>	<b>Affordable/</b>	<b>Community</b>	<b>Responsible</b>	<b>Avg Sewer</b>	<b>Environment.</b>	<b>Total Points</b>	<b>Estimated Project Cost</b>
		<b>Hazards, &amp; Water Quality Problems</b>	<b>Project Cost/ Connection</b>	<b>Involvement &amp; Willingness</b>	<b>Management Entity</b>	<b>Bill as a % of Project Area's MHI</b>	<b>Justice - EPA EJScreen Report for Project Area</b>		
Buchanan	Hurley	30	20	0	10	10	3	73	4,222,700
Tazewell	Hillcrest	20	20	5	15	8	5	73	795,200
Russell	Carbo	20	20	0	15	8	6	69	511,900
Tazewell	Baptist Valley West	30	10	5	15	5	3	68	6,162,900
Russell	Old Castlewood	25	10	5	15	8	4	67	773,100
Dickenson	McClure Stratton	30	10	5	10	8	2	65	3,997,200
Dickenson	Nora	30	10	5	10	8	2	65	623,400
Buchanan	Greenbrier	30	10	0	10	10	3	63	3,667,700
Russell	Rosedale	15	20	0	15	8	2	60	4,020,900
Russell	Clinchfield	20	10	0	15	5	6	56	1,033,000
Tazewell	St. Clair Heights Subdivision	20	10	0	15	5	2	52	1,518,400
Tazewell	Ebenezer Subdivision	20	10	0	15	5	2	52	1,311,200
								<b>Total</b>	<b>\$ 28,637,600</b>

### 7.3.2 LENOWISCO Planning District

A total of thirty (30) potential Centralized collection system projects were identified within the Lenowisco Planning District; twenty-two (22) of which are uncompleted from the 2005 Study and eight (8) new projects. Descriptions of these projects are provided in Appendix B. An individual scoring matrix printout for each project is provided in Appendix J. A summary table of the project ranking follows:

<b>Overall Project Ranking - Centralized Projects LENOWISCO Planning District</b>									
<u>County</u>	<u>Project Name</u>	<u>Health Hazards, &amp; Water Quality Problems</u>	<u>Affordable/Project Cost/Connection</u>	<u>Regional Effort</u>	<u>Equiv. # of Residential Connections Served</u>	<u>Avg Sewer Bill as a % of Project Area's MHI</u>	<u>Environment. Justice - EPA EJScreen Report for Project Area</u>	<u>Total Points</u>	<u>Estimated Project Cost</u>
Lee	Sandy Ridge / North Jonesville	25	16	8	8	10	6	73	11,489,400
Wise	Riverview Community	25	21	0	4	10	5	65	1,706,575
Wise	East Stone Gap / Crackers Neck	25	16	0	10	10	2	63	18,915,325
Wise	Coeburn Mountain Community	25	16	0	10	10	2	63	16,489,850
Wise	South Coeburn	25	16	0	6	10	5	62	6,817,200
Lee	Woodway / Hickory Flats	25	10	0	10	10	5	60	41,142,075
Wise	Cranes Nest Community	25	16	0	4	10	5	60	3,977,350
Lee	Dryden Heights	20	16	0	8	10	4	58	7,902,050
Wise	Glamorgan Community	25	16	0	4	10	3	58	2,449,850
Wise	Dorchester Community Extensions	25	10	0	8	10	3	56	12,851,150
Lee	Western Lee	25	5	0	10	10	4	54	58,565,000
Wise	Powell Valley Community	25	7	0	10	10	2	54	25,769,575
Wise	Banner Community	25	10	0	4	10	5	54	3,759,925
Wise	Indian Creek (Wise to Pound)	25	5	0	10	10	3	53	29,702,400
Scott	Hiltons Community Phases 1 - 3	25	7	0	8	8	4	52	22,904,700
Wise	Wildcat / Irondale	20	10	0	10	10	2	52	17,781,075
Scott	Yuma Community Phases 2 - 4	25	7	0	6	8	5	51	12,493,325
Wise	Crab Orchard / Dry Fork / Bull Run	25	5	0	6	10	5	51	11,303,175
Wise	Upper Guest River	25	7	0	6	10	3	51	8,924,500
Wise	Bold Camp	25	5	0	8	10	3	51	18,243,225
Wise	South Fork Community	25	5	0	6	10	3	49	22,285,900
Wise	Timberville Acres	25	5	0	4	10	5	49	4,654,975
Wise	North Fork Community	25	5	0	6	10	3	49	19,085,300
Lee	Cross Creek to Hickory Flats	15	5	8	4	10	6	48	5,790,200
Scott	AP Carter Highway	25	5	0	6	8	4	48	10,810,475
Scott	Duffield Route 871	25	5	0	4	8	5	47	5,358,925
Scott	Daniel Boone Phases 2 & 3	20	7	0	6	8	5	46	13,633,750
Scott	Reed Hollow Community	20	7	0	4	8	4	43	3,262,025
Scott	Manville Community	20	7	0	4	8	4	43	3,137,225
Wise	Hoot Owl Hollow	20	5	0	4	10	2	41	2,719,275
								<b>Total</b>	<b>\$ 423,925,775</b>

A total of twenty-seven (27) potential Existing System Upgrade projects were identified within the Lenowisco Planning District. Descriptions of these projects are provided in Appendix C. A summary table of the project ranking follows:

<b>Overall Project Ranking - Existing System Upgrade Projects LENOWISCO Planning District</b>									
<u>County</u>	<u>Project Name</u>	<u>Targeted</u>	<u>Environment.</u>	<u>Enforcement</u>	<u>COLG</u>	<u>Potential</u>	<u>Readiness</u>	<u>Total</u>	<u>Estimated</u>
		<u>Project Types</u>	<u>Concerns -</u>	<u>/ Compliance</u>	<u>Composite</u>	<u>Bonus Points</u>			
		<u>&amp; Outcomes</u>	<u>Priority</u>	<u>History</u>	<u>Fiscal Stress</u>	<u>for Towns or</u>	<u>to Proceed</u>	<u>Points</u>	<u>Project Cost</u>
			<u>Watersheds</u>		<u>Index</u>	<u>Cities</u>			
Wise	Town of Pound WWTP Upgrades	29	25	2	12	0	8	76	4,005,600
Wise	Pound I & I Rehabilitation	25	20	2	12	0	8	67	15,000,000
Wise	Appalachia Elementary WWTP to Force Main	25	20	2	12	0	2	61	1,600,000
Wise	Coeburn I & I Improvements	8	20	4	12	2	8	54	7,000,000
Lee	Pennington Gap WWTP Improvements	8	20	4	12	2	4	50	3,994,500
Wise	Big Stone Gap SSES Improvements	8	20	2	12	2	4	48	25,000,000
Wise	Norton SSES Rehabilitation	8	15	4	17	2	1	47	8,000,000
Scott	Duffield WWTP Improvements	8	15	4	12	0	8	47	1,200,000
Wise	Big Stone Gap WWTP Improvements	8	20	2	12	2	1	45	6,000,000
Lee	Rose Hill WWTP Improvements	8	20	4	12	0	0	44	1,500,000
Wise	Appalachia I & I Improvements	8	15	4	12	2	1	42	4,000,000
Lee	Pennington Gap SSES Rehabilitation	8	15	4	12	2	1	42	1,500,000
Lee	Rose Hill SSES Rehabilitation	8	15	4	12	0	2	41	172,700
Lee	Dryden SSES Rehabilitation	8	15	4	12	0	2	41	570,000
Lee	Jonesville I & I Improvements	8	15	4	12	2	0	41	2,500,000
Wise	St. Paul SSES Rehabilitation	8	15	4	12	0	1	40	2,500,000
Wise	C-N-W I & I Improvements	8	15	4	12	0	0	39	3,000,000
Wise	St. Paul WWTP Improvements	8	15	4	12	0	0	39	2,000,000
Wise	C-N-W WWTP Improvements	8	15	4	12	0	0	39	3,000,000
Scott	Duffield I & I Improvements	8	15	4	12	0	0	39	2,000,000
Scott	Weber City I & I Improvements	8	15	4	12	0	0	39	2,500,000
Scott	Nickelsville I & I Improvements	8	15	4	12	0	0	39	1,000,000
Scott	Dungannon I & I Improvements	8	15	4	12	0	0	39	500,000
Scott	Holston WWTP Improvements	8	15	4	12	0	0	39	2,500,000
Scott	Dungannon WWTP Improvements	8	15	2	12	2	0	39	500,000
Scott	Nickelsville Sewage Pump Station Improvements	8	15	2	12	0	1	38	500,000
Scott	Gate City I & I Improvements	8	10	4	12	2	1	37	2,500,000
								<b>Total</b>	<b>\$ 104,542,800</b>

Within the Lenowisco Planning District, eight (8) potential decentralized community wastewater projects were identified; one of which was uncompleted from the 2005 Study and seven (7) new projects. A summary table of the project ranking follows:

<b>Overall Project Ranking - Decentralized Projects - LENOWISCO Planning District</b>									
<u>County</u>	<u>Project Name</u>	<u>Health</u>	<u>Affordable/</u>	<u>Community</u>	<u>Responsible</u>	<u>Avg Sewer</u>	<u>Environment.</u>	<u>Total</u>	<u>Estimated</u>
		<u>Hazards, &amp;</u>	<u>Project Cost/</u>	<u>Involvement</u>	<u>Management</u>	<u>Bill as a % of</u>	<u>Justice - EPA</u>		
		<u>Water</u>	<u>Connection</u>	<u>t &amp;</u>	<u>Entity</u>	<u>Project</u>	<u>EJScreen</u>	<u>Points</u>	<u>Project Cost</u>
		<u>Quality</u>	<u>Problems</u>	<u>Willingness</u>		<u>Area's MHI</u>	<u>Report for</u>		
							<u>Project Area</u>		
Lee	Stone Creek	20	20	0	15	8	6	69	1,774,500
Wise	Honey Branch	25	20	0	10	5	5	65	836,000
Wise	Dunbar	25	20	5	0	8	3	61	928,900
Wise	Russell Creek	20	20	0	10	5	4	59	477,800
Lee	Keokee	20	10	0	15	10	3	58	3,559,100
Scott	Natural Tunnel Parkway	30	10	0	5	8	5	58	596,000
Wise	Little League Road	15	10	5	10	8	5	53	503,000
Scott	Spring Valley Subdivision	30	10	0	0	5	4	49	682,200
								<b>Total</b>	<b>\$ 9,357,500</b>

### 7.3.3 Mount Rogers Planning District

A total of thirty-three (33) potential Centralized collection system projects were identified within the Mount Rogers Planning District; thirty-one (31) of which are uncompleted from the 2005 Study and two (2) new projects. Descriptions of these projects are provided in Appendix B. An individual scoring matrix printout for each project is provided in Appendix J. A summary table of the project ranking follows:

<b>Overall Project Ranking - Centralized Projects Mount Rogers Planning District</b>									
<u>County</u>	<u>Project Name</u>	<u>Health Hazards, &amp; Water Quality Problems</u>	<u>Affordable/Project Cost/Connection</u>	<u>Regional Effort</u>	<u>Equiv. # of Residential Connections Served</u>	<u>Avg Sewer Bill as a % of Project Area's MHI</u>	<u>Environment. Justice - EPA EIScreen Report for Project Area</u>	<u>Total Points</u>	<u>Estimated Project Cost</u>
Smyth	Pleasant Heights / Midway	25	16	8	6	5	5	65	5,864,393
Washington	Benhams Road	20	16	0	10	8	5	59	12,595,671
Smyth	Watson Gap / North Holston	25	10	8	6	5	5	59	9,230,945
Washington	Mock Hollow	25	16	0	4	8	4	57	686,520
Smyth	Currin Valley	25	16	0	6	5	5	57	4,234,039
Washington	Lee Highway	25	5	8	6	8	4	56	33,153,396
Washington	East Central	25	7	0	10	8	5	55	52,415,738
Washington	Larwood	20	16	0	6	8	5	55	4,952,343
Washington	High Meadows	20	16	0	6	8	4	54	6,933,150
Washington	Clinchburg	25	10	0	6	8	4	53	5,046,008
Washington	Buchanan Road	25	5	0	4	8	8	50	2,153,174
Grayson	Stevens Creek / Eagle Bottom	20	7	8	8	2	5	50	12,201,410
Smyth	Groseclose	25	10	0	8	5	2	50	9,733,248
Grayson	Providence	20	5	8	8	2	5	48	19,465,550
Smyth	Hungry Mother	25	10	0	4	5	4	48	2,245,534
Washington	Old Mill Road	25	5	0	4	8	5	47	3,018,540
Washington	Spoon Gap	25	5	0	4	8	4	46	2,742,852
Washington	Rush Creek	25	5	0	4	8	2	44	3,140,200
Bland	Rocky Gap	25	7	0	4	5	2	43	6,691,815
Bland	Bland	20	7	0	8	5	2	42	17,538,625
Washington	Seven Springs	20	5	0	4	8	5	42	2,879,429
Washington	Wyndale	0	16	8	4	8	4	40	1,935,056
Grayson	Independence North/South	0	21	0	6	5	4	36	4,050,020
Wythe	Wytheville East	20	5	0	4	0	6	35	2,506,985
Wythe	Route 21 South	20	5	0	4	0	5	34	7,741,890
Carroll	Can Sewer	0	5	8	10	5	4	32	45,867,250
Grayson	Fairview	0	5	8	10	5	3	31	42,060,460
Smyth	Middle Fork	0	7	8	4	5	4	28	5,299,450
Washington	Damascus Area	0	5	0	4	8	3	20	1,047,559
Wythe	Cripple Creek	0	5	0	4	0	8	17	6,994,000
Grayson	Elk Creek	0	5	0	4	5	3	17	11,822,005
Wythe	Barren Springs	0	7	0	6	0	2	15	11,642,605
Wythe	Poplar Camp, Foster Falls	0	5	0	6	0	3	14	13,818,220
								<b>Total</b>	<b>\$ 371,708,080</b>



## 7.4 Project Prioritization

Based on the existing needs and future sewer demands presented in this report, there is a significant need for sanitary sewer collection and treatment within the study area over the 10-year planning horizon. A need has been identified to score/rank the projects in order to maximize the benefits to the area.

### 7.4.1 Scoring Criteria

Scoring criteria for centralized sewer projects, decentralized sewer projects, and existing wastewater collection or treatment system upgrades type projects have been developed in order to assist in the prioritization of the proposed projects identified in this study.

For centralized sewer projects, these criteria were used in order to evaluate each project with respect to eliminating health hazards & water quality problems, affordability/cost per equivalent residential connection, regionalization, number of equivalent customers served, average residential customer's annual sewer bill as a percentage of the project area's median household income, and environmental justice.

For decentralized sewer projects, these criteria were used in order to evaluate each project with respect to eliminating health hazards & water quality problems, affordability/cost per equivalent residential connection, community involvement & willingness to participate, responsible management entity considerations for ownership and operation, average residential customer's annual sewer bill as a percentage of the project area's median household income, and environmental justice.

For existing wastewater collection or treatment system upgrades type projects, these criteria were used in order to evaluate each project with respect to targeted project types/outcomes, environmental concerns - priority watersheds, environmental concerns – enforcement/ compliance history, commission on local government composite fiscal stress index ranking, potential bonus points for towns or cities, and readiness to proceed with project.

Each criterion was assigned a point value, which was used to measure how well a proposed project meets and/or addresses the intent of the criteria. A project can receive a maximum of 100 points if it meets or addresses all of the ranking criteria. Weighting factors are built into each of the evaluation criteria based on their relative importance. The criteria were selected based on input from the Project Management Team and from funding agencies existing methodologies for evaluating projects. The project ranking criteria utilized for this Study differs from the criteria used in the 2005 Study.

### 7.4.2 Centralized Sewer Projects

A 100-point project ranking scale was developed with input from the Study stakeholders. The ranking scale was modified from that used in the 2005 Study to place higher emphases on health hazards and water quality, affordability, regionalization, and environmental justice and less emphasis on growth potential.

#### **Project Outcomes, Health Hazards, & Water Quality Problems (30 Points maximum)**

The criteria for these will be evaluated based on the following point system:

- Address a severe or urgent public health hazard as declared by VDH = 30 points
- Eliminates Failing Septics or Straight Pipes in Watershed of 303(d) Impaired Water = 25 points
- Eliminates Failing Septics or Straight Pipes in a Water Not Listed as 303(d) Impaired = 20 points
- Consolidates One or More Permitted Discharging Systems into a Centralized System = 15 points
- Consolidates One or More Decentralized Systems into a Centralized System = 15 points



**Affordability/Project Implementation Cost per Equivalent Residential Connection (25 points)**

The total present worth of the project (including construction, related and annual O&M costs) will be evaluated with respect to the potential number of connections that will be served by the proposed project. The lower the cost per connection the more points the project will receive under these criteria.

This criterion shall be evaluated in accordance with the following point system:

- < \$20,000 per connection = 25 points
- \$20,000 - \$30,000 per connection = 21 points
- \$30,000 - \$45,000 per connection = 16 points
- \$45,000 - \$60,000 per connection = 10 points
- \$60,000 - \$75,000 per connection = 7 points
- > \$75,000 per connection = 5 points

**Regionalization (15 points maximum)**

Regionalization of the project will be evaluated based on the number of localities/utility providers involved in each project. The more localities/utility providers involved in a project the more points awarded.

The criteria shall be evaluated in accordance with the following point system:

- Project Involves Four or More Localities / Utility Providers = 15 points
- Project Involves Three or More Localities / Utility Providers = 12 points
- Project Involves Two or More Localities / Utility Providers = 8 points

**Number of Equivalent Customers Served by the Project (10 points maximum)**

The total number of equivalent customers served by the project will be evaluated for each project. Since one of the objectives of this study is to serve new customers, projects that serve more customers will receive more points.

This criterion shall be evaluated in accordance with the following point system:

- > 300 equivalent connections = 10 points
- 200 - 300 equivalent connections = 8 points
- 100 – 200 equivalent connections = 6 points
- < 100 equivalent connections = 4 points

**Average Residential Customer’s Annual Sewer Bill as a Percentage of Project Area’s Median Household Income (10 points maximum)**

The annual sewer bill based on 4,200 gallon per month as a percentage of a project area’s median household income is used to determine the capability of a project to produce revenue for the municipality. The higher the percentage the more points awarded.

This criterion shall be evaluated in accordance with the following point system:

- > 2.0 % of Median Household Income = 10 points
- 1.5 % - 2.0 % of Median Household Income = 8 points
- 1.0 % - 1.5 % of Median Household Income = 5 points
- 0.75 % - 1.0 % of Median Household Income = 2 points

**Environmental Justice – EPA EJSscreen Report for Project Area (10 points maximum)** The USEPA’s EJSscreen report is used to determine pollution & source indexes, and socioeconomic indicators for a project area. The more severe the pollution & source index and Socioeconomic indicators are for a project area the more points will be awarded for that project.

The criterion shall be evaluated in accordance with the following point system based upon the project area’s Composite State Percentile for 12 Pollution and Source Indexes and the 8 Socioeconomic Indicators:

- Composite State Percentile for 12 Pollution & Source Indexes > 70 = 5 points
- Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70 = 4 points
- Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 – 50 = 2 points
- Composite State Percentile for 8 Socioeconomic Indicators > 70 = 5 points
- Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 – 70 = 4 points
- Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 – 60 = 3 points
- Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 – 50 = 2 points

#### **7.4.3 Decentralized Sewer Projects**

A 100-point project ranking scale was developed with input from the Study stakeholders. The ranking scale was modified from that used in the 2005 Study to place higher emphases on affordability, regionalization, and environmental justice and less emphasis on community involvement.

#### **Project Outcomes, Health Hazards, & Water Quality Problems (30 points maximum)**

The criteria for these will be evaluated based on the following point system:

- Address a severe or urgent public health hazard as declared by VDH = 30 points
- Eliminates Failing Septics or Straight Pipes in Watershed of 303(d) Impaired Water = 25 points
- Eliminates Failing Septics or Straight Pipes in a Water Not Listed as 303(d) Impaired = 20 points
- Consolidates One or More Permitted Discharging Systems into a Decentralized System = 15 points
- Consolidates One or More Decentralized Systems into a Centralized System = 15 points

#### **Affordability/Project Implementation Cost per Equivalent Residential Connection (25 points maximum)**

The total present worth of the project (including construction, related and annual O&M costs) will be evaluated with respect to the potential number of connections that will be served by the proposed project. The lower the cost per connection the more points the project will receive under these criteria.

This criterion shall be evaluated in accordance with the following point system:

- < \$20,000 per connection = 25 points
- \$20,000 - \$30,000 per connection = 20 points
- \$30,000 - \$50,000 per connection = 10 points
- > \$50,000 per connection = 5 points

**Community Involvement & Willingness to Participate (10 points maximum)**

Points will be awarded for projects that have watershed group activities, citizen initiatives, or both.

This criterion shall be evaluated in accordance with the following point system:

- Watershed Group Activities (Water Quality Monitoring, Surveys, User Agreements) = 5 points
- Citizen Initiatives (Community Meetings, Petitions to Utility Providers) = 5 points
- Both Water Quality Activities & Citizen Initiatives = 10 points

**Responsible Management Entity (RME) Considerations for Ownership and Operation (15 points maximum)** Utility willingness considers whether a proposed project has either an existing RME with prior experience owning and operating a de-centralized system, or a provided with knowledge of decentralized systems and willing to be the RME.

This criterion shall be evaluated in accordance with the following point system:

- Existing RME with Experience Owning and Operating a Decentralized System = 15 points
- Existing Public Utility Provider Willing to be the RME = 10 points
- Availability of a Privately Owned Company with Operating Experience = 10 points

**Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income (10 points maximum)**

The annual sewer bill as a percentage of a project area's median household income is used to determine the capability of a project to produce revenue for the municipality. The higher the percentage the more points awarded.

This criterion shall be evaluated in accordance with the following point system:

- > 2.0 % of Median Household Income = 10 points
- 1.5 % - 2.0 % of Median Household Income = 8 points
- 1.0 % - 1.5 % of Median Household Income = 5 points
- 0.75 % - 1.0 % of Median Household Income = 2 points

**Environmental Justice – EPA EJSscreen Report for Project Area (10 points maximum)**

The EJSscreen report is used to determine pollution & source indexes, and socioeconomic indicators for a project area. The more severe the pollution & source index and Socioeconomic indicators are for a project area the more points will be awarded for that project.

The criterion shall be evaluated in accordance with the following point system:

- Composite State Percentile for 12 Pollution & Source Indexes > 70 = 5 points
- Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70 = 4 points
- Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60 = 3 points
- Composite State Percentile for 8 Socioeconomic Indicators > 70 = 5 points
- Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 – 70 = 4 points
- Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 – 60 = 3 points
- Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 – 50 = 2 points

#### **7.4.4 Existing Wastewater Collection Or Treatment System Upgrades Type Project**

A 100-point project ranking scale was utilized for this new project category that wasn't included in the 2005 Study. The scoring criteria mirrors DEQ's CWSRF project scoring system, except that the point criteria were pro-rated to equate to a 100-point scale instead of the 600-point CWSRF scale.

##### **Targeted Project Types/Outcomes (42 points maximum)**

The outcome of projects are based on several criteria that look to resolve DEQ enforcement or general system concerns.

The following criteria and scoring system will be used to evaluate the projects:

- Needed to Meet New More Stringent Water Quality Standards of Regulations = 33 points
- Addresses a Severe or Urgent Public Health Hazard as Declared by VDH = 29 points
- Addresses Problems (Not Growth Related) & Has Been Referred to DEQ Enforcement = 25 points
- Addresses Potential Health Concerns Not Declared by VDH to Be Health Hazards = 17 points
- Addresses Problems (Growth Related) & Has Been Referred to DEQ Enforcement = 17 points
- Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities = 8 points
- Sewer Service Extensions to Serve Previously Unsewered Areas = 4 points
- Bonus Points for Projects Using Innovative Technologies to Address the Problems = 8 points

##### **Environmental Concerns – Priority Watersheds (25 points maximum)**

The reduction of environmental concerns for a watershed associated with a project will award a given number of points based on the characteristics of the watershed and the pollution source reduced.

The following criteria and scoring system will be used to evaluate the projects:

- Reduces of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water = 25 points
- Reduces of a Moderate Pollution Source of a Listed 303(d) Impaired Water = 20 points
- Reduces of a Minor Pollution Source of a Listed 303(d) Impaired Water = 15 points
- Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired = 20 points
- Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired = 10 points

##### **Environmental Concerns – Enforcement / Compliance History (4 points maximum)**

The ability of a municipality to address DEQ enforcement action will be awarded additional points for improvement projects.

The following criteria and scoring system will be used to evaluate the projects:

- System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions = 4 points
- System Demonstrates Efforts Taken to Address DEQ Enforcement Action = 2 points
- System Demonstrates Physical Improvements Addressing Problems Resulting in NOV's = 2 points
- Efforts Made to Improve O&M Practices, Increase Revenues, Restrict Flows = 1 points

**Commission on Local Government Composite Fiscal Stress Index Ranking (17 points maximum)**

The commission on local government releases a composite stress index every year that evaluates every county in the state of Virginia. The higher the classification of a county is the more points awarded to that project.

The following criteria and scoring system will be used to evaluate the projects:

- Locality's Most Recent Composite Stress Index is Classified as "High" = 17 points
- Locality's Most Recent Composite Stress Index is Classified as "Above Average" = 12 points
- Locality's Most Recent Composite Stress Index is Classified as "Below Average" = 5 points
- Locality's Most Recent Composite Stress Index is Classified as "Low" = 0 points

**Potential Bonus Points for Towns or Cities (4 points maximum)**

The project will be awarded additional points for rate increases or significant loss of industry or tax base.

The following criteria and scoring system will be used to evaluate the projects:

- Recent (Last 5 Years) Significant User Rate Increases = 2 points
- Recent (Last 5 Years) Tax Rate Increase for Capital Improvements = 2 points
- Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of Revenues = 2 points

**Readiness to Proceed with Project (8 points maximum)**

The status of plans, specifications, and preliminary engineering reports for a given project will award the project additional points.

The following criteria and scoring system will be used to evaluate the projects:

- Plans and Specifications Completed and All Regulatory Permits Secured = 8 points
- Plans and Specifications Completed and Reviewed by Regulatory Agencies = 6 points
- Plans and Specifications Prepared and Expected to be Complete within 4 Months = 4 points
- Plans and Specifications Being Prepared for Project = 2 points
- Preliminary Engineering Report for Project Completed = 1 point

## **8.0 Meeting the Challenges**

The three Planning Districts representing for Southwest Virginia face a number of significant challenges with respect to continued provision and expansion of public wastewater collection and treatment services.

- Demographics – Southwest Virginia as a region has a declining and aging population base with a Median Household Income that is less than half of the Virginia state average in most localities.
- Affordability – The study area’s existing sewer customers have some of the highest sewer rates and lowest incomes of any area in the State.
- Geography – Southwest Virginia’s topography is largely mountainous with rock being very predominant – making sewer construction more difficult and expensive than other areas of the State.
- Environment – Southwest Virginia has some of the most biologically diverse and environmentally sensitive waterways in the nation.
- Operator Availability – It is becoming increasingly difficult for localities to find and retain sufficient qualified WWTP operators.
- Cost of Needs – This Study has identified in excess of \$1.67 Billion of wastewater construction needs within the three PDC’s. Implementation of even a fraction of these projects will require significant grant assistance.

### **8.1 Regionalization**

Within the three PDC study areas, there are currently forty (40) public sewer service providers serving nearly 59,000 customers. With this many separate entities, there is some degree of duplication of efforts. In an area with declining customer bases and rising operating and construction costs, it is becoming more and more difficult for many systems to remain financially viable.

Regionalization should be evaluated where practical as a means for systems to combine and/or share resources in order to more cost effectively provide services.

There are examples within the study area whereby regional efforts have been taken to address problems. The Cumberland Plateau Regional Waste Management Authority was created in 1992 – Buchanan, Dickenson, and Russell Counties combining their solid waste collection and disposal efforts. There are a number of Regional Jail Authorities that have been established to develop and operate regional jails for their member localities.

One example of a regional approach taken to wastewater service within the study area is the CNW Sewer Authority. This Authority was established in 1987 as a cooperative effort by the Town of Coeburn, City of Norton, and Town of Wise. The Authority initially developed a 4.0 MGD regional wastewater plant to serve these member localities, replacing each of their own former plants. The CNW plant’s capacity has since been expanded to 6.5 MGD and the three member localities still own and operate their respective wastewater collection systems.

Regionalization may not work well in all situations due to factor such as topography, political will, and others. However, regional approaches should be considered when feasible moving forward.

#### **8.1.1 Decentralized Managed Wastewater Systems**

The importance of a responsible management entity (RME) for decentralized wastewater systems (DWS) has been discussed in Section 7.1.3.2, along with pointing out the reluctance of some of the public sewer service providers in the region to take on that role. A solution to that problem could be the formation of a regional

Authority in each Planning District, to manage, operate, and maintain decentralized wastewater systems in their District. The Cumberland Plateau Regional Waste Management Authority is a good model to follow. It has been providing solid waste management services for Buchanan, Dickenson and Russell counties since 1992, and a similar Authority to provide decentralized wastewater system management services would be a way to address a growing problem associated with onsite treatment systems in Southwest Virginia.

A DWS/RME Authority could be staffed with trained and licensed onsite wastewater system operators, which the lack thereof has been discussed in Section 3.7 as one of the biggest challenges for the onsite wastewater industry in Southwest Virginia. Also, since a septic system for an individual home is considered a decentralized wastewater system, the Authority could be actively involved in educating homeowners on the importance of regular maintenance for their septic system, such as the pump-out of the septic tank, and possibly even providing that service. The Authority could also be the applicant for funding to assist with the installation of new onsite wastewater systems and the repair or replacement of failing systems, especially for low-income families.

The Cumberland Plateau Planning District has more challenges with permitting onsite sewage systems than the other two Planning Districts. This is evidenced by the number of VPDES General Permits in the District (500 compared to 400 in the other two Districts combined), which are only permitted when there are no other onsite options available for either a conventional system or some type of alternative system. This would indicate that the logical location for initiating such a DWS/RME Authority would be in the Cumberland Plateau PDC, coupled with the experience they already have in operating a waste management authority.

Brian Stanley is the Environmental Health Manager of the Cumberland Plateau Health District, and a closing paragraph in his letter requested for the Study to address the wastewater needs in his District is as follows:

*Providing public sewer or decentralized sewer service to the areas mentioned above would alleviate existing and potential health hazards due to failing or substandard onsite sewage disposal systems. Also, evaluating how to maintain existing onsite systems whether they are conventional or alternative onsite systems on a **regional basis** (emphasis added) would help alleviate future problems before they may arise.*

## **8.2 Implementation of Proactive Policies**

### **8.2.1 Mandatory Hookup Ordinances**

Within the study area, only a portion of the wastewater systems have mandatory hookup ordinances that are in effect and being enforced.

Provision of public sewer service is very expensive. Providing this service is even more expensive when all of the potential customers do not participate. Having a strong mandatory hookup ordinance in effect and enforcing that ordinance would be helpful for localities to increase the number of users (rate payers) on sewer line extensions.

Mandatory hookup ordinances have often been politically divisive within the study area. Some localities have opted not to enact or enforce mandatory connections and rely instead upon voluntary participation.

### **8.2.2 Regulatory Enforcement / DEQ Involvement**

As exhibited in this study, many of the wastewater systems and treatment facilities in Southwest Virginia have aged well past their intended useful life. These systems were constructed when “the solution to pollution is dilution” was an accepted truth. Stormwater drains, roof gutters, and basement sump pump lines were all



connected to the sanitary systems with little thought of consequence. These stormwater connections significantly add to the infiltration/inflow problems and subsequent sewer system overflows experienced by most wastewater systems in the region.

When the coal industry was at its peak, many “company towns” were developed to accommodate the coal miners and their families. The homes in these developments were constructed virtually side by side with no room for septic facilities. The wastewater disposal systems consisted of a “straight pipe” directly from the homes’ plumbing to an adjacent stream. Many of these still exist in Southwest Virginia today. Failing septic systems are also common in the area, and because of the soil conditions and lot sizes, repair or replacement of septic tanks and field lines is often not feasible.

These situations present difficult challenges for local government and regulatory officials. Many of the homeowners are elderly and do not have the resources to correct the issues. In other instances, there are no feasible means to properly dispose of wastewater on the homeowner’s property. Officials are faced with an impossible choice of either allowing the situation to continue or condemning the property. These are complicated problems without easy solutions, but they must be addressed to protect the overall public health and our natural resources.

Wastewater system operators, building officials, local health departments, and the DEQ must work together to address these issues.

- Public wastewater system operators should pass ordinances that clearly prohibit stormwater connections, including roof gutters and sump pumps. As these connections are identified through smoke testing and other means, the homeowners should be notified and required to correct the situation.
- Building officials and local health departments should inventory all failing septic systems and straight pipes and clearly identify their locations. Regulatory officials along with local officials should develop policies and procedures for addressing these problems such as not allowing transfer of ownership until the situation is resolved.
- Funding resources should be identified and/or developed to assist those without the necessary resources to correct the issues.

### 8.3 Funding

Substantial wastewater system needs have been identified within the three PDC’s, including both existing system upgrades and potential collection system extensions to serve new customers:

Planning District	Centralized Extensions	Decentralized Systems	Ex. System Upgrades
Cumberland Plateau	\$ 436,482,917	\$ 28,637,600	\$ 140,068,456
LENOWISCO	423,925,775	9,357,500	104,542,800
Mount Rogers	371,708,080	21,001,300	136,737,715
<b>Totals</b>	<b>\$1,232,116,772</b>	<b>\$ 58,996,400</b>	<b>\$ 381,348,971</b>

Collectively, over \$1.67 Billion in wastewater needs have been identified within the study area. Implementing even a portion of these projects will require significant outside funding assistance. Following are brief descriptions of potential funding sources available to localities:

**Department of Environmental Quality Clean Water State Revolving Fund (CWSRF)** - The CWSRF is a funding source administered by DEQ for wastewater collection and treatment projects. In the past, the CWSRF has been nearly exclusively loan funds with interest rates ranging from 0% up to market rates and terms up to 30

years. CWSRF applications are accepted once annually, usually in July. The application review process is competitive in that all applications are ranked in terms of need, cost, readiness to proceed, and a number of other criteria. Appendix I provides some additional information about DEQ's program.

**Virginia Department of Housing and Community Development (DHCD)** - DHCD has a number of grant assistance programs, two of which include the Community Facilities Grants and Community Economic Development Fund Grants. DHCD grants require a grant management agency to monitor the project and administer the grant funds. The grant manager can be either a direct employee of the grant applicant or it can be an independent outside agency.

The Community Facilities Grant (CF) program offers grants of up to a maximum amount of \$1,400,000 for eligible projects with three activities. A project with sewer only would be eligible for a maximum of \$1,000,000. CF grants must be tied directly to infrastructure or housing improvements to benefit Low-to-Moderate Income (LMI) households. Over 51% of the project beneficiaries must meet LMI eligibility requirements. For sewer projects, DHCD will not fund more than \$25,000 per household, based upon the number of houses served. CF grant applications are due in May of each year and all applications received statewide are scored competitively.

The Community Economic Development Fund (CEDF) Grant program offers grants of up to a maximum amount of \$700,000 for eligible projects. CEDF Grants are awarded on a non-competitive basis as applications are made for eligible projects. The program is established to help communities implement off-site infrastructure improvements required to attract new industries, enable existing industries to expand, or to retain existing industries. When available funds have expired, applications are held until new funds are appropriated. There are a number of requirements which must be met for a project to be eligible, but the three principal stipulations for a project to be eligible are:

1. The industry involved must make an investment of at least \$3,000,000 in building or equipment related costs for the new/expanded facility.
2. The industry involved must hire in excess of 50 new employees for the new/expanded facility.
3. The industry must screen the new employees hired (for a period of up to 3 years) to ensure that in excess of 51% of those targeted for hiring meet LMI eligibility guidelines.

DHCD's CEDF program would only be applicable if there would be a qualifying commitment for new jobs.

**USDA-Rural Development (RD)** - RD is a federal agency under the jurisdiction of the United States Department of Agriculture. RD offers low interest loan and grant assistance for development of community water and sewer facilities. The funding application process for RD is composed of two parts. The first step is filing of the funding Pre-Application which generally includes all of the project's supporting documentation and is used to determine the project's eligibility for RD assistance. If a project is RD eligible, then a formal Application is invited following completion of the Pre-Application review. Applications for financial assistance from RD can be made at any time, but funding offerings are dependent upon the availability of funds.

The RD funding application review process is competitive, and there has been a large demand for RD assistance in recent years. Determination of award amount is made on a case-by-case basis after review of a number of factors. For community water and sewer facilities, the maximum amount of grant which RD can offer is up to 75% of the eligible project costs. RD loans are offered for terms up to 40 years with interest rates generally lower than the market rate. USDA-RD's current poverty loan interest rate is 2.125%.

The RD funding program places a higher emphasis on projects that serve a higher percentage of residential users.

**Virginia Tobacco Indemnification and Community Revitalization Commission (VTIC)** – The Virginia Tobacco Commission provides funding primarily for economic development related project in eligible Virginia localities. If an industrial prospect were to commit to a new development, then VTIC could potentially be pursued for sewer funding assistance.

Current VTIC funding guidelines typically fund 50% of an eligible project as a grant and requires the applicant to provide a 50% match from other sources.

**Economic Development Administration (EDA)** - EDA offers infrastructure improvement grants for projects which are needed to help communities develop economically, with the primary emphasis being new industrial growth. EDA grants are made on a competitive basis after funding applications are received and reviewed. A number of requirements must be met for a project to be eligible for EDA funds. Some of the requirements include that new jobs are being created or existing jobs retained, and the unemployment rate in the project location must be above the national average at the time the application is made. EDA projects are very often on a long waiting list and can take years to achieve funding. EDA projects require a grant manager.

**Appalachian Regional Commission (ARC)** – The ARC is an economic development partnership agency of the federal government and 13 state governments focusing on 423 counties across the Appalachian Region. Every county in the study area is included in the ARC footprint. The Virginia ARC program works closely with PDC's in the development of eligible projects. ARC Objectives include promoting regional partnerships that support regional economic development, encourage activities that diversify the economic base and enhance entrepreneurial activities; and to assist communities to develop, expand and upgrade infrastructure, including broadband, to allow for greater access to resources and opportunities for increased economic growth and to improve the quality of life. As it relates to wastewater, ARC strategies include assisting with installation of public infrastructure for new business location/expansion and creating jobs for the region; to support project that encourage broad-based, regional cooperation and provide increased regional economic growth opportunities; to assist water supply and wastewater treatment projects that will support private investment, leading to job creation or retention; and to support the deployment of regional solutions to address water/wastewater infrastructure needs.

In Virginia, DHCD serves as the ARC Registered State Basic Agency and is responsible for administrative and fiscal oversight and compliance monitoring of construction projects. Construction projects are eligible for up to \$500,000 in funding. Planning grants are eligible for up to \$50,000 in funding.

**Planning District Commissions (PDC)** – Each of the three Planning Districts within the study area has an annual allocation of funding received from DHCD that is made available for potential water or sewer projects within the respective District. These funds are typically capped at \$100,000 per project and are very often used as local matching funds to be used as part of a larger project funded by other agencies.

**Other Agencies/Allocations** – The aforementioned agencies are those which are typically regularly utilized by those localities within the study area for sewer projects. There are other agencies which have provided sewer project funding assistance before and may potentially be available again in the future; such as

- US Army Corps of Engineers
- Environmental Protection Agency
- State Tribal Assistance Grants (STAG)
- Special State or Federal Legislative Assistance Allocations

**Private Financial Institutions** – Private banks and financial institutions can potentially be utilized for project funding. However, these facilities offer funding as loans and would not be able to offer grant assistance.

**Privatization** – There are private firms which can provide sewer system assistance through operation/maintenance contracts and/or system purchase. A number of the localities within the study area have (or still) utilize private firms to operate their wastewater treatment facilities. These operational agreements are typically for a long range (> 5 year) term and would allow the locality to retain ownership of the treatment facility and retain eligibility for potential government sourced funding agencies.

There are also private utility companies that purchase public locality water and/or wastewater systems and provide the utility service. When a locality sells their utility system, they generally lose their independence to make decisions about the utility's rates and policies. A privately owned utility is also typically not eligible to receive grant funding assistance from many of the funding agencies that are available to public localities.

**8.3.1 Decentralized Wastewater Systems** - Public funding for decentralized wastewater systems (DWS) has not been a high priority for the agencies that typically provide funding for water and wastewater projects in Southwest Virginia. However, with EPA's growing recognition of the importance of DWS through its Decentralized Wastewater MOU Partnership, that may be changing. Information on this partnership can be found on the EPA website ([www.epa.gov/septic](http://www.epa.gov/septic)).

One of the core priorities of the MOU Partnership for the 2020 -2023 period is stated as follows:

*Share information on funding sources and pursue innovative public and private financing options to help communities and homeowners replace, upgrade, or maintain decentralized wastewater systems.*

One existing funding source is EPA's Clean Water State Revolving Fund, and a recent EPA Fact Sheet titled 'Financing Decentralized Wastewater Treatment Systems' explaining this program is found in Appendix G.

Another encouraging indication of funding for DWS is the *Drinking Water and Wastewater Infrastructure Act of 2021* authorized \$550 million annually in new grant programs, one of which is for the 'installation or upgrade of decentralized wastewater systems'. This is not nearly enough obviously to address decentralized needs nationwide, but at least the DWS concept has now being recognized as a need and hopefully funding will continue to increase.

## **9.0 Educating the Public**

Adequate public wastewater collection and treatment systems (existing and proposed) are paramount to public health and welfare, to the success of the Southwest region in sustaining existing businesses and industries and recruiting new developments and associated economic growth, and for the emerging tourism industry. Many of the outdoor recreational opportunities afforded by Southwest Virginia include the natural environment, and specifically rivers and streams. Protecting these vital natural resources, including some of the most biodiverse streams in the nation, is of critical consequence to the region's future.

Unfortunately, the construction and continued maintenance of wastewater systems are expensive and the public that bear those costs must be educated to understand the overall benefits the systems provide and the consequences of inaction. To succeed in this, the public and their local elected officials must be actively engaged. This will require a sustained effort from multiple stakeholders and will involve the expenditure of resources in both time and money. Some suggestions include the following:

- Each of the three PDCs and the regional DEQ office should consider designating individuals to serve on a committee charged with developing and managing initiatives involving the education of the

public. The committee could also include individuals from local organizations such as The Nature Conservancy, Soil and Water Conservation Districts, Upper Tennessee River Roundtable, local health departments, local engineering firms and business leaders, elected state and local representatives, and others. The Committee should meet and communicate on a regular basis.

- Each of the three PDCs and the regional DEQ office should consider developing educational materials regarding wastewater systems and the environment, especially as they relate to the overall public health and the environment. This material could be distributed to local chambers of commerce and news organizations. Strong consideration should also be given to purchasing ads that link the material on social media outlets such as Facebook, Instagram, and Snapchat. The websites of the PDCs and DEQ should also include links to the new material.
- With each new rehabilitation or construction project, a project sign and groundbreaking and/or ribbon cutting ceremony should be held as a condition of funding. These projects should be celebrated and publicized to underscore their importance to the local community.
- Learning opportunities, such as field trips to wastewater treatment facilities, should be developed with the cooperation of local middle and high schools to expose students to the importance of proper wastewater collection and treatment. Local engineering firms should be approached for volunteers to help with these efforts. Either the committee described above or the DEQ should lead this endeavor.

Wastewater collection and treatment systems largely operate out of sight and mind of the public. However, they are among the most important and essential public infrastructure systems. The public must be made aware of their vital role in protecting public and environmental health and we must encourage everyone to participate in efforts to improve and protect our area's natural resources. Educating and engaging the public may be one of the most important tools for making a difference in the water quality of Southwest Virginia.

## **10.0 Conclusions and Recommendations**

The planning, design, construction, operation, and maintenance of public wastewater collection and treatment infrastructure is one of the most fiscally challenging issues facing local governments in Southwest Virginia. This situation is exacerbated by the depressed economies, declining populations, aging infrastructure, undulating topography, unsuitable soil conditions, lack of qualified wastewater treatment plant operators, and other issues faced by our region. Nevertheless, adequate wastewater collection and treatment is one of the most important aspects of the quality of life for the public. Maintaining public health, sustaining existing and providing for future residential, commercial, and industrial growth, and protecting the environment, particularly the ecosystem of our waterways is dependent upon adequate wastewater infrastructure.

This Study was funded by the Virginia Department of Environmental Quality (DEQ) and is to be utilized as a road map for the future implementation of sanitary sewer projects, both existing and proposed new systems and treatment facilities, in Southwest Virginia PDCs One, Two, and Three. The Study will also serve as a basis for need and costs for current and future Clean Watersheds Needs Survey efforts required by the United States Environmental Protection Agency for the Virginia Clean Water Revolving Loan Fund Program and for the upcoming Commonwealth Needs Assessment promulgated in 2021.

The Study evaluated and identified needs for existing public wastewater systems and treatment facilities, updated the status of the system extension projects identified in the 2005 Southwest Virginia Regional Wastewater Study, and identified new potential extension projects and prioritized those projects based on a detailed scoring criteria. In total, the study identified over \$1.67 Billion in conventional and decentralized system rehabilitation and extension/development needs within Southwest Virginia.

With each passing year, the costs associated with maintaining wastewater system infrastructure continue to rise. The challenges facing Southwest Virginia are daunting as populations in poverty and decline must attempt to maintain aging sewer infrastructure. The future of this region is largely dependent upon meeting this challenge. The following are the findings and recommendations of the Study:

- An informational meeting should be held with all stakeholders, including system owners and operators, local environmental health district managers, local politicians, funding agencies, news outlets, the three PDCs, and DEQ. The meeting should present the findings and recommendations of the Study and discuss the path forward.
- The Study identified deteriorating and aging sewer systems and I/I as major issues affecting existing systems. The DEQ Southwest Virginia Pilot Program Step 1 provided much needed funding to localities for use in preparing Sewer System Evaluation Surveys. These surveys and studies are invaluable in evaluating existing sewer systems and identifying and prioritizing rehabilitation efforts. Step 2 program funding is currently being utilized for design and construction of rehabilitation projects throughout Southwest Virginia. Strong consideration should be given to DEQ continuing both the Step 1 and Step 2 programs.
- The study identified the lack of quality wastewater treatment operators as a growing concern. Efforts should be made to partner with existing community colleges to offer classes related to wastewater treatment plant operation and to prepare potential students for their licensure exams. Consideration should also be given to beginning an apprenticeship program funded by the state to help train the next generation of operators.
- Many of the existing wastewater systems in Southwest Virginia have a diminishing and impoverished customer base. These localities face an almost impossible task of maintaining their existing collection systems and treatment facilities. Wherever possible, consolidation of smaller systems into county-wide public service authorities should be strongly considered and encouraged. Regionalization including the cooperation of larger systems should be one of the first alternatives evaluated in future projects.
- Adequate wastewater systems benefit everyone by protecting our critical ecosystems, particularly our waterways. If the trends hold, Southwest Virginia will be largely dependent on tourism based upon outdoor recreational opportunities. Therefore, strong consideration should be given to instituting county-wide mandatory hook-up ordinances or sewer availability fees that can be used to offset the costs of system expansions.
- The Study identified over \$1.67 Billion in needed wastewater system and treatment facility improvements and needed decentralized system construction and conventional system extension projects within Southwest Virginia. This enormous cost will continue to grow year after year as the wastewater infrastructure continues to age and as the costs of goods and services rise. Funding from local, state, and federal sources will need to be secured at a much higher amount than currently available. The findings of the Study should be utilized in cooperation with elected officials to underscore the urgency of the situation facing the region and to increase the availability of state and federal funding for these critical projects.
- Strong consideration should be given to the implementation of the recommendations of Section 9.0 with regard to educating the public.
- A more concentrated emphasis is needed by regulatory and funding agencies on the advantages and benefits of managed decentralized wastewater systems, particularly in areas where the extension of central wastewater systems is cost-prohibitive.



## APPENDIX A

### EXISTING SYSTEM INFORMATION AND MAPPING

This Appendix includes a summary description of all public sewage collection system and wastewater treatment plants within the three Planning District study areas. The data presented is based upon the information received in response to system inquiries that were distributed during Study preparation. In some instances, incomplete or missing data may not have been received by the requested deadlines. The data is segregated by the three Planning Districts.

APPENDIX A

CUMBERLAND PLATEAU PLANNING DISTRICT  
EXISTING SYSTEMS AND MAPS

# BUCHANAN COUNTY PUBLIC SERVICE AUTHORITY CONAWAY WASTEWATER TREATMENT SYSTEM (VA0090531)

*Cumberland Plateau Planning District Commission*

System Description – The Buchanan County Public Service Authority Conaway Wastewater Treatment System serves a large portion of Buchanan County. The collection system was constructed in 1973.

The approximate number of customers served by the system was reported to be:

<u>1,205</u>	Residential Customers
<u>38</u>	Commercial Customers
<u>155</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>1,398</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 98% residential and 2% non-residential.

The collection system consists of 8 inch through 20 inch gravity lines. It is estimated that approximately 5% of the system consists of ductile iron pipe and approximately 78% of the manholes are masonry brick. The newest area of the system was constructed in 2009. The oldest areas of the system are estimated to have been constructed in the 1970s.

System Flows -A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	49,386,100	13,975,000	<b>28%</b>
February	59,654,000	11,215,100	<b>19%</b>
March	41,152,500	12,001,500	<b>29%</b>
April	69,441,000	12,040,100	<b>17%</b>
May	60,313,600	10,898,900	<b>18%</b>
June	57,285,000	11,490,600	<b>20%</b>
July	51,249,200	11,045,200	<b>22%</b>
August	50,982,600	11,095,700	<b>22%</b>
September	47,736,000	15,020,300	<b>31%</b>
October	45,067,800	11,197,100	<b>25%</b>
November	38,958,000	10,864,200	<b>28%</b>
December	42,141,400	10,619,700	<b>25%</b>
<b>Monthly Average</b>	<b>51,113,933</b>	<b>11,788,617</b>	<b>23%</b>
<b>Daily Average</b>	<b>1,680,458</b>	<b>387,571</b>	<b>23%</b>
<b>Avg / Customer</b>	<b>1,202</b>	<b>277</b>	

## Other Maintenance Related Issues Experienced by System

- Aging equipment at treatment plant,
- Aging pipes in collection system,
- Inflow and Infiltration concerns,
- Electrical problems for equipment.

## System Needs

- Replacement of the sewer treatment plant,
- Rehabilitation of collection system.

Permit Violations/System Overflows/Consent Order

- The Buchanan County Public Service Authority collection system had 5 reported sewer system overflows during calendar year 2021. 5 were due to excessive Infiltration and Inflow, 0 were due to line blockages created by root intrusion, grease, or other debris.
- The system has not had any permit violations over the past 3 years since December of 2018
- The collection system is under a consent order with the DEQ. The consent order is dated 2016-2017

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines. Not enforced.

SSES

A SSES was performed on the system in January 2022 by Thompson & Litton. The SSES identified \$5,065,000 of recommended system rehabilitation projects.

Asset Management Plan

The system has an asset management plan prepared by Thompson & Litton in 2022.

Sewer Rate Structure

The following sewer rate structure was last modified in July 2021:

Residential		Out of County Fee
\$25.00	First 1,000 Gallons	\$9.50
\$9.00	Every 1,000 Gallons After	

Commercial (5/8")	
\$37.50	First 1,000 Gallons
\$9.00	Every 1,000 Gallons After

Commercial (1")	
\$60.00	First 1,000 Gallons
\$9.00	Every 1,000 Gallons After

System Debt and Maturity Date of Outstanding Loans

\$2,000,000 loan with the Collection system, Vac Truck, and CCTV camera system.

Opinion of Probable Project Cost for Necessary Facility Improvements – The opinion of probable project cost for the identified facility improvements is \$5,600,000.

Improvement	Cost
Lining 5,430 linear feet of sewer main and 32 masonry manholes.	\$560,000
CCTV approximately 50,000 linear feet of sewer main and lining of 160 manholes.	\$5,040,000
<b>Total</b>	<b>\$5,600,000</b>

**BUCHANAN COUNTY PUBLIC SERVICE AUTHORITY CONAWAY-  
VPDES PERMIT #VA0090531**

**BUCHANAN COUNTY PUBLIC SERVICE AUTHORITY**

*Cumberland Plateau Planning District*

Facility Description – The treatment facility is located at Conaway Rd, Big Rock, VA (see attached general vicinity map). The facility was originally constructed in 1986. The facility utilizes secondary treatment as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the BCPSA collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 2.0 MGD. The average daily flow treated at the facility during calendar year 2021 was 51,113,933 gallons. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 2.033 MGD. The facility exceeded 80% capacity for 165 days during this period. Effluent from the plant is discharged to the Levisa River. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by the BCPSA. Currently, 5 full time and part time licensed operators work at the facility. 1 Class 1, 1 Class 2, 1 Class 3, 1 Class 4, and 1 trainee. The facility is required to be staffed 16 hours/day.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Aged equipment,
- Aged pipes,
- Aged equipment and parts,
- High flows,
- Aging electrical issues.

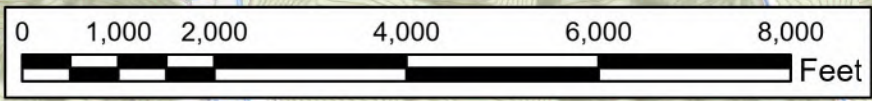
Facility Needs – Identified facility needs are as follows:

- Facility needs replacing,
- Lack of space for upgrades or expansion.

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable project cost for the identified facility improvements is \$7,850,000.

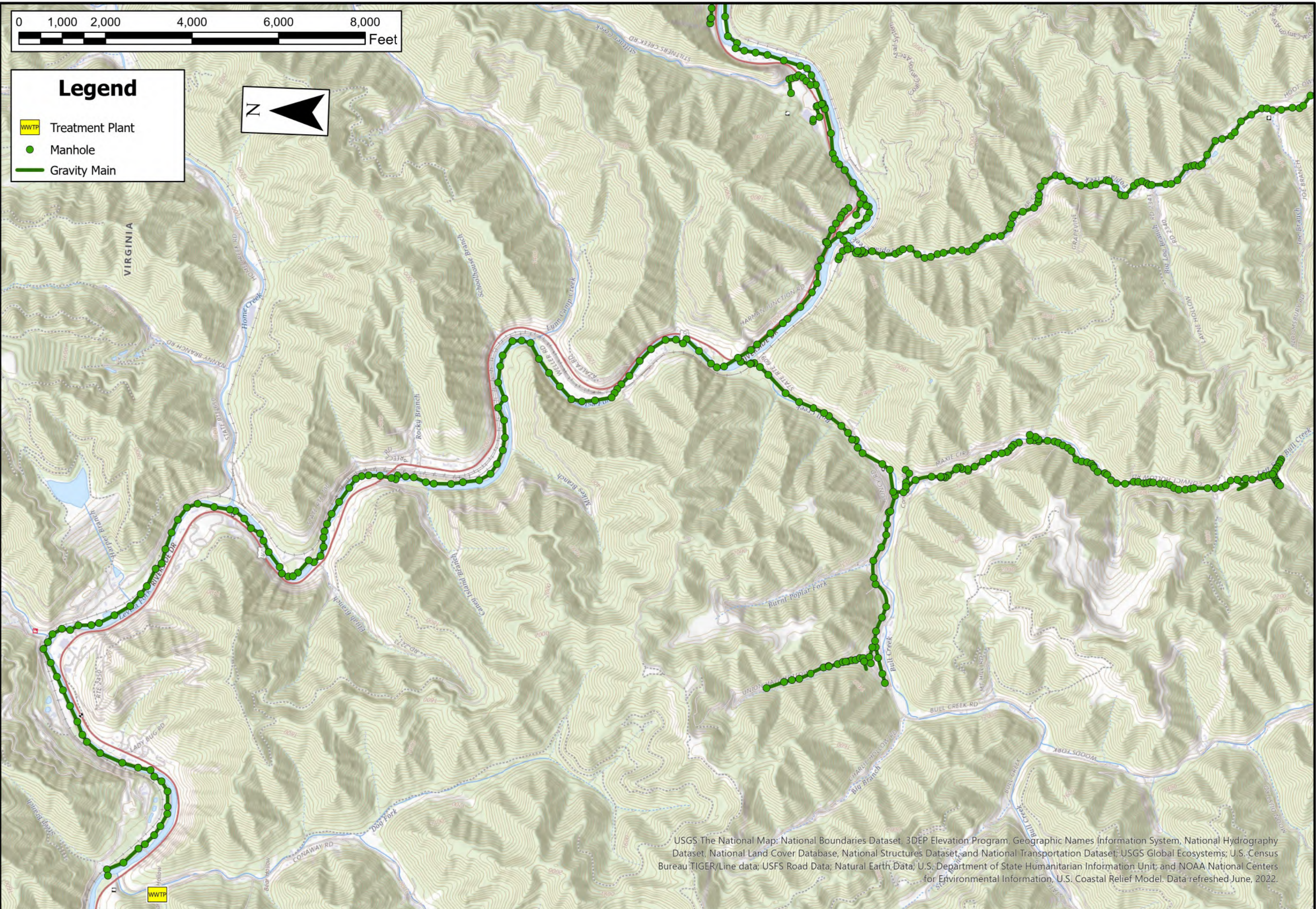
Improvement	Cost
Replacement of Influent Pump Station	\$1,350,000
Replacement of Grit Removal Pumps	\$800,000
Replacement of Rotating Biological Contactors	\$1,200,000
Replacement of Biological Contactor Blowers	\$1,350,000
Replacement of Primary Sludge Pump Station	\$900,000
Replacement of Secondary Sludge Pump Station	\$1,800,000
Replacement of Aerobic Digester Blower	\$450,000
<b>Total</b>	<b>\$7,850,000</b>





**Legend**

- WWTP Treatment Plant
- Manhole
- Gravity Main



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



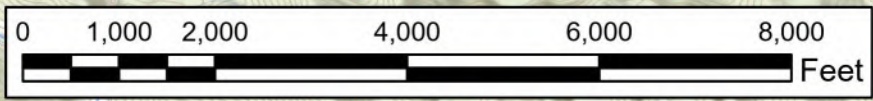
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SEWER STUDY 2022**

**BUCHANAN COUNTY  
PUBLIC SERVICE  
AUTHORITY**



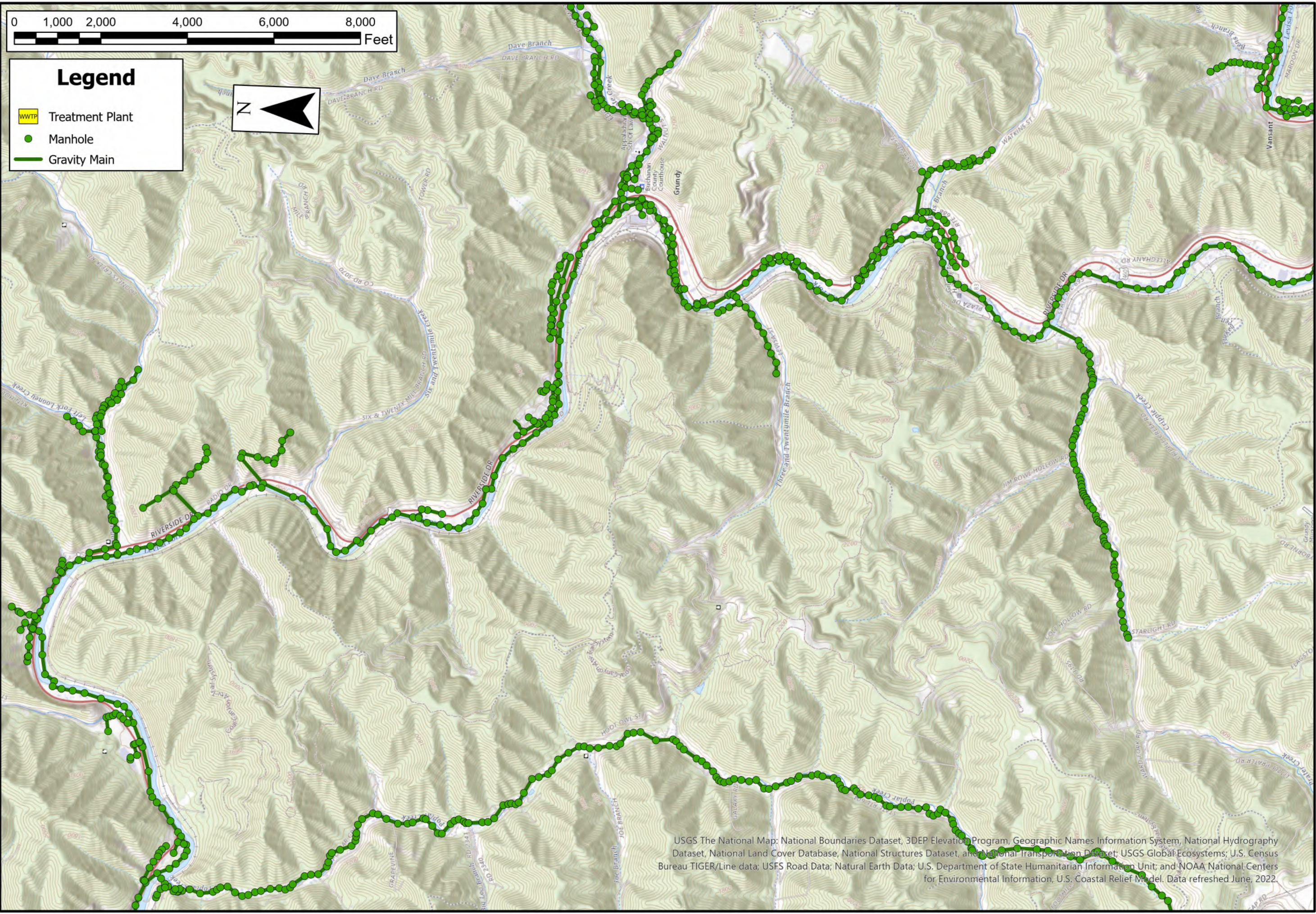
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**Legend**

- WWTP Treatment Plant
- Manhole
- Gravity Main

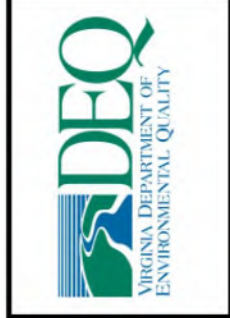


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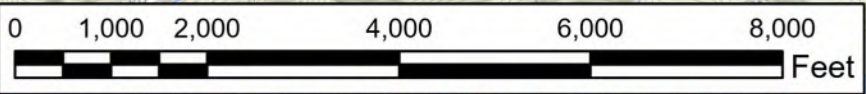
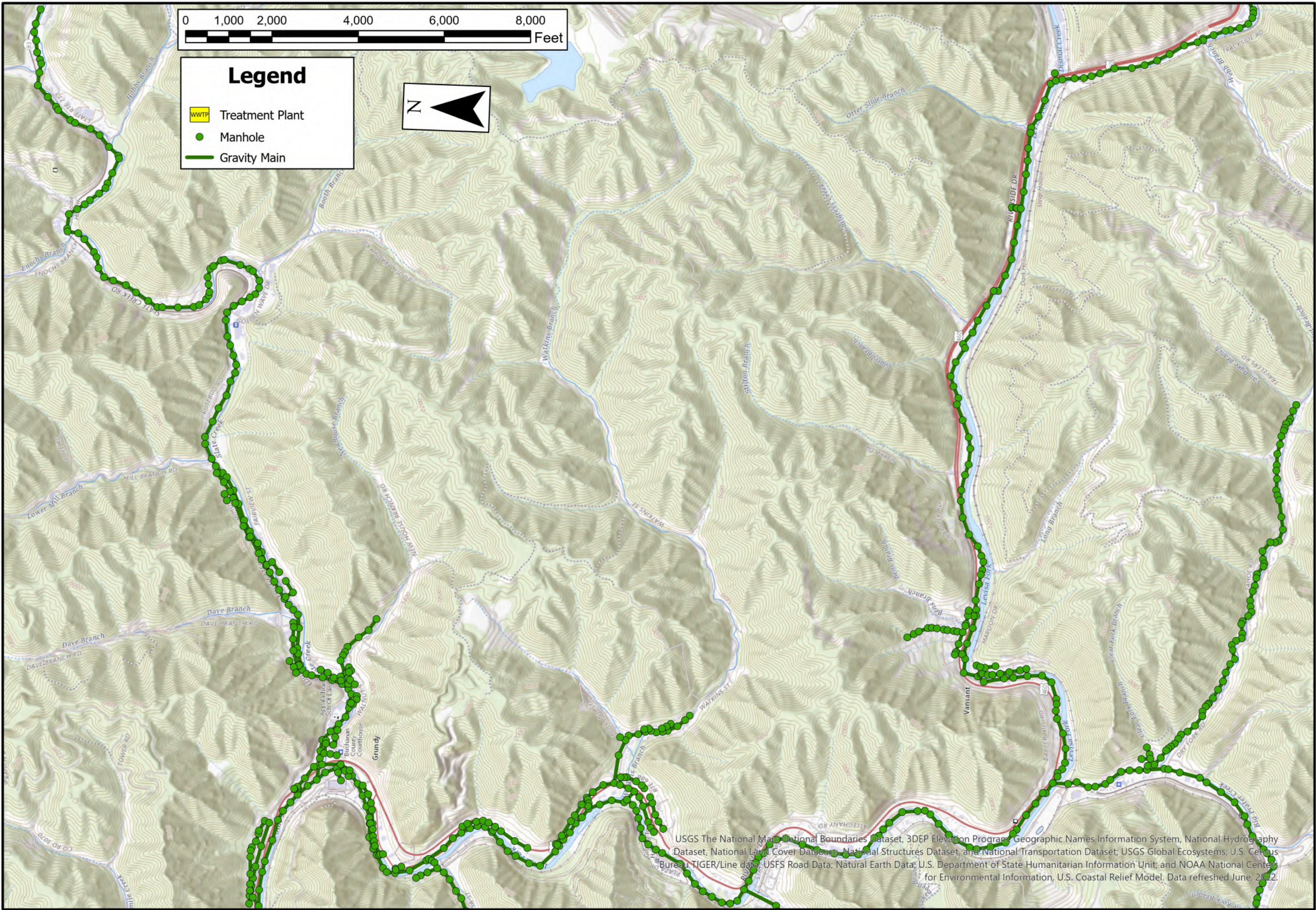
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PUBLIC SERVICE  
AUTHORITY**



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**Legend**

- Treatment Plant
- Manhole
- Gravity Main



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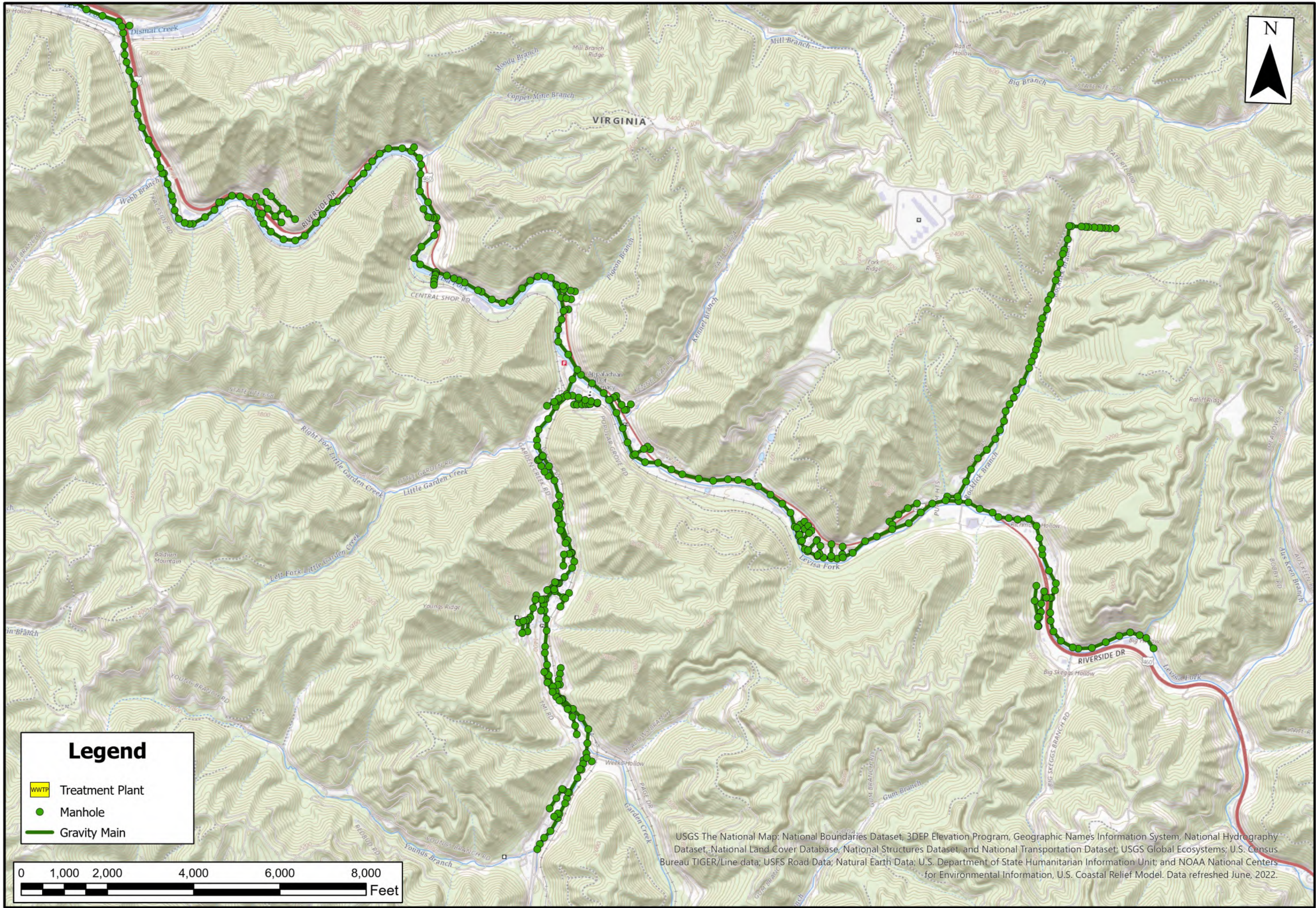
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**BUCHANAN COUNTY  
PUBLIC SERVICE  
AUTHORITY**



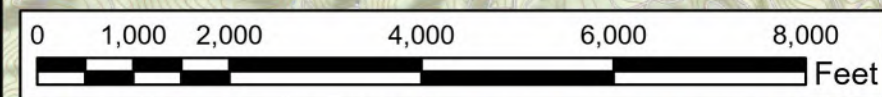
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**Legend**

- Treatment Plant
- Manhole
- Gravity Main



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**BUCHANAN COUNTY  
PUBLIC SERVICE  
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# TOWN OF CLINTWOOD (VA0026565)

Cumberland Plateau Planning District Commission

System Description – The Town of Clintwood Wastewater Treatment System serves the Town of Clintwood located in the Northwest section of Dickenson County East of the Town of Pound along route 83. The collection system was constructed in the 1986.

The approximate number of customers served by the system was reported to be:

<u>781</u>	Residential Customers
<u>131</u>	Commercial Customers
<u>1</u>	<u>Other Municipal Systems</u>
<b>913</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 92% residential and 8% non-residential.

The collection system consists of 4 inch through 12 inch gravity lines. It is estimated that approximately 90% of the system consists of PVC and 10% ductile iron pipe and approximately 50% of the manholes are masonry brick but have been lined. The rest of the manhole are precast concrete. The newest area of the system was constructed in 2009. The oldest areas of the system are estimated to have been constructed in 1986.

The system includes four pump stations:

- Happy Valley Lift Station: 15 HP 4”, Feeds into 8”
- Longs Fork Lift Station: 15 HP 4” Feeds into 8”
- Colley Lift Station: 60 HP 4” Feeds into 8”
- Brush Creek Lift Station: Numatics Connection 4”, Feeds into 8”

System Flows - A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	6,435,700	2,945,800	46%
February	9,260,300	2,964,500	32%
March	8,635,600	3,599,700	42%
April	5,280,500	4,075,600	77%
May	5,227,300	3,164,600	61%
June	5,645,500	3,781,700	67%
July	4,944,300	3,561,900	72%
August	6,682,000	3,388,200	51%
September	5,216,900	3,307,800	63%
October	5,234,900	4,460,200	85%
November	4,354,700	3,634,600	83%
December	5,242,600	3,761,000	72%
<b>Monthly Average</b>	<b>6,013,358</b>	<b>3,553,800</b>	<b>59%</b>
<b>Daily Average</b>	<b>197,699</b>	<b>116,837</b>	<b>59%</b>
<b>Avg / Customer</b>	<b>123</b>	<b>126</b>	

## Other Maintenance Related Issues Experienced by System

- Electrical issues,
- Age of equipment,
- Parts are difficult to find.

System Needs

- All pumps need to be replaced,
- Blowers need to be replaced,
- Motors need to be replaced for blowers.

Sewer Use Ordinance: It is enforced

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

No SSES has been done for the Town of Clintwood.

Asset Management Plan

No Asset Management Plan has been done for the Town of Clintwood.

Sewer Rate Structure

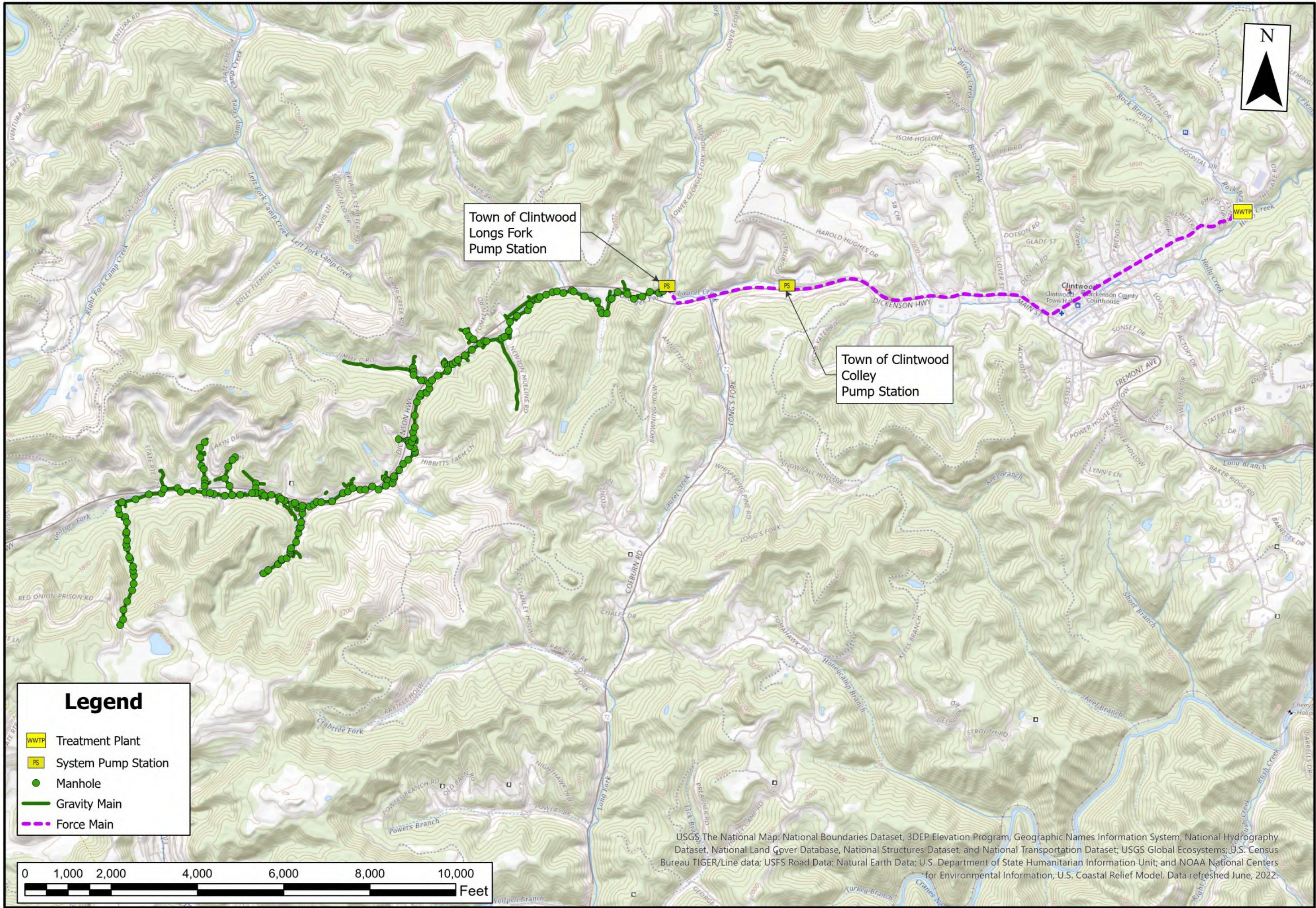
The following sewer rate structure was last modified in June 2022:

Residential		Commercial	
In - Town		In - Town	
\$17.00	2000 gal	\$22.00	2000 gal
Out of Town		Out of Town	
\$22.00	2000 gal	\$32.50	2000 gal
Clintwood Processes sewer for Dickenson County PSA (George Fork Area) \$6.00 per 1000 gal.			

System Debt and Maturity Date of Outstanding Loans

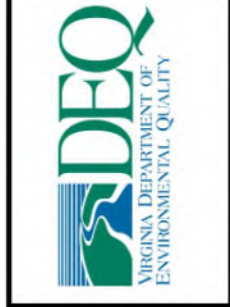
No Sewer Loans





SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

DICKENSON COUNTY  
 PUBLIC SERVICE  
 AUTHORITY -  
 GEORGES FORK



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**DICKENSON COUNTY PUBLIC SERVICE AUTHORITY HAYSI  
(VA0067571)**

**DICKENSON COUNTY PUBLIC SERVICE AUTHORITY**

*Cumberland Plateau Planning District Commission*

Facility Description – The treatment facility is located at Splash Dam Rd Haysi, VA 24256 (see attached general vicinity map). The facility was originally constructed in 1980. The last major upgrade/expansion was completed in 2007 and involved New RBCs, New clarifiers, doubling the capacity of the plant. The facility utilizes secondary treatment as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Dickenson County Haysi, Clinchco, and Centennial Height collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 0.1 MGD. The average daily flow treated at the facility during calendar year 2021 was 195,984 gpd. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.231 MGD. The facility exceeded 80% capacity for 250 days during this period. Effluent from the plant is discharged to the Russell Fork River. Sludge from the facility is disposed of at a landfill.

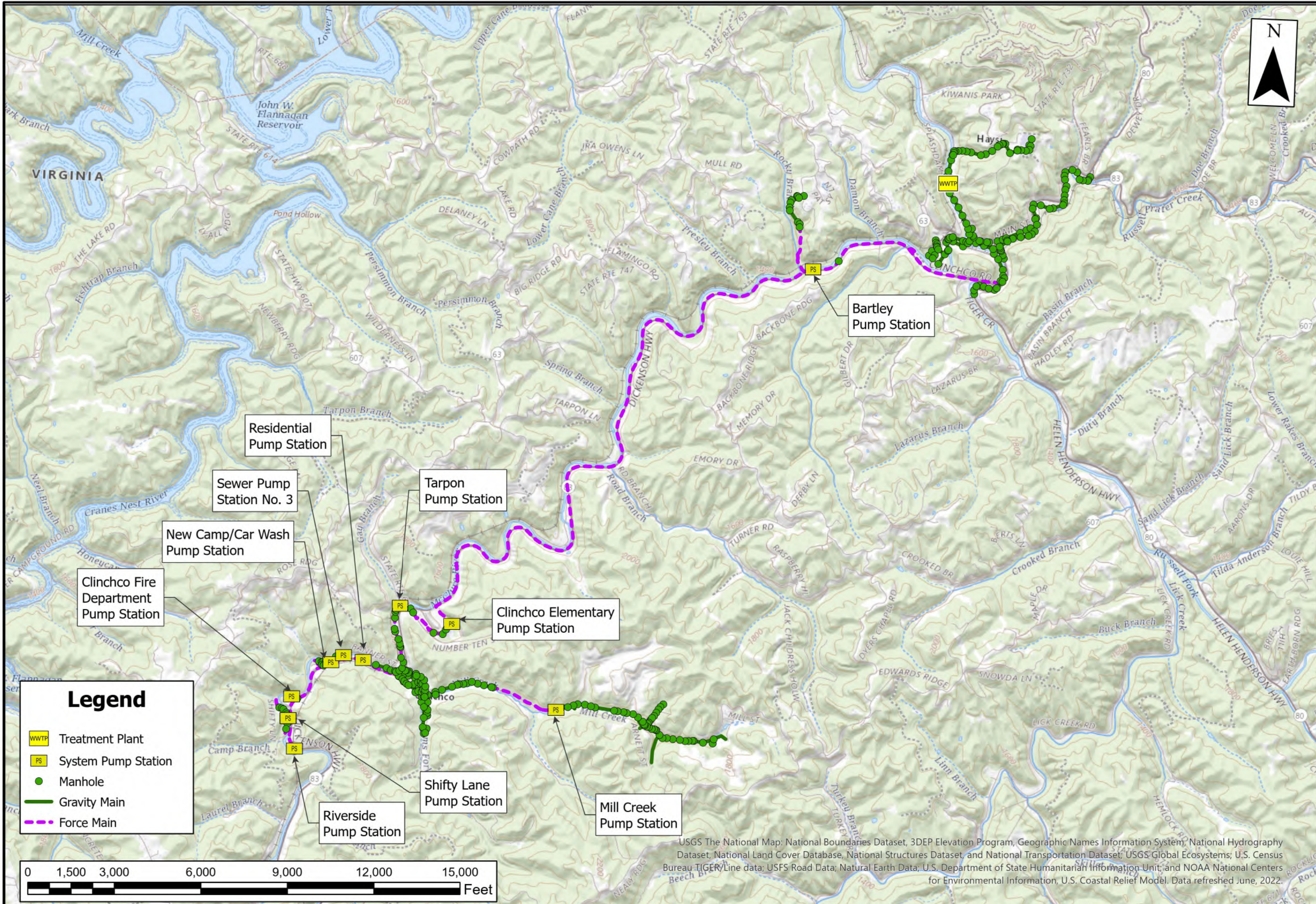
Facility Operation – The facility is operated and maintained by UMG. Currently, 3 full time and 0 part time licensed operators work at the facility. 1 Class 2 and 2 Class 3. The facility is required to be staffed 8 hours/day.

Permit Violations – The facility has had 4 permit violations over the past 2 years. The violations were the result of collection system issues.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Deterioration of equipment





SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

DICKENSON COUNTY  
 PUBLIC SERVICE  
 AUTHORITY -  
 CLINCHCO / HAYS



DATE:	xx/xx/xxxx
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<b>SHEET</b>	
DRAWN BY:	CHEKED BY:
PROJECT NO.:	xxxx
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**DICKENSON COUNTY PUBLIC SERVICE AUTHORITY TRAMMEL**  
**DICKENSON COUNTY PUBLIC SERVICE AUTHORITY**  
*Cumberland Plateau Planning District Commission*

Facility Description – The treatment facility is located at main camp Trammel, VA 24273 (see attached general vicinity map). The facility was originally constructed in 1991. The facility utilizes secondary treatment as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Dickenson County Trammel Community collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.02 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.004 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.005. The facility exceeded 80% capacity for 0 days during this period. Effluent from the plant is discharged to the McClure River. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by Dickenson County Public Service Authority. Currently, 2 full time and 0 part time licensed operators work at the facility. 1 Class 2 and 1 Class 3. The facility is required to be staffed 1 hours/day 7 days a week.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

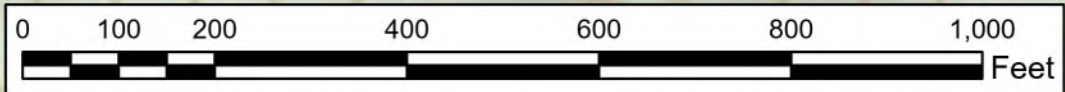
- Deterioration of equipment





**Legend**

- Treatment Plant
- System Pump Station
- Manhole
- Gravity Main
- Force Main

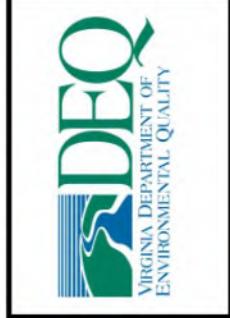


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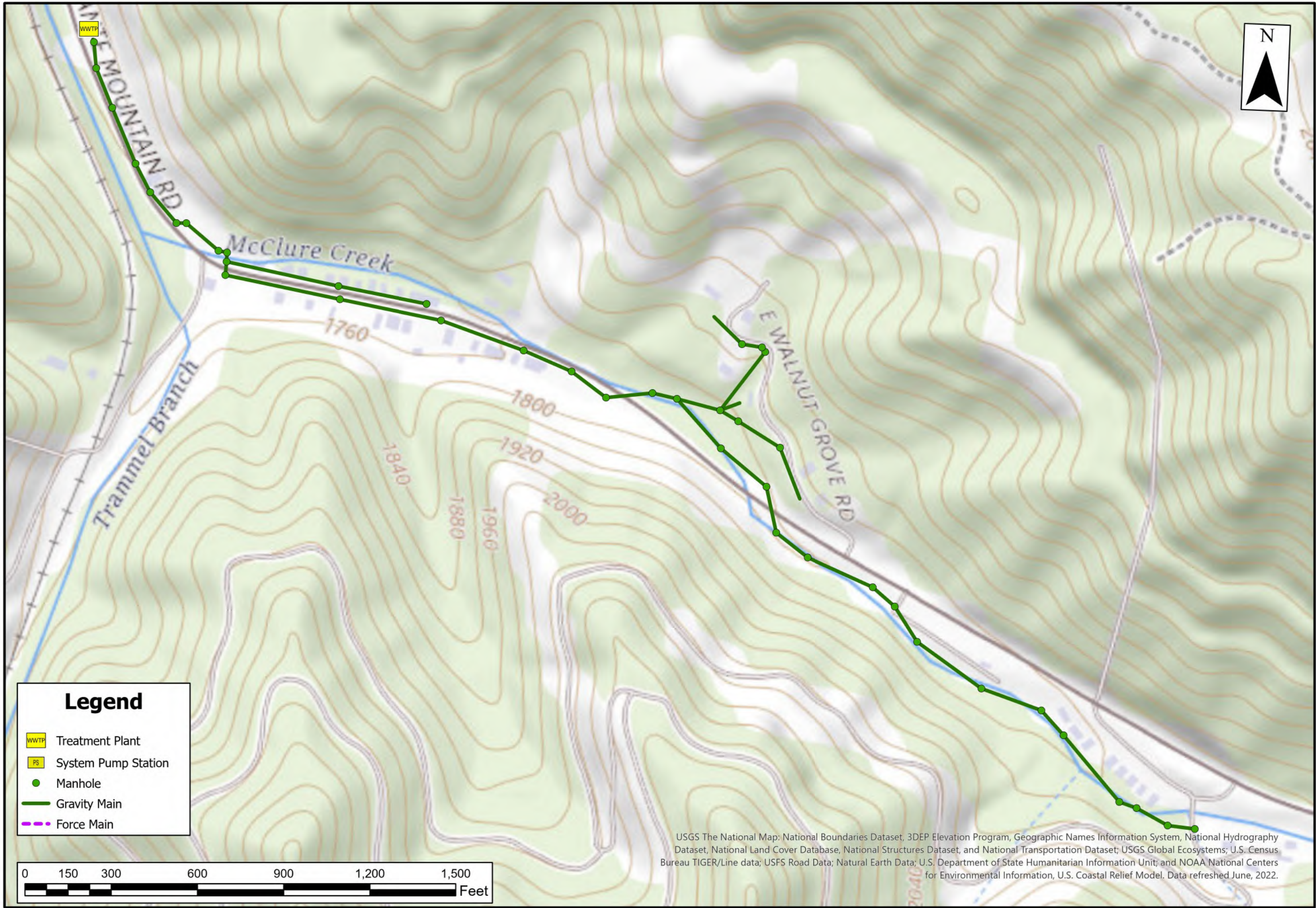
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COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

DICKENSON COUNTY  
PUBLIC SERVICE  
AUTHORITY - NORA



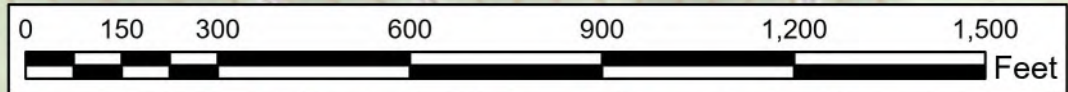
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**Legend**

- Treatment Plant
- System Pump Station
- Manhole
- Gravity Main
- Force Main

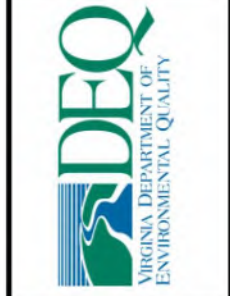


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

DICKENSON COUNTY  
PUBLIC SERVICE  
AUTHORITY -  
TRAMMEL



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# TOWN OF HONAKER (VA0026387)

Cumberland Plateau Planning District Commission

System Description – The Town of Honaker Wastewater Treatment System serves the Town of Honaker located in Russell County North of Rosedale along Route 80. The collection system was constructed in 1987.

The approximate number of customers served by the system was reported to be:

569 Residential Customers:  
61 Commercial Customers:  
**630 Total Number of Customers**

The system's customer billings flows for 2021 were estimated to be approximately 84% residential and 16% non-residential.

The collection system consists of 2" force main and 6" & 8" gravity sewer. It is estimated that approximately 25% of the system consists of Terracotta pipe and approximately 30% of the manholes are masonry brick. The newest area of the system was constructed in 2010. The oldest areas of the system are estimated to have been constructed in 1987.

System Flows - A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	4,232,000	4,065,200	96%
February	4,206,000	3,615,300	86%
March	5,236,000	3,903,300	75%
April	4,052,000	3,763,200	93%
May	2,737,000	3,954,100	144%
June	3,435,000	3,738,100	109%
July	2,483,000	4,464,800	180%
August	3,460,000	4,200,500	121%
September	3,111,000	4,047,600	130%
October	2,500,000	4,116,400	165%
November	2,785,000	3,797,500	136%
December	2,999,000	4,176,000	139%
<b>Monthly Average</b>	<b>3,436,333</b>	<b>3,986,333</b>	<b>116%</b>
<b>Daily Average</b>	<b>112,975</b>	<b>131,074</b>	<b>116%</b>
<b>Avg / Customer</b>	<b>179</b>	<b>208</b>	

## Permit Violations/System Overflows/Consent Order

- The Town of Honaker collection system had **9** reported sewer system overflows during calendar year 2021. **9** were due to excessive Infiltration and Inflow, **0** were due to line blockages created by root intrusion, grease or other debris.
- The system has had 14 permit violations over the past 2 years. The violations were the result of EColi, ammonia, BOD, TSS limits being exceeded.
- The system is under consent order with the DEQ. The consent order is dated June 2020 and was issued to address exceedances in permitted limits and addressing equipment and process improvements.

## Other Maintenance Related Issues Experienced by System

- Outdated and old equipment failure.

System Needs

- Addressing Infiltration & Inflow,
- Replacing aging equipment.

Sewer Use Ordinance: No ordinance

The system is not governed by an existing sewer use ordinance. The ordinance does not address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

SSES

No SSES has been done for the Town of Honaker.

Asset Management Plan

No Asset Management Plan has been done for the Town of Honaker.

Sewer Rate Structure

The following sewer rate structure was last modified 2018:

Residential		Commercial	
In - Town		In - Town	
2500 gals	\$28.26	2500 gals	\$31.17
Out of Town		Out of Town	
2500 gals	\$38.89	2500 gals	\$40.96

System Debt and Maturity Date of Outstanding Loans

The system currently has:

VRA Loan at the wastewater plant (UV System) \$167,531.72 (July 2022)

## **TOWN OF HONAKER– VPDES PERMIT # VA0026387**

### **TOWN OF HONAKER**

*Cumberland Plateau Planning Commission*

Facility Description – The treatment facility is located at 4259 Lewis Creek Rd (see attached general vicinity map). The facility was originally constructed in 1987. The last major upgrade/expansion was completed in 2010 and involved removal of chlorine disinfection and changed to UV disinfection. The facility utilizes activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Honaker collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.4 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.105 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.152 MGD. The facility exceeded 80% capacity for 0 days during this period. Effluent from the plant is discharged to Lewis Creek. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by the Town of Honaker. Currently, 1 full time and 1 part time licensed operators work at the facility. 2 Class 2. The facility is required to be staffed 8 hours/day.

Permit Violations – The facility has had 14 permit violations over the past 2 years. The violations were the result of E.Coli, ammonia, BOD, and TSS limits being exceeded.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

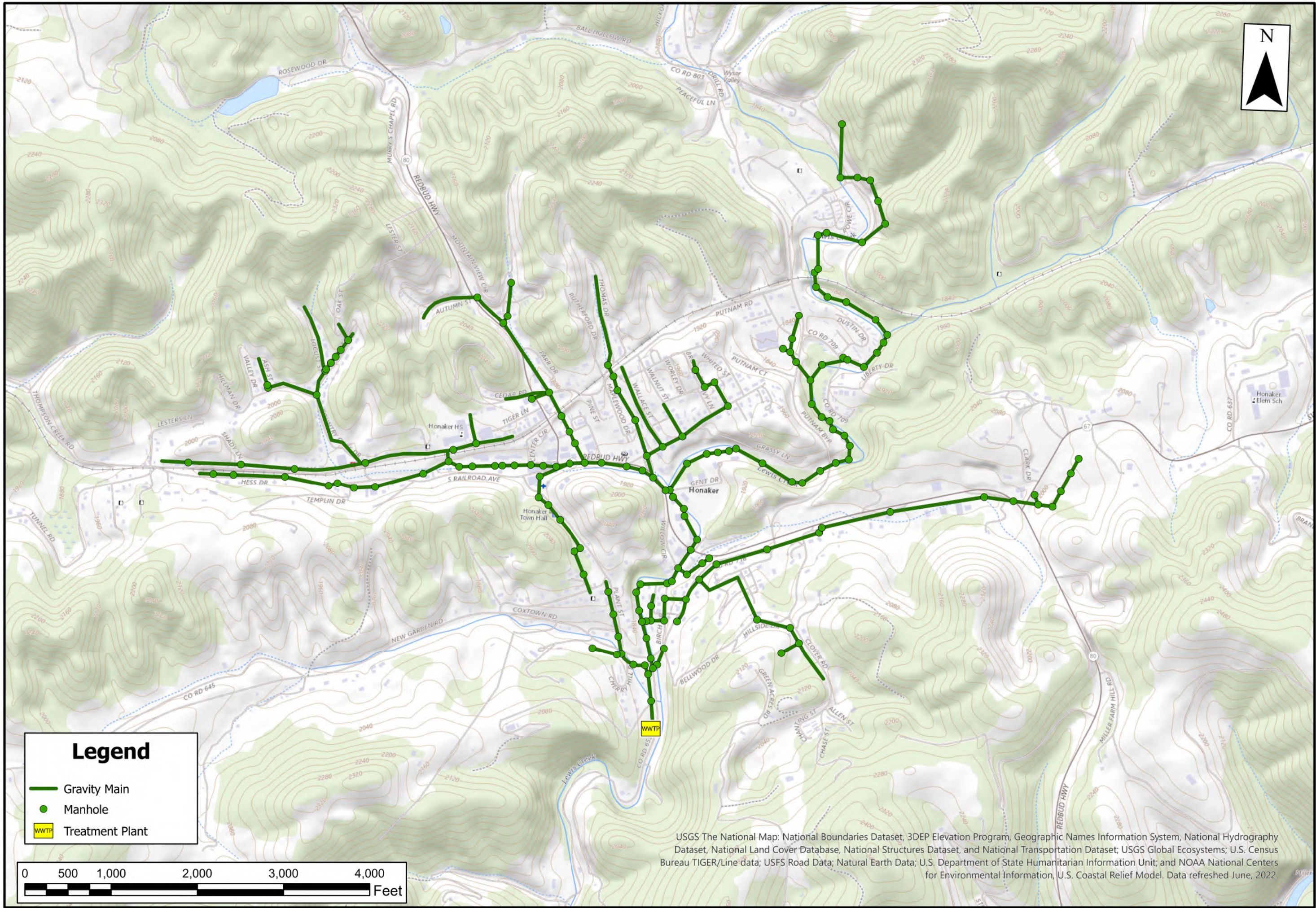
- Outdated and old equipment failure.

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- I&I,
- Equipment replacement and improvements.

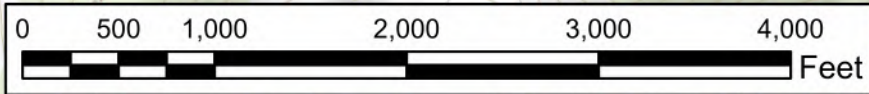
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable project cost for the identified facility improvements is \$1,364,416.





**Legend**

- Gravity Main
- Manhole
- WWTP Treatment Plant



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF  
HONAKER**



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# TOWN OF LEBANON COLLECTION SYSTEM

## TOWN OF LEBANON, VIRGINIA

*Cumberland Plateau Planning District Commission*

System Description – The Town of Lebanon is located in Russell County, Virginia and provides public sewer service to 1,653 +/- customers within the Town’s corporate limits as well as some adjacent areas of Russell County. The sewage collection system includes approximately 32 +/- miles of 8”-18” gravity sewer lines and five (5) pump stations. The wastewater treatment plant has a permitted discharge capacity of 999,000 GPD. The collection system was constructed in the 1970’s.

The approximate number of customers served by the system was reported to be:

<u>1406</u>	Residential Customers
<u>247</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>1653</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **58%** residential and **42%** non-residential.

The collection system consists of 8” through 18” gravity lines. It is estimated that approximately 50% of the system consists of terra cotta or concrete lines and approximately 50% of the manholes are masonry brick. The newest area of the system was constructed in 2010. The oldest areas of the system are estimated to have been constructed in the 1970’s.

The area of Fields Avenue and South Angles Drive of the system experiences problems with capacity due to inadequately sized lines.

The system includes five pump stations:

- **Big Cedar Pump Station** - The largest collection system pump station is the Big Cedar Pump Station located directly adjacent to Big Cedar Creek. This station receives flow from a 12” gravity sewer line serving the eastern part of the collection system. Two (2) 30-HP sewage pumps are provided, with a reported pumping rate of 410 GPM, discharging into an 8” force main. The pump motors and discharge piping are located in a room situated over top of the wetwell.

The pump station does not have an emergency generator. The pump station was originally constructed with backup diesel pump drivers, but they became inoperable and have been removed. The station was originally provided with a comminutor, but it became inoperable and has been removed. The pump station has a local high water alarm and a system that sends a text and email to notify of the alarm conditions. The station has 13 reported overflows during the 10-year period from 2010-2019. The station was constructed as part of the 1980 sewer improvements project.

- **Gilbert Pump Station** - The Gilbert (Jones Addition) Pump Station serves a residential subdivision located on the northeastern side of the collection system. The pump station and associated collection system were constructed as part of the Town’s 1980 sewer improvements project. The pump station was originally constructed as a pneumatic ejector type pump station. Town crews constructed a new submersible sewage pump station in 2017 and demolished/removed the original pump station.

The station includes two (2) 15.5 HP submersible sewage solids handling pumps with a design operating point of 150 GPM @ 119 ft TDH. The collection system into the pump station is an 8” gravity sewer and the discharge line a 4” force main. The station has a local high water alarm, but does not have telemetry or remote alarm notification. The station does not have an emergency generator, but does have a connection for a portable generator. The station had 10 reported overflows during the 10-year period from 2010-2019

- **Industrial Park Pump Station** - The Industrial Park Pump Station is located at the intersection of Route 71 (Fincastle Road) and Clydesway Drive, on the western most portion of the Town’s sewer system. The pump station services the Russell County Industrial Park and those customers along Route 71. Original

plans were not provided for this pump station. The pump station was constructed in about 1980, so is in excess of 40 years old. The capacity of the pump station is believed to be about 90 GPM.

The pump station lot is fenced and has two structures, a circular steel chamber housing the pneumatic ejector tanks and a separate metal building housing the compressors and electrical switchgear. The station does not have an emergency generator. The station had 7 reported overflows during the 10-year period from 2011-2020 with 4 of those occurring in 2020.

- **Elliot Pump Station** - Also known as the Bus Garage Pump Station, this pump station is located on State Route 658 (Big Cedar Creek Road). This station serves only two customers, the Town’s Water Treatment Plant and the Russell County Schools’ bus garage. As-Built plans were not provided for this pump station and only limited other information. The pump station is a submersible type pump station with two pumps and a small shelter for the controls. The reported pump delivery rate is approximately 170 GPM with discharge through a 4” force main. The pump station has a local high water alarm but does not have SCADA or remote alarm notification. An emergency generator is not provided. The pump station was constructed in 1999.

There have been 9 reported overflows at this pump station during the 10-year period from 2011-2020. It was indicated that the majority of those overflows were attributed to releasing too much water from the water treatment plant’s filter backwash and/or sludge dewatering basin.

- **Manor Pump Stations** - There are two (2) small grinder pump stations located in the Lebanon Manor subdivision near the southwest corner of the Town. As-Built plans were not provided for these pump stations and only limited other information is available.

Manor Pump Station No. 1 is located adjacent to Brumley Circle. The number of homes served by this pump station was not provided, but there are estimated to be about 15 +/- homes in close proximity to the pump station without direct access to the Town’s gravity sewer lines (based upon sewer mapping provided). This pump station reportedly has one (1) submersible sewage pump installed in a buried septic tank. DEQ requires pump stations serving more than one customer to have multiple pumps. The pump has a reported delivery rate of about 56 GPM. This pump station does not have a local alarm.

Manor Pump Station No. 2 is located adjacent to Woodland Drive. The number of homes served by this pump station was not provided but there are estimated to be about 10 +/- homes in close proximity to the pump station without direct access to the Town’s gravity sewer lines (based upon sewer mapping provided). This pump station reportedly has two (2) submersible sewage pumps installed in a manhole wetwell. The pumps have a reported delivery rate of about 116 GPM. This pump station has a local alarm.

Neither of these pump stations has a fenced lot, nor a generator, nor SCADA, nor remote alarm indication. There have been no reported overflows at either of these pump stations in the past ten years. The system does not collect flow from any other system.

Treatment is ultimately provided at the Town of Lebanon WWTP (VPDES Permit #VA0020745).

System Flows - A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	20,004,400	6,791,963	33.9%
February	24,496,750	6,016,959	24.5%
March	27,130,400	6,114,649	22.5%
April	17,879,760	6,902,172	38.6%
May	15,093,510	10,687,820	70.8%
June	15,343,020	1,759,534	11.4%
July	14,970,820	7,422,759	49.5%
August	15,162,950	8,311,606	54.8%
September	12,797,630	6,401,314	50.0%

October	15,498,470	8,612,462	55.5%
November	12,275,510	6,267,795	51%
December	14,556,510	8,670,550	59.5%
<b>Monthly Average</b>	<b>17,100,810</b>	<b>6,996,631</b>	<b>40.9%</b>
<b>Daily Average</b>	<b>570,027</b>	<b>233,221</b>	<b>40.9%</b>
<b>Avg / Customer</b>	<b>344.8</b>	<b>141</b>	

Permit Violations/System Overflows/Consent Order

- The collection system had 2 reported sewer system overflows during calendar year 2021. \_\_\_ were due to excessive Infiltration and Inflow, 2 were due to line blockages created by root intrusion, grease or other debris.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Age of equipment and availability of replacement parts.

System Needs

- Infiltration and inflow identification and remediation.
- Pump Station Rehabilitation/Replacements
- Manhole Rehabilitation/Replacements
- Line Replacement (both deteriorating and undersized)

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the entire area of the system in May, 2022 by The Lane Group. The SSES identified \$3,069,700 of recommended system rehabilitation projects.

Capital Improvements Plan

The Town does not have a CIP.

Asset Management Plan

The system has an asset management plan prepared by The Lane Group in May, 2022.

Sewer Rate Structure

The following sewer rate structure was last modified in 2021

- Residential (in-town) - \$19.00
- Residential (out-of-town) - \$31.00
- Commercial (in-town) - \$21.00
- Commercial (out-of-town) - \$36.00

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$3,069,700. (Include table breakdown is possible).

System Dept and Maturity Date of Outstanding Loans

The wastewater system currently has no outstanding loans.



**TOWN OF LEBANON WWTP – VPDES PERMIT #VA0020745**  
**TOWN OF LEBANON, VIRGINIA**  
*Cumberland Plateau PDC*

Facility Description – The treatment facility is located at 274 Haber Drive, Lebanon Virginia 24266 (see attached general vicinity map). The facility was originally constructed in 1950. The last major upgrade/expansion was completed in 1994 and involved increasing the capacity to .999 MGD. The facility utilizes conventional activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Lebanon collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is .999 MGD. The average daily flow treated at the facility during calendar year 2021 was 729,031. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 918,142. The facility exceeded 80% capacity for 40days during this period. Effluent from the plant is discharged to Big Cedar Creek. Sludge from the facility is disposed of at the landfill.

Facility Operation – The facility is operated and maintained by the Town of Lebanon. Currently two full time licensed operators work at the facility. One is a Class 1 while the other is a Class 3 operator. The facility is required to be staffed 8 hours/day/7 days per week.

Permit Violations – The facility has had no permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

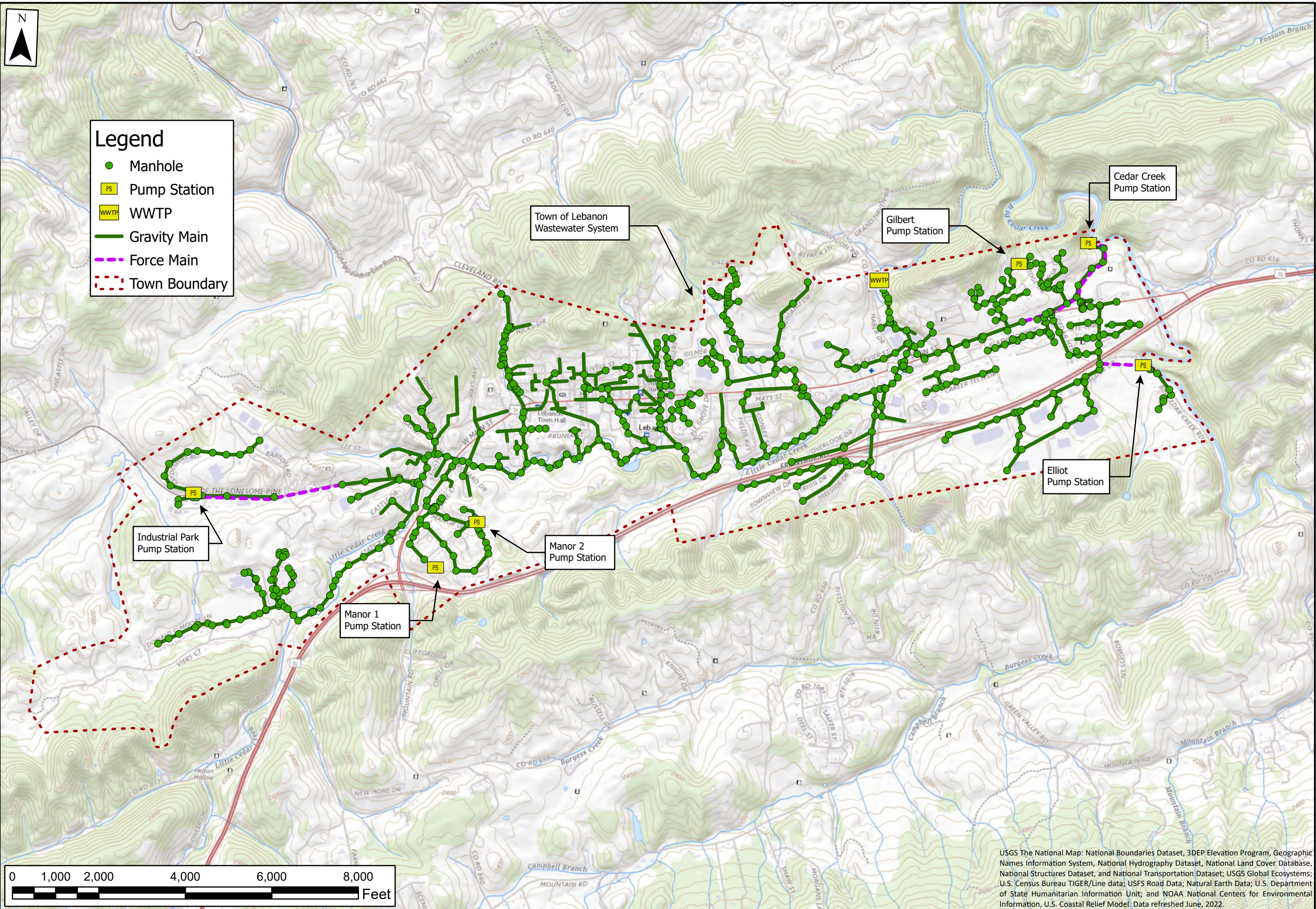
- Age of equipment
- Availability of replacement parts for existing equipment.

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Replacement of Aeration Blowers & Yard Piping.
- Replace Sludge Belt Press System.
- Rehabilitate Secondary Treatment Units.
- Rehabilitate Grit Collector
- Rehabilitate Flow Splitter Assemblies.
- Rehabilitate Primary Clarifiers.
- Rehabilitate Aerobic Digesters
- Rehabilitate Post-Aeration Tank.
- Rehabilitate Plan Drain Pump Station.
- Replace Backup Emergency Generator.
- WWTP SCADA System.
- Replacement of the Industrial Park Pump Station.
- Rehabilitation of the Big Cedar Pump Station.

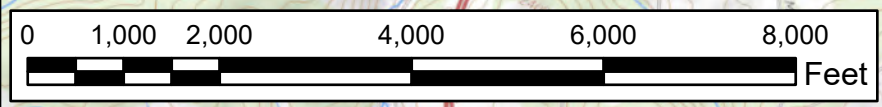
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$6,715,000 (Including related costs and contingencies)





**Legend**

- Manhole
- PS Pump Station
- WWTP WWTP
- Gravity Main
- - - Force Main
- - - Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF LEBANON  
WASTEWATER  
SYSTEM



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# TOWN OF TAZEWELL – VPDES PERMIT #VA0026298

## TOWN OF TAZEWELL

*Cumberland Plateau Planning District Commission*

Facility Description – The treatment facility is located at 618 Titis Rd, Tazewell, VA 24651 (see attached general vicinity map). The facility was originally constructed in 1964. The last major upgrade/expansion was completed in 1990 and involved reconstruction of the wastewater plant. The facility utilizes activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Tazewell collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 2.0 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.893 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 1.514 MGD. The facility exceeded 80% capacity for 34 days during this period. Effluent from the plant is discharged to the Clinch River. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by the Town of Tazewell. Currently, 4 full time and 0 part time licensed operators work at the facility. 1 Class 1, 1 Class 2, 1 Class 3, and 1 Class 4. The facility is required to be staffed 10 hours/day M-F and 8 hours/day Sat-Sun.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Aging equipment

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

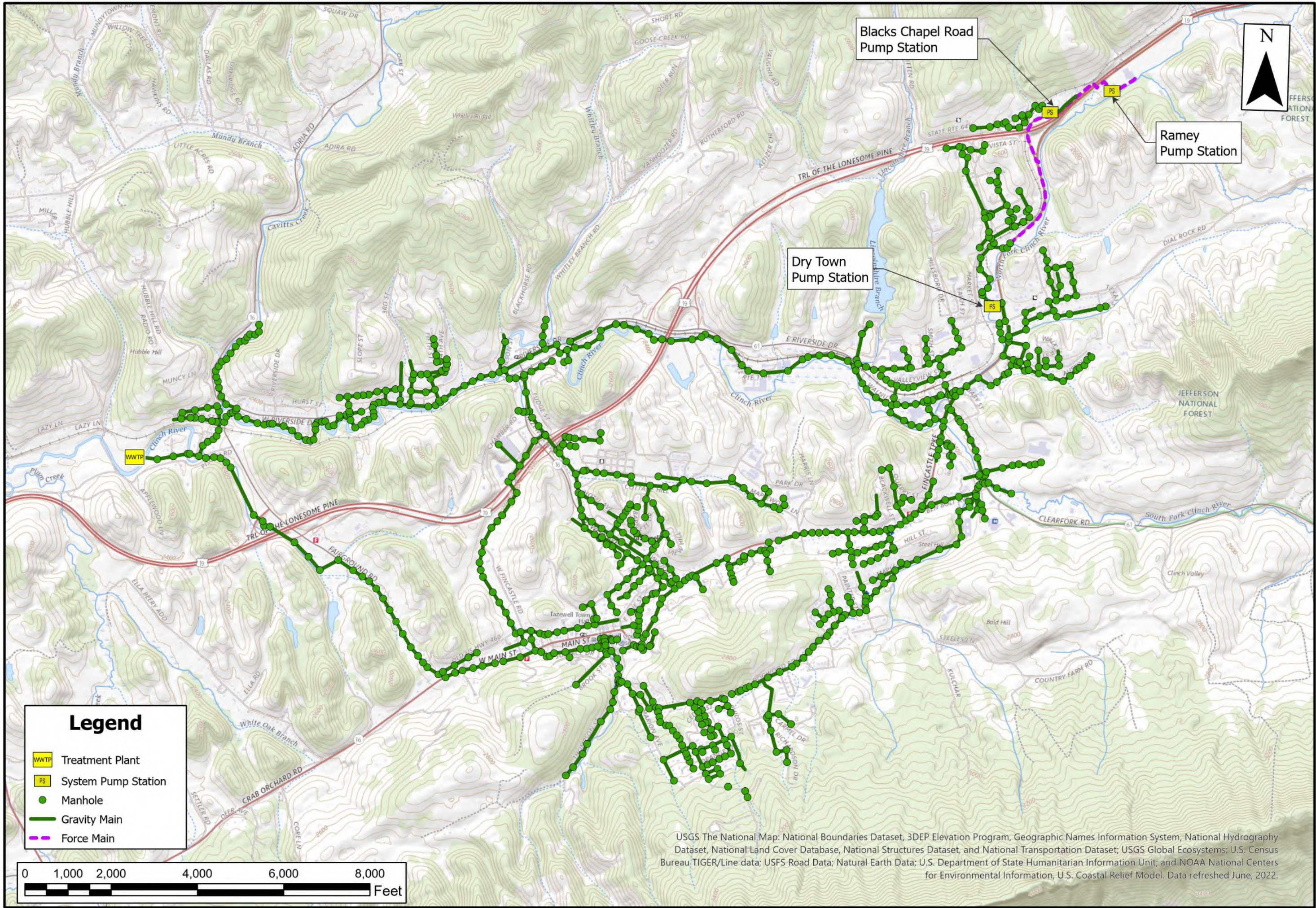
- Pumps,
- Electrical issues,
- UV.

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$8,091,660.

Improvement	Cost
New Influent Pump Station	\$500,000
Mechanical Screen and Compactor	\$240,000
Vortex Grit System	\$370,000
Rehabilitate Primary Clarifier	\$100,000
Primary Sludge Pumps	\$36,000
Aeration Basin Diffuser System	\$120,000
Aeration Basin Blowers	\$260,000
Aeration Basin Structural Modifications	\$5,000
Aeration Basin Mixers	\$60,000
DO and pH/ORP Meters @ Aeration Basins	\$34,000
MLSS Recirc. Pump Station & Piping	\$330,000
Rehabilitate Secondary Clarifiers	\$140,000

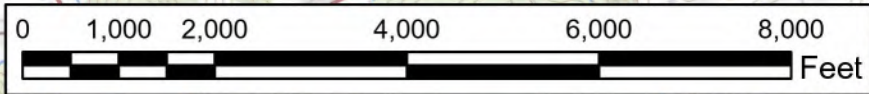
RAS Pumps	\$136,000
WAS Pumps	\$36,000
Tertiary Disc Filter Rehabs	\$200,000
UV Disinfection System	\$308,000
Digester Diffuser System	\$130,000
Digester Blowers	\$330,000
New Telescopic Valves at Digesters	\$30,000
Processed Sludge Pumps	\$42,000
Non-potable Water Pumps	\$14,000
Sump Pumps at Grit & Secondaries	\$42,000
Dewatering Bldg. Roll-Up Door & Electrical	\$15,000
Biosolids Storage Building	\$180,000
Replace Plant Flow Meters	\$100,000
Replace Pressure Gauges	\$20,000
Yard Piping	\$760,000
Valve & Gate Replacements	\$380,000
New Automatic Samplers	\$30,000
Bypass Pumping during Construction	\$30,000
Electrical & Controls	\$1,010,000
SCADA Update	\$50,000
Demolish Existing Biosolids Storage Bldg.	\$20,000
Rehab. Allowance for Concrete Structures	\$100,000
Total	\$8,091,660





**Legend**

- WWTP Treatment Plant
- PS System Pump Station
- Manhole
- Gravity Main
- Force Main

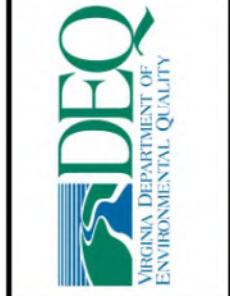


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF  
TAZEWELL



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**TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY CLAYPOOL HILL – VPDES PERMIT # VA0064271**  
**TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY**  
*Cumberland Plateau Planning District Commission*

Facility Description – The treatment facility is located at 843 Wardell Rd, Pounding Mill, VA 24639 (see attached general vicinity map). The facility was originally constructed in November 2015. The last major upgrade/expansion was completed in 2015 and involved shutting down the old plant and constructing the new one. The facility utilizes extended aeration as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Claypool Hill and Wardell collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.7 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.234 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.321 MGD. The facility exceeded 80% capacity for 0 days during this period. Effluent from the plant is discharged to the Little River. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by the Tazewell County Public Service Authority. Currently, 3 full time and 0 part time licensed operators work at the facility. 2 Class 2 and 1 Class 4. **The facility is required to be staffed 10 hours/day.**

Permit Violations – The facility has had 0 permit violations over the past 2 years.

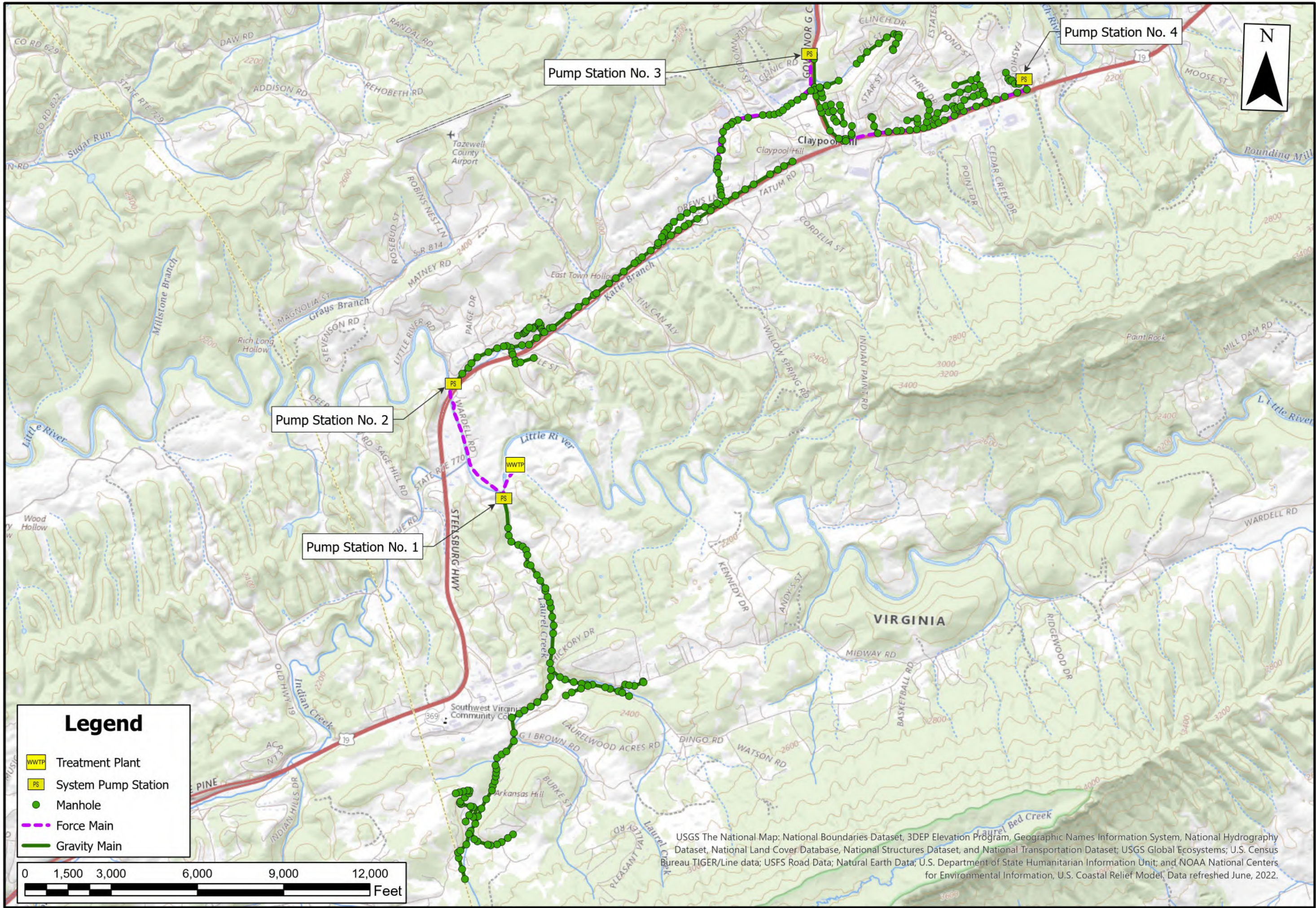
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- I&I from ground water,

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

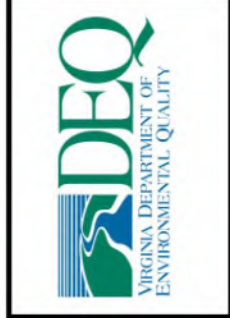
- Upkeep of operation equipment,
- I&I.





SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TAZEWELL COUNTY  
PUBLIC SERVICE  
AUTHORITY -  
CLAYPOOL HILL



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**TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY FALLS MILLS–  
VPDES PERMIT #VA0062561**

**TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY**

*Cumberland Plateau Planning District Commission*

Facility Description – The treatment facility is located at 203 Brush Fork Rd, Falls Mills, VA 24613 (see attached general vicinity map). The facility was originally constructed in 1986. The facility utilizes Rotating Biological Contactor as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Falls Mills collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.25 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.104 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.103 MGD. The facility exceeded 80% capacity for 8 days during this period. Effluent from the plant is discharged to the Blue Stone River. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by Tazewell County Public Service Authority. Currently, 3 full time and 0 part time licensed operators work at the facility. 3 Class 3. The facility is required to be staffed 8 hours/day.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Pump failure,
- Metal deterioration.

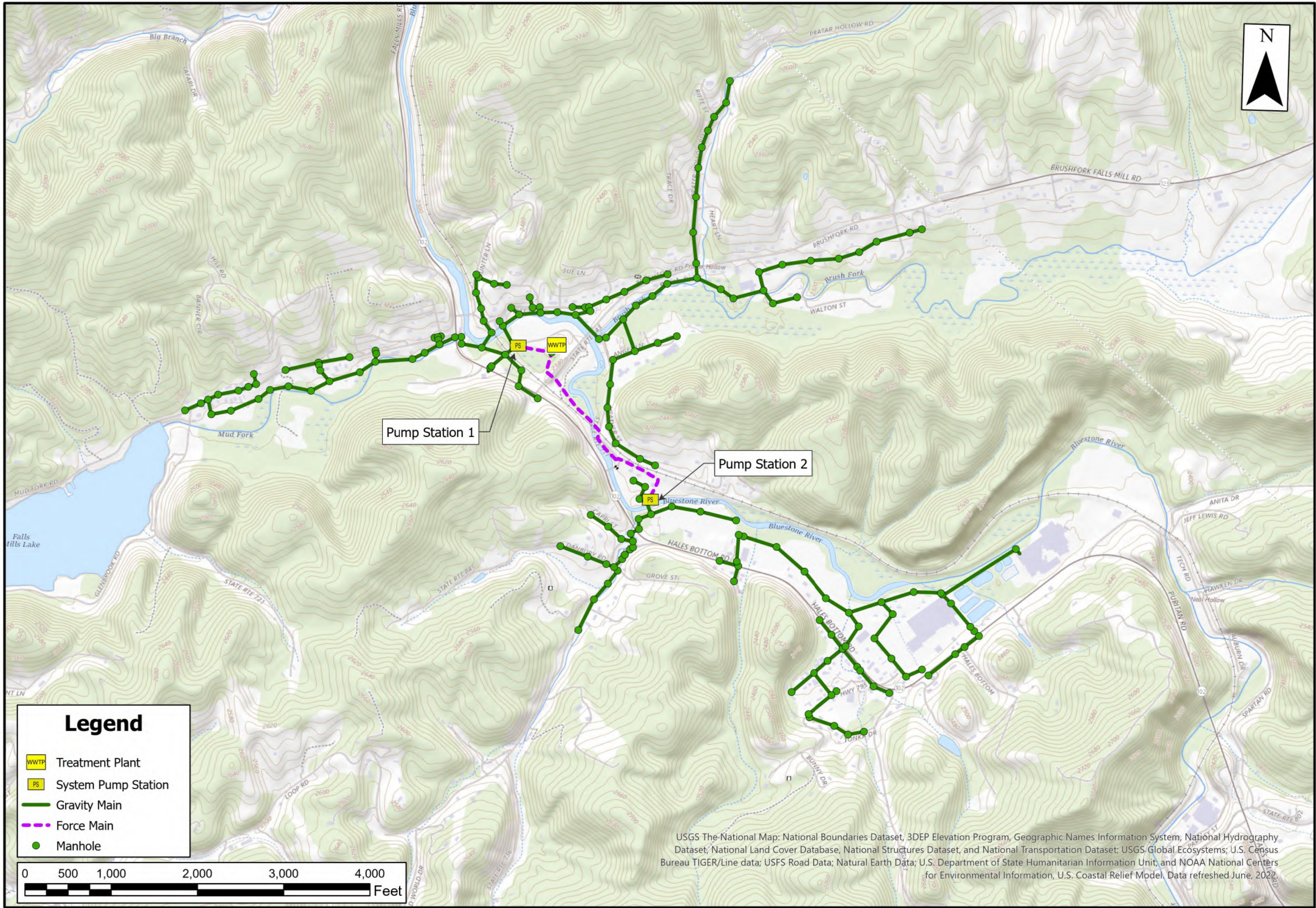
Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- UV light disinfection,
- New Imhoff tank.

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$800,000.

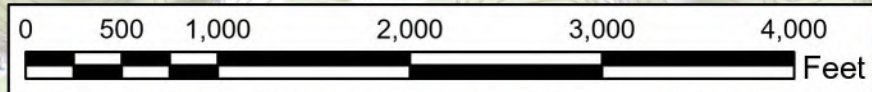
Improvement	Cost
Replacement of Circulation Pump	\$150,000
Replacement of Blowers	\$200,000
Replacement of Emergency Generator	\$450,000
Total	\$800,000





**Legend**

- Treatment Plant
- System Pump Station
- Gravity Main
- Force Main
- Manhole

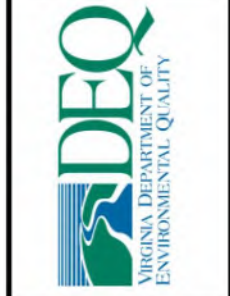


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SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TAZEWELL COUNTY  
PUBLIC SERVICE  
AUTHORITY -  
FALLS MILLS



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**TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY NORTHERN  
TAZEWELL – VPDES PERMIT #VA0091588  
TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY  
Cumberland Plateau Planning District Commission**

Facility Description – The treatment facility is located at 2748 Rosenbaum Rd, Bluefield VA 24605 (see attached general vicinity map). The facility was originally constructed in 2007. The last major upgrade/expansion was completed in 2007 and involved construction of the facility. The facility utilizes Sequencing Batch Reactors as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Pocahontas, Pocahontas State Corrections, and Boissevain collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.5 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.223 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.33 MGD. The facility exceeded 80% capacity for 20 days during this period. Effluent from the plant is discharged to Laurel Fork. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by the Tazewell County Public Service Authority. Currently, 3 full time and 0 part time licensed operators work at the facility. 3 Class 3. The facility is required to be staffed 8 hours/day.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

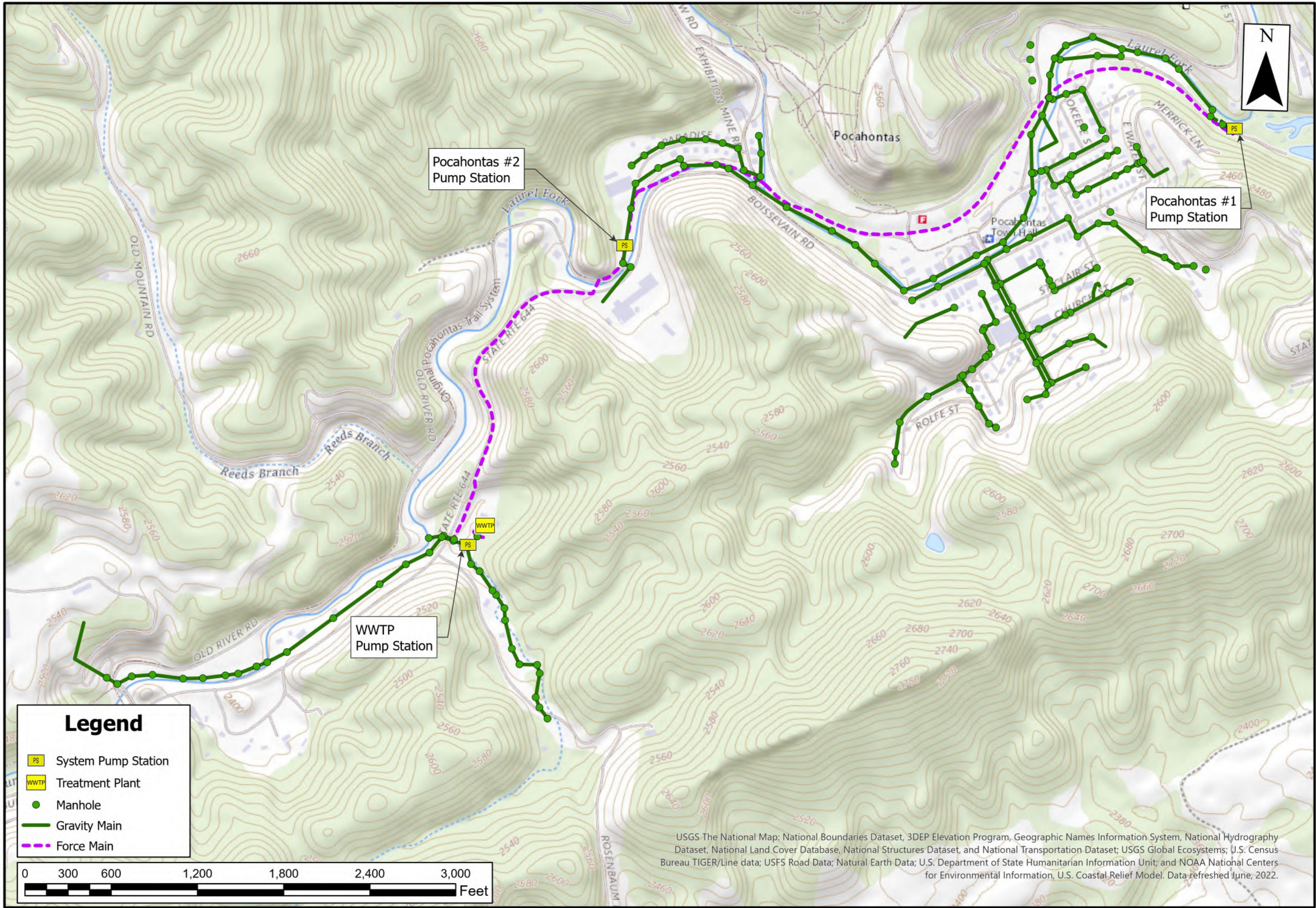
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Pump failures.

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

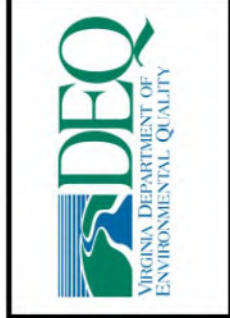
- Better sludge handling equipment.





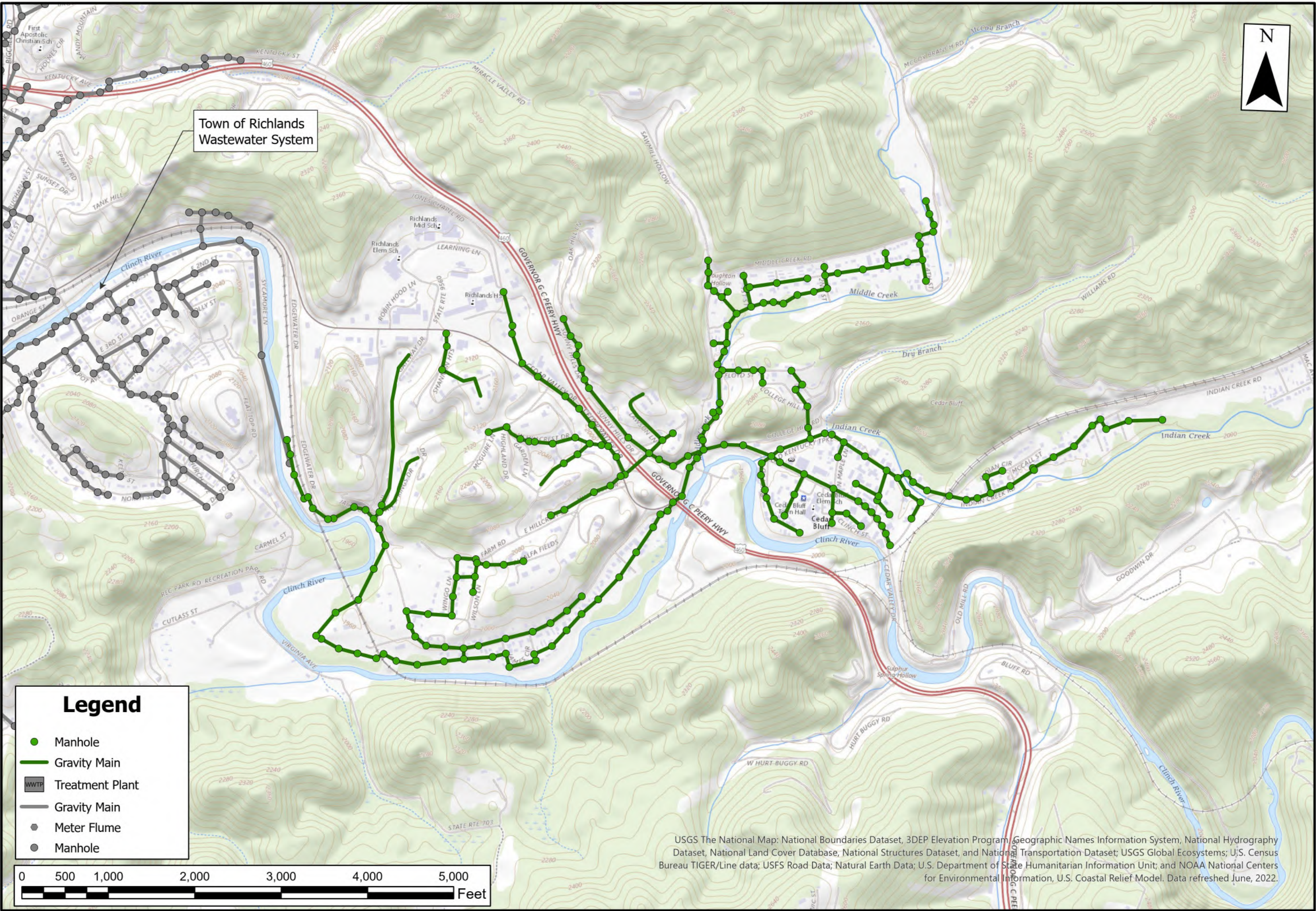
SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TAZEWELL COUNTY  
PUBLIC SERVICE  
AUTHORITY -  
NORTHERN TAZEWELL  
COUNTY



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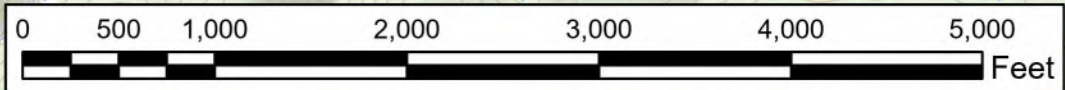




Town of Richlands  
Wastewater System

**Legend**

- Manhole
- Gravity Main
- WWTP Treatment Plant
- Gravity Main
- Meter Flume
- Manhole

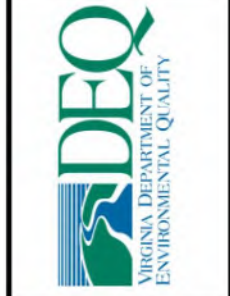


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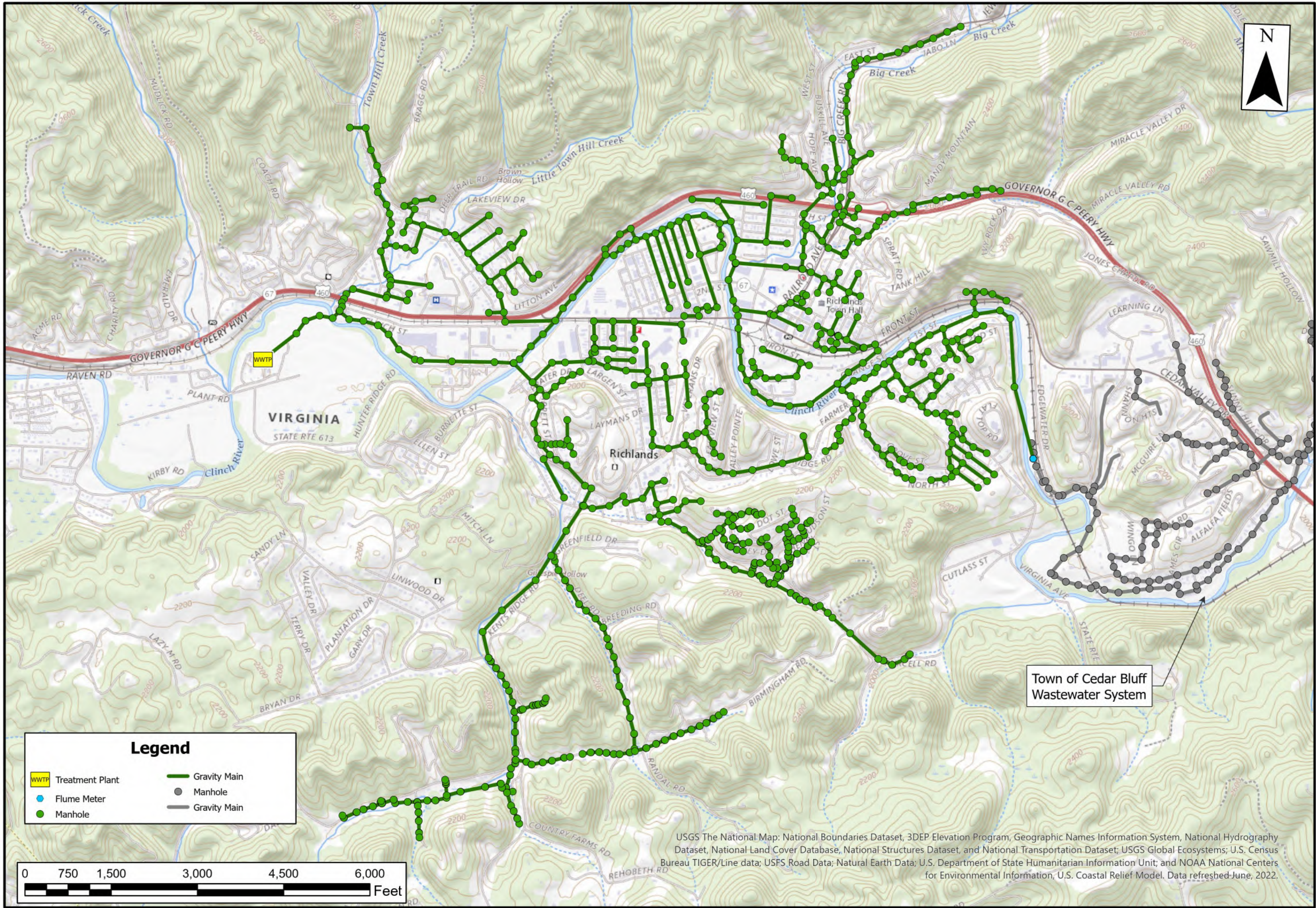
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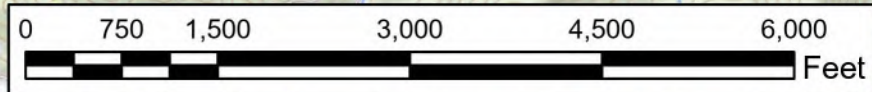
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**Legend**

Treatment Plant	Gravity Main
Flume Meter	Manhole
Manhole	Gravity Main



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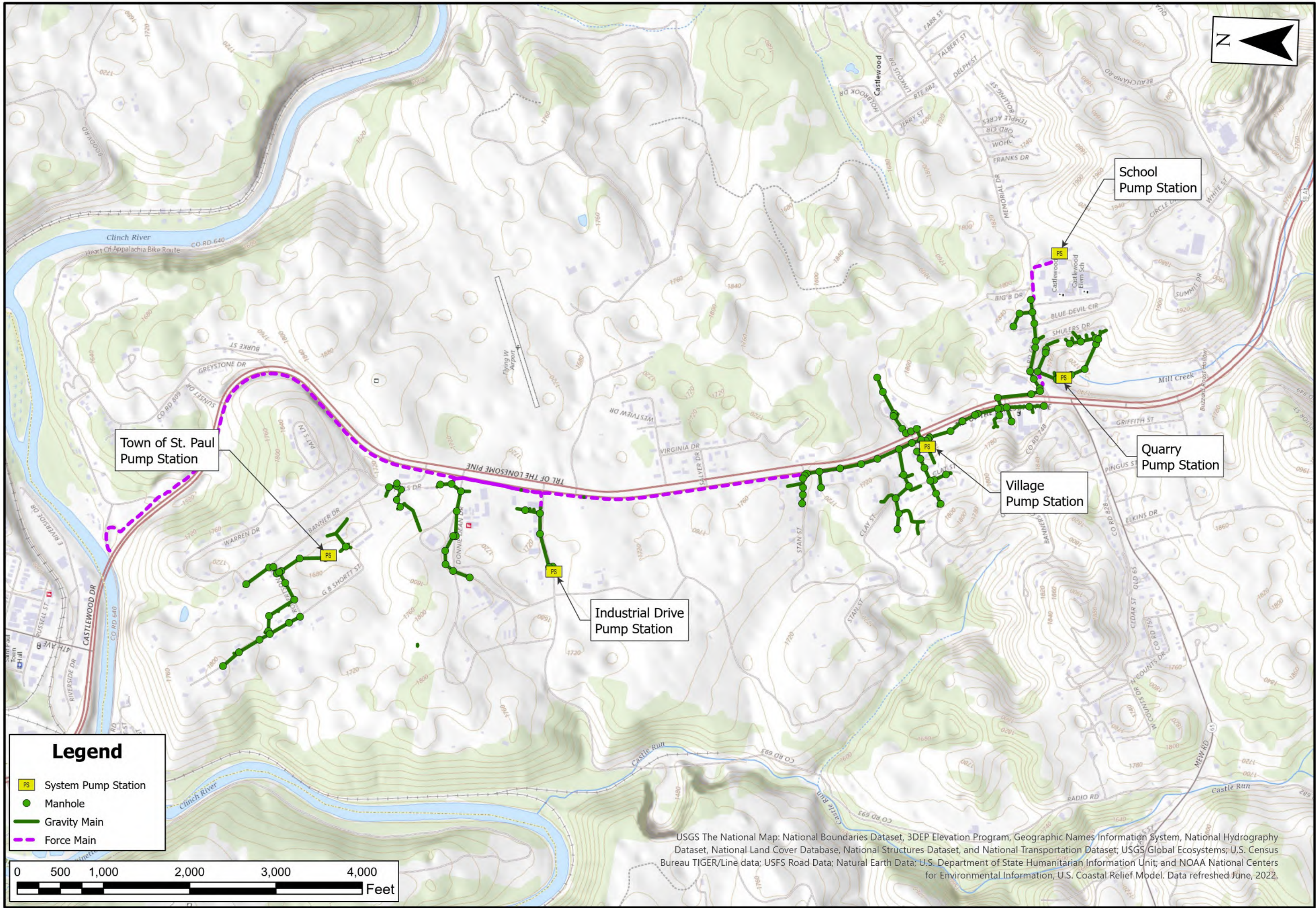
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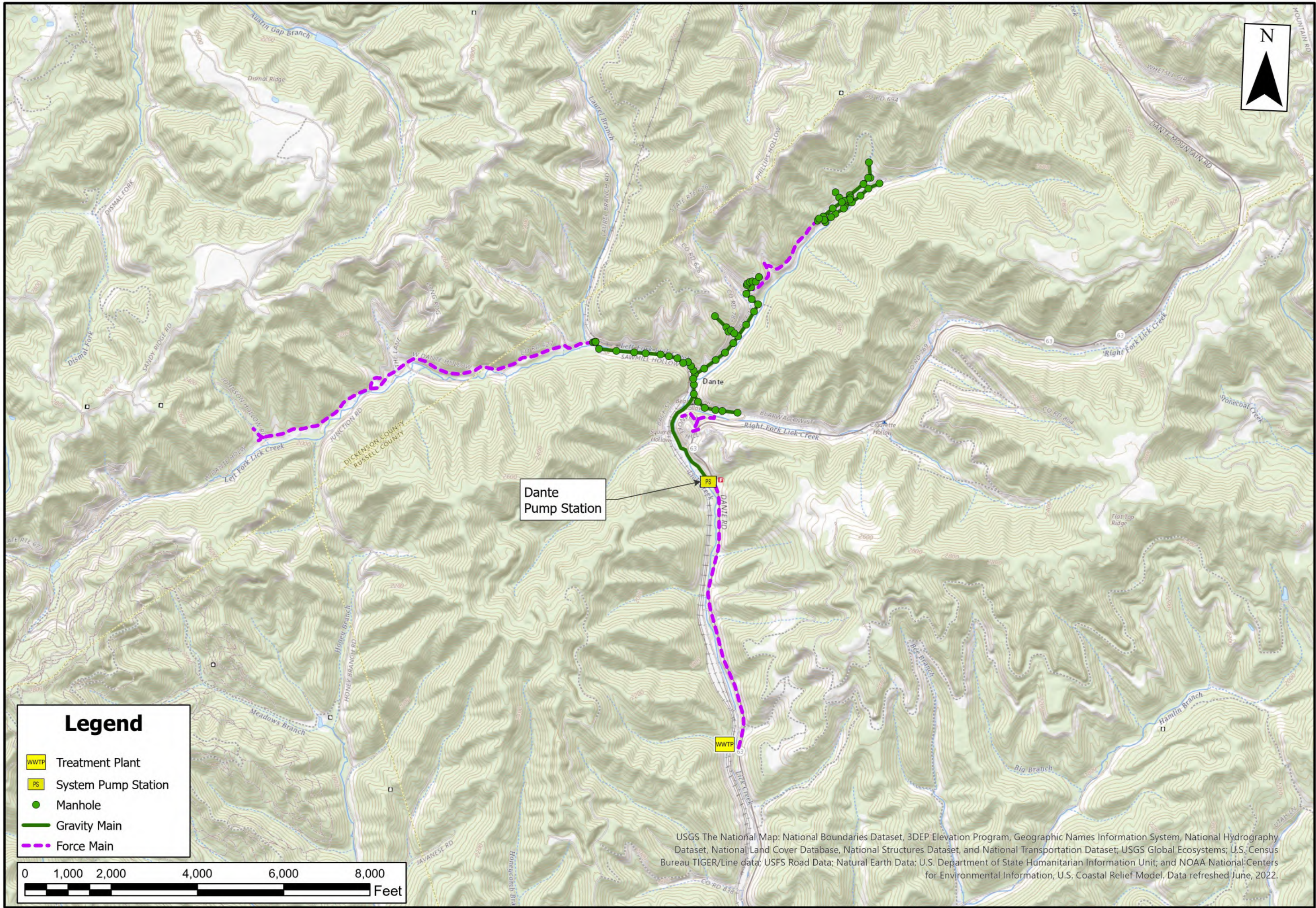
RUSSELL COUNTY PUBLIC  
SERVICE AUTHORITY -  
CASTLEWOOD



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.

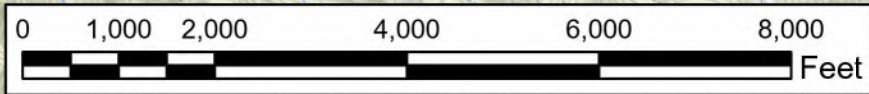
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**Legend**

- WWTP Treatment Plant
- PS System Pump Station
- Manhole
- Gravity Main
- Force Main

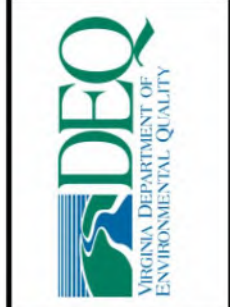


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SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

RUSSELL COUNTY  
PUBLIC SERVICE  
AUTHORITY -  
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APPENDIX A

LENOWISCO PLANNING DISTRICT  
EXISTING SYSTEMS AND MAPS



# TOWN OF APPALACHIA COLLECTION SYSTEM

## TOWN OF APPALACHIA

Lenowisco Planning District Commission

System Description – The Town of Appalachia wastewater collection system services within the town corporate limits and the former coal camp communities of Andover and Inman. The town is located along U.S. BUS 23 in the Western portion of Wise County, VA. System-wide, piping is comprised of cast iron, terra cotta, asphalt felt and PVC. Virtually all in- and out-of-town residents and businesses near sewer services rely on the Town’s gravity system for wastewater treatment.

The approximate number of customers served by the system was reported to be:

<u>671</u>	Residential Customers
<u>38</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>1</u>	<u>Other Municipal Systems</u>
<b>710</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 95% residential and 5% non-residential.

The collection system consists of 6” through 10” gravity lines. It is estimated that approximately 75% of the system consists of terra cotta or concrete lines and approximately 75% of the manholes are masonry brick. The newest area of the system was constructed in 2011. The oldest areas of the system are estimated to have been constructed in the 1940’s.

No areas within the system experience problems with capacity due to inadequately sized lines.

The system includes one pump station:

- Appalachia Pump Station – Triplex suction lift sewer pump station serving the Town of Appalachia service area. It operates to convey sewage flows ranging from 0.25 MGD minimum to 1.1 MGD maximum directly to the Town of Big Stone Gap Wastewater Treatment Plant. The Pump Station is located within the Town of Appalachia corporate limits at the intersection of W. Main St. and S. Inman St.

The system also collects flow from the Wise County Public Service Authority system.

Flow collected by the system is conveyed to the Big Stone Gap system. Treatment is ultimately provided at the Big Stone Gap WWTP (VPDES Permit #VA0020940).

System Flows - Flows for the collection system are estimated based upon pump run times for the Appalachia Pump Station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	4,092,101	2,008,413	49%
February	4,092,101	2,168,258	53%
March	4,092,101	2,100,903	51%
April	4,092,101	2,626,710	64%
May	4,092,101	2,165,121	53%
June	4,092,101	3,075,596	75%
July	4,092,101	2,787,451	68%
August	4,092,101	2,916,257	71%
September	4,092,101	2,848,980	70%
October	4,092,101	2,330,936	57%
November	4,092,101	2,247,520	55%
December	4,092,101	2,283,570	56%

<b>Monthly Average</b>	<b>4,092,101</b>	<b>2,463,310</b>	<b>60%</b>
<b>Daily Average</b>	<b>134,535</b>	<b>80,985</b>	<b>60%</b>
<b>Avg / Customer</b>	<b>189</b>	<b>114</b>	

Permit Violations/System Overflows/Consent Order

- The Town of Appalachia collection system had 0 reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration and Inflow

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES has not been performed on the system.

Capital Improvements Plan

The system does not currently have a CIP adopted.

Asset Management Plan

The system currently does not have an asset management plan prepared.

Sewer Rate Structure

The following sewer rate structure was last modified in June 2021:

Inside Town Limits

Water - \$15.25 (First 1,000 gallons)  
Each additional 1,000 gallons - \$5.90  
Sewer Rate – 135% of Water Fee

Outside Town Limits

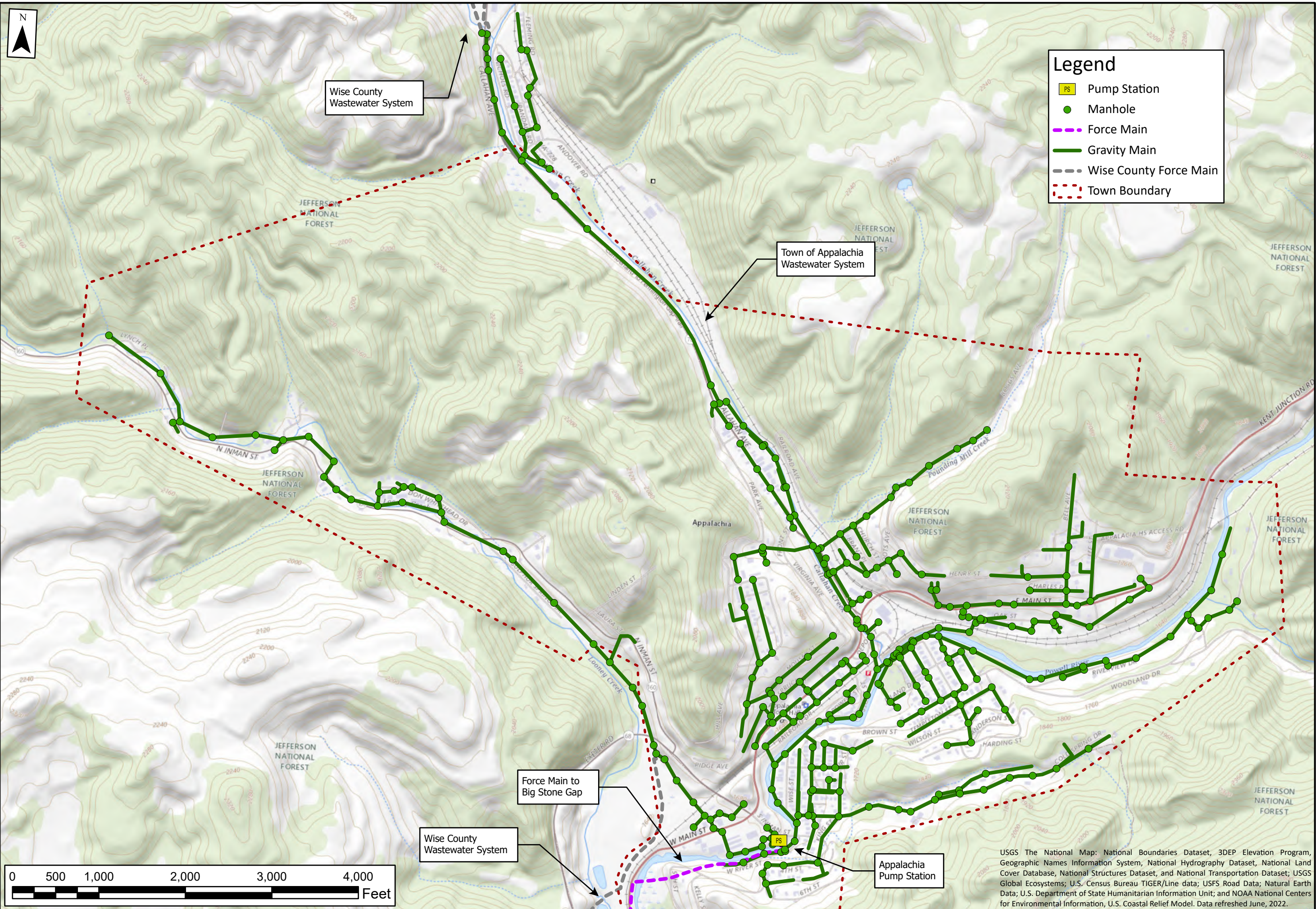
Water - \$20.60 (First 1,000 gallons)  
Each additional 1,000 gallons - \$9.15  
Sewer Rate – 135% of Water Fee

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$TBD.

System Dept and Maturity Date of Outstanding Loans

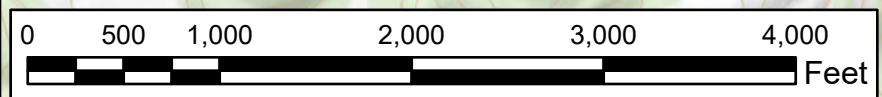
The system currently has approximately \$175,000 in outstanding loan.





### Legend

- Pump Station
- Manhole
- Force Main
- Gravity Main
- Wise County Force Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



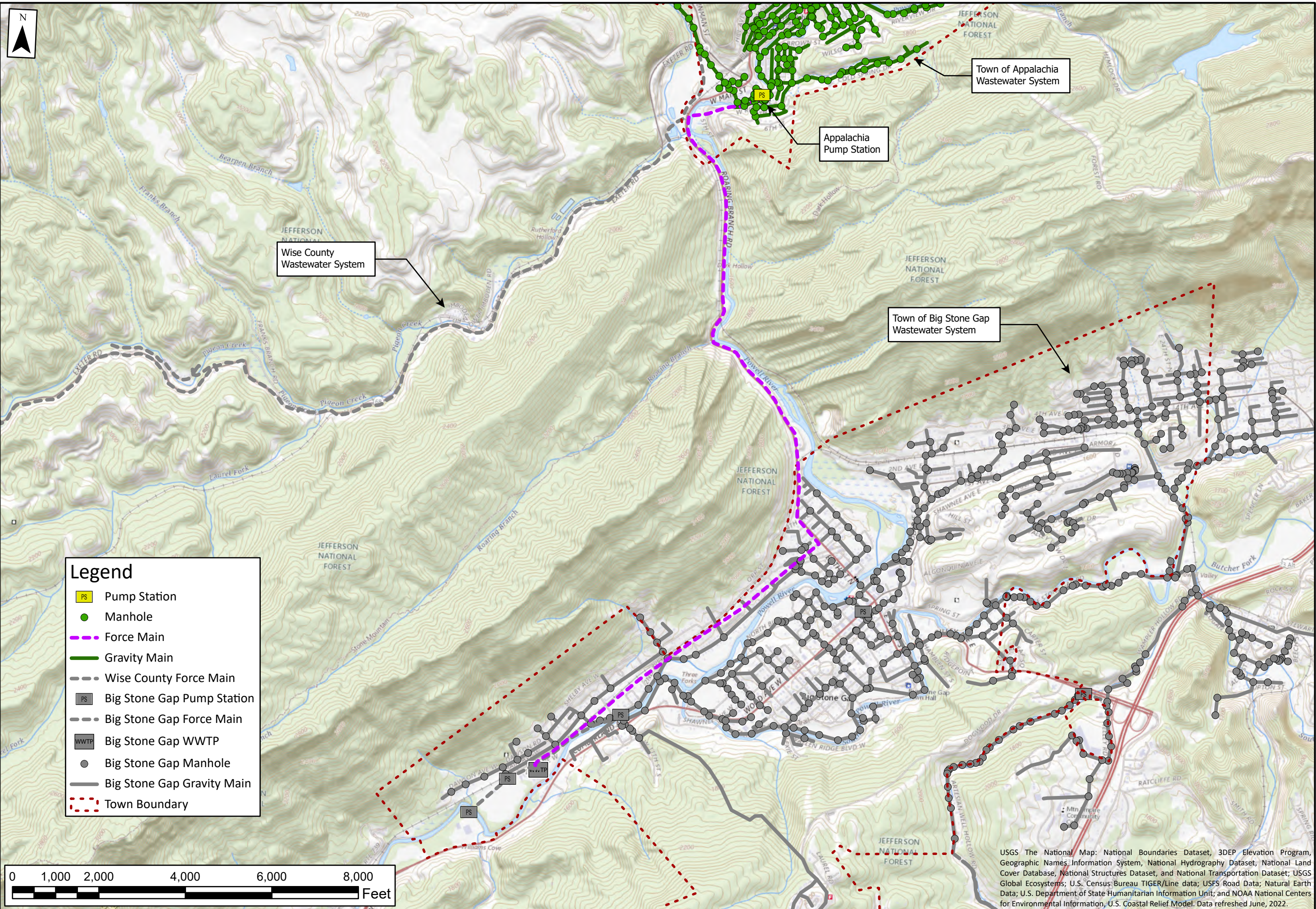
**SOUTHWEST VIRGINIA  
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SEWER STUDY 2022**

**TOWN OF APPALACHIA  
WASTEWATER  
SYSTEM - NORTH  
AREA**



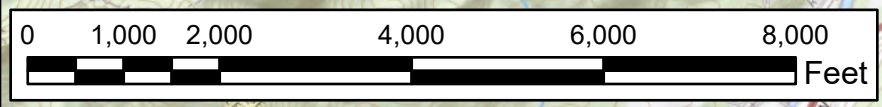
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**Legend**

- PS Pump Station
- Manhole
- Force Main
- Gravity Main
- Wise County Force Main
- PS Big Stone Gap Pump Station
- Big Stone Gap Force Main
- WWTP Big Stone Gap WWTP
- Big Stone Gap Manhole
- Big Stone Gap Gravity Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF APPALACHIA  
WASTEWATER  
SYSTEM - SOUTH  
AREA**



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# TOWN OF BIG STONE GAP COLLECTION SYSTEM

## TOWN OF BIG STONE GAP

*Lenowisco Planning District Commission*

System Description – The Town of Big Stone Gap wastewater collection system serves the incorporated Town of Big Stone Gap located along U.S. ALT 23 in the Southwestern portion of Wise County, VA. System-wide, piping is comprised of cast iron, terra cotta, asphalt felt and PVC. The town’s wastewater treatment plant is located on the western side of town along the Powell River. The treatment plant utilizes an aerobic digestion treatment system with a 4 million gallon per day (MGD) capacity.

The approximate number of customers served by the system was reported to be:

<u>2,332</u>	Residential Customers
<u>240</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>1</u>	<u>Other Municipal Systems</u>
<b>2,573</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 91% residential and 9% non-residential.

The collection system consists of 4” through 24” gravity lines. It is estimated that approximately 50% of the system consists of terra cotta or concrete lines and approximately 50% of the manholes are masonry brick. The newest area of the system was constructed in 2010. The oldest areas of the system are estimated to have been constructed in the 1960’s.

No areas of the system experience problems with capacity due to inadequately sized lines.

The system includes six (6) pump stations:

- Artesian #1 Pump Station – Sewer pump station serving the Artesian Well Hollow community, just outside the Town of Big Stone Gap eastern corporate limits. The station discharges sewer to the Artesian #2 Pump Station.
- Artesian #2 Pump Station – Serves the Artesian Well Hollow community, just outside the Town of Big Stone Gap eastern corporate limits. The sewer pump station discharges into a manhole located along Wampler Hollow Rd. in East Stone Gap.
- Shawnee Ave. Pump Station – Serves a small area along Shawnee Ave. in downtown Big Stone Gap. The station is designed to handle flows up to 9 gpm. The pump station discharges into a manhole located behind the Town of Big Stone Gap Fire Hall, which is conveyed to the Aviation Road Pump Station.
- Maloney’s Pump Station – Serves a small community just outside the western Town of Big Stone Gap corporate limits. The duplex sewer pump station is designed to handle flows up to 240 gpm. The pump station discharges directly into the Town of Big Stone Gap Wastewater Treatment Plant.
- Cadet Pump Station – Serves the Cadet community within the Town of Big Stone Gap. The duplex sewer pump station is designed to handle flows up to 50 gpm. The pump station discharges directly into the Town of Big Stone Gap Wastewater Treatment Plant.
- Aviation Road Pump Station – A triplex sewer pump system that serves the entire downtown area of the Town of Big Stone Gap. The station is designed to handle flows up to 2,000 gallons per minute (gpm). The pump station discharges directly into the Town of Big Stone Gap Wastewater Treatment Plant.

The system also collects flow from the Town of Appalachia system.

Treatment is ultimately provided at the Big Stone Gap WWTP (VPDES Permit #VA0020940).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the Big Stone Gap Regional Wastewater Treatment Plant. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	58,696,817	11,976,100	20.4%
February	72,613,488	10,378,700	14.3%
March	69,352,756	10,468,400	15.1%
April	36,551,220	9,985,400	27.3%
May	26,798,245	10,774,643	40.2%
June	25,323,800	11,713,283	46.3%
July	24,913,312	11,416,620	45.8%
August	31,430,288	11,420,614	36.3%
September	25,334,394	11,133,862	44.0%
October	26,615,828	11,382,631	42.8%
November	22,843,494	9,764,213	42.7%
December	31,853,295	11,833,179	37.2%
<b>Monthly Average</b>	<b>37,693,911</b>	<b>11,020,637</b>	<b>29.2%</b>
<b>Daily Average</b>	<b>1,239,252</b>	<b>362,322</b>	<b>29.2%</b>
<b>Avg / Customer</b>	<b>482</b>	<b>141</b>	

Permit Violations/System Overflows/Consent Order

- The Town of Big Stone Gap collection system had **31** reported sewer system overflows during calendar year 2021. 19 were due to excessive Infiltration and Inflow, 12 were due to line blockages created by root intrusion, grease or other debris.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the Town of Big Stone Gap sewer system in May 2021 by The Lane Group, Inc. The SSES identified \$13,860,663 of recommended system rehabilitation projects.

Capital Improvements Plan

The system currently has a CIP adopted in 2021. The CIP includes \$1,203,300 of projects for completion in the next 5 years.

Asset Management Plan

The system does not have an asset management plan prepared.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

<u>Inside Town Limits</u>	<u>Outside Town Limits</u>
0-1,000 Gallons - \$20.74	0-1,000 Gallons - \$35.29
1,001 Gal. or More - \$6.22	1,001 Gal. or More - \$9.92



Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$15,063,963.

System Dept and Maturity Date of Outstanding Loans

The system currently has approximately \$3,585,890.00 in outstanding loan.

**BIG STONE GAP REGIONAL WASTEWATER TREATMENT PLANT –  
VPDES PERMIT #VA0020940  
TOWN OF BIG STONE GAP**

*Lenowisco Planning District Commission*

Facility Description – The treatment facility is located at 1572 2<sup>nd</sup> Ave. W. in Big Stone Gap, VA (see attached general vicinity map). The facility was originally constructed in 1964. The last major upgrade/expansion was completed in 2009 and involved expanding the plant to 4.0 MGD capacity with additions and upgrades to the pretreatment building, influent pump station, activated sludge basin, secondary clarifier, UV disinfection and cascade aerator. The facility utilizes aerobic digestion as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Big Stone Gap and Town of Appalachia collection systems. The facility does receive and treat septage. The permitted capacity of the facility is 4.0 MGD. The average daily flow treated at the facility during calendar year 2021 was 1.575 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 2.23 MGD. The facility exceeded 80% capacity for 52 days during this period. Effluent from the plant is discharged to the Powell River. Sludge from the facility is disposed of through drying beds and hauled to the land fill.

Facility Operation – The facility is operated and maintained by the Town of Big Stone Gap. Currently, 4 full time and 4 part time licensed operators work at the facility. 4 Class 1, 2 Class 2 and 1 Class 3. The facility is required to be staffed 16 hours/day.

Permit Violations – The facility has had 1 permit violations over the past 2 years. The violations were the result of aeration and effluent.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

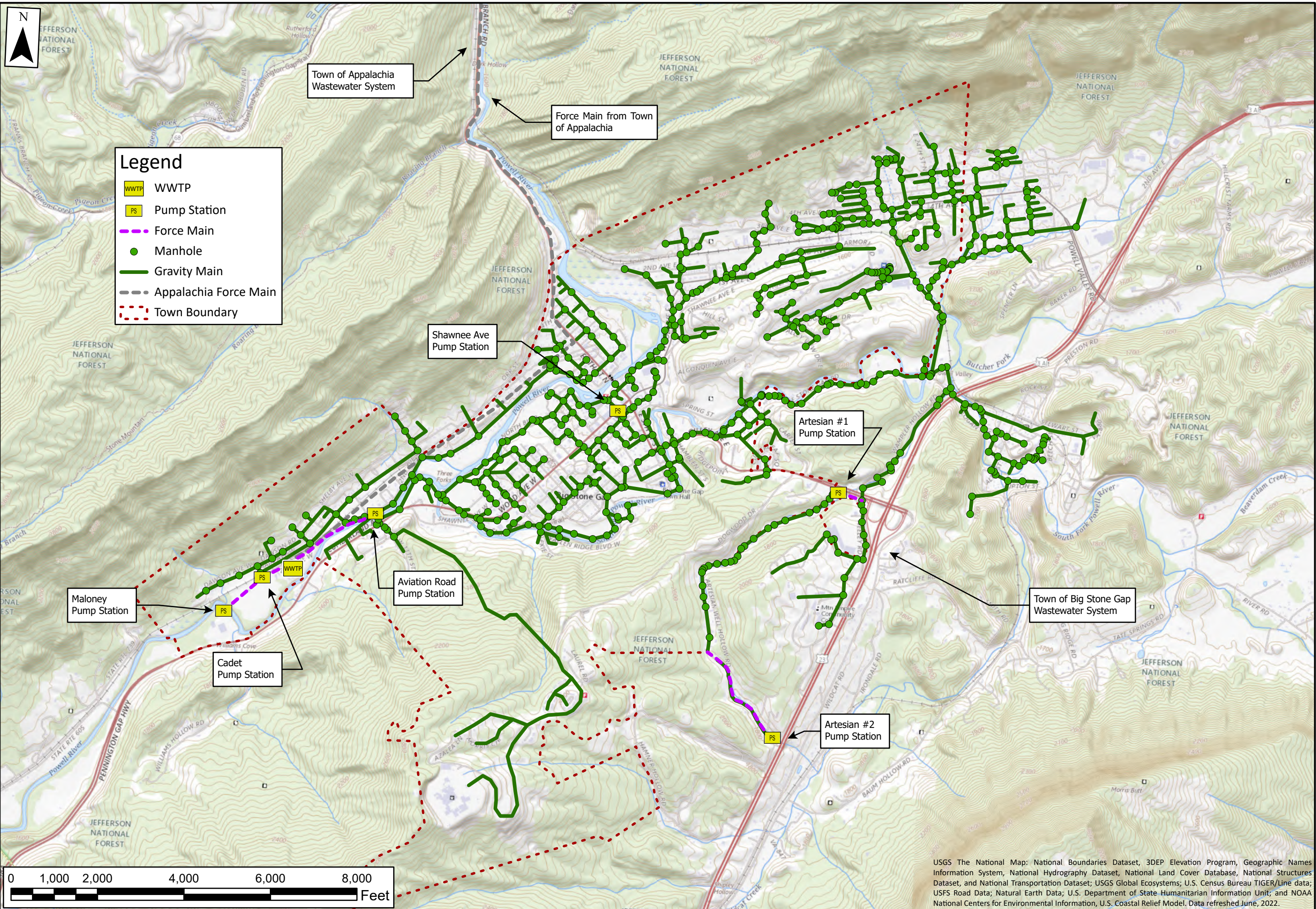
- Continuous maintenance and repair of aged equipment
- Difficulty of obtaining repair parts

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Electrical upgrades to Pre-treatment Building
- Upgrade and Repair Oxidation Ditch
- Install New Belt Press

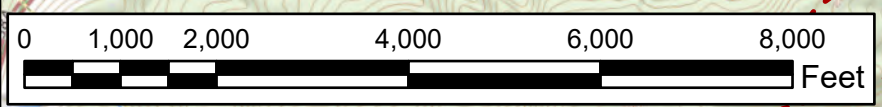
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$TBD.





**Legend**

- WWTP WWTP
- PS Pump Station
- Force Main
- Manhole
- Gravity Main
- - - Appalachia Force Main
- - - Town Boundary



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF BIG  
STONE GAP  
WASTEWATER  
SYSTEM**



DATE:	11/10/2022
SHEET:	
DRAWN BY:	JLR
CHECKED BY:	
PROJECT NO.:	2248
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USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**CNW REGIONAL WWTP– VPDES PERMIT #VA0077828**  
**COEBURN-NORTON-WISE REGIONAL WASTEWATER TREATMENT AUTHORITY**  
*LENOWISCO PDC*

Facility Description – The treatment facility is located at 4123 CNW Road, Coeburn, Virginia 24230. (see attached general vicinity map). The facility was originally constructed in 1991. The last major upgrade/expansion was completed in 2015 and involved:

- Two new fine mechanical screens to process a peak hour influent flow of 15 MGD.
- Upgrade of the influent pump station to a peak hour pumping rate of 15 MGD.
- Implementation of integrated fixed film activated sludge in the existing oxidation ditch to reduce the solids load on the secondary clarifies.
- Pilot study on the disinfection system to implement disinfection on a CT basis to avoid costly expansion of the chlorine contact tanks.
- Return activated sludge pumping improvements.
- Installation of a rotary drum thickener to pre-thicken the waste activated sludge prior to aerobic digestion.
- Aerobic digester upgrades with new mixing and heating utilizing a geothermal heat pump and the effluent flow.
- Expansion of the administrative/laboratory building.
- Installation of generators for standby power.
- System-wide SCADA system.

The facility utilizes Secondary (Oxidation Ditch) as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Coeburn, City of Norton, Town of Wise, and the Wise County Board of Supervisors collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 6.5 MGD. The average daily flow treated at the facility during calendar year 2021 was 3.7 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 5.4 MGD. The facility exceeded 80% capacity for 44 days during this period. Effluent from the plant is discharged to the Guest River. Sludge from the facility is disposed of by land application however the Wise County landfill is also permitted.

Facility Operation – The facility is operated and maintained by the Coeburn-Norton-Wise Regional Waste Water Treatment Authority. Currently, seven full time licensed operators work at the facility along with three full time operator trainees. 7 Class 1, 0 Class 2. The facility is required to be staffed 20 hours/day.

Permit Violations – The facility has had no permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Increasing difficulty in obtaining repair parts for existing equipment, especially for items manufactured in foreign countries.
- Increasing difficulty in obtaining operational chemicals and other supplies.

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

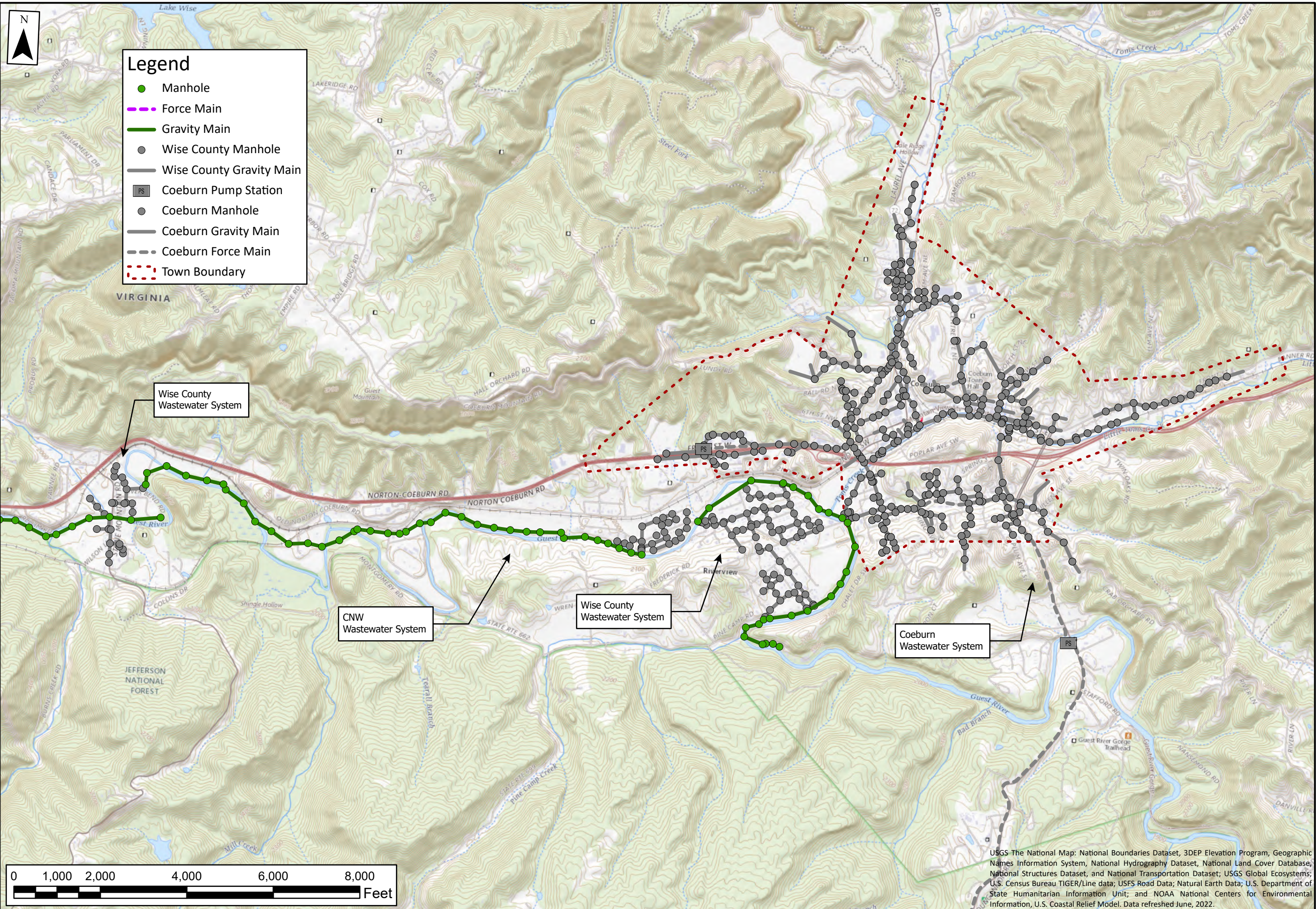
- Improved system for digester aerating and mixing.



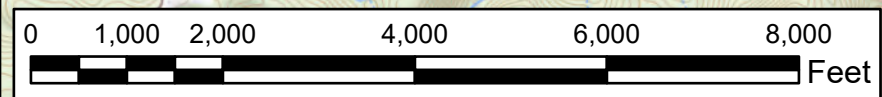
- Improved systems for removal of screenings and grit
- improved SCADA system with maintenance and laboratory software.
- Improved splitter box screening system.
- Upgrade hoists & other material handling.

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$ \_\_\_\_\_ . (Include tale breakdown if possible)





- Legend**
- Manhole
  - Force Main
  - Gravity Main
  - Wise County Manhole
  - Wise County Gravity Main
  - Coeburn Pump Station
  - Coeburn Manhole
  - Coeburn Gravity Main
  - - - Coeburn Force Main
  - - - Town Boundary



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

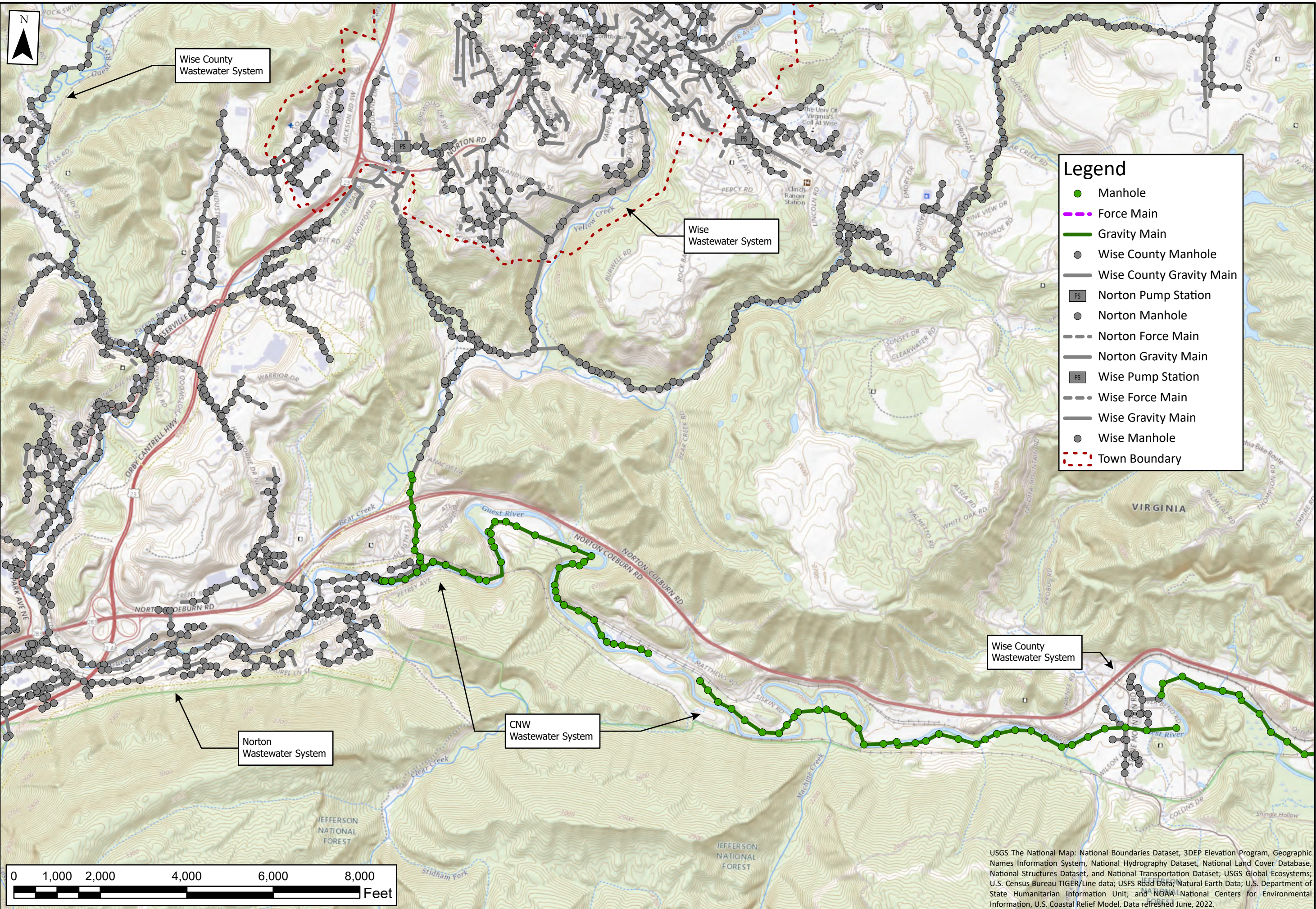
CNW  
WASTEWATER  
SYSTEM - EAST



DATE:	12/28/2022
SHEET:	
DRAWN BY:	JJR
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PROJECT NO.:	2248
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Wise County Wastewater System

Wise Wastewater System

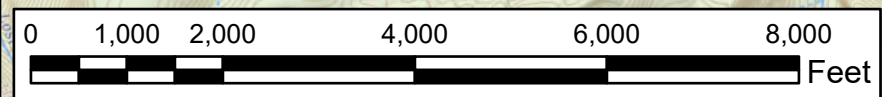
Norton Wastewater System

CNW Wastewater System

Wise County Wastewater System

### Legend

- Manhole
- Force Main
- Gravity Main
- Wise County Manhole
- Wise County Gravity Main
- PS Norton Pump Station
- Norton Manhole
- - - Norton Force Main
- Norton Gravity Main
- PS Wise Pump Station
- - - Wise Force Main
- Wise Gravity Main
- Wise Manhole
- - - Town Boundary



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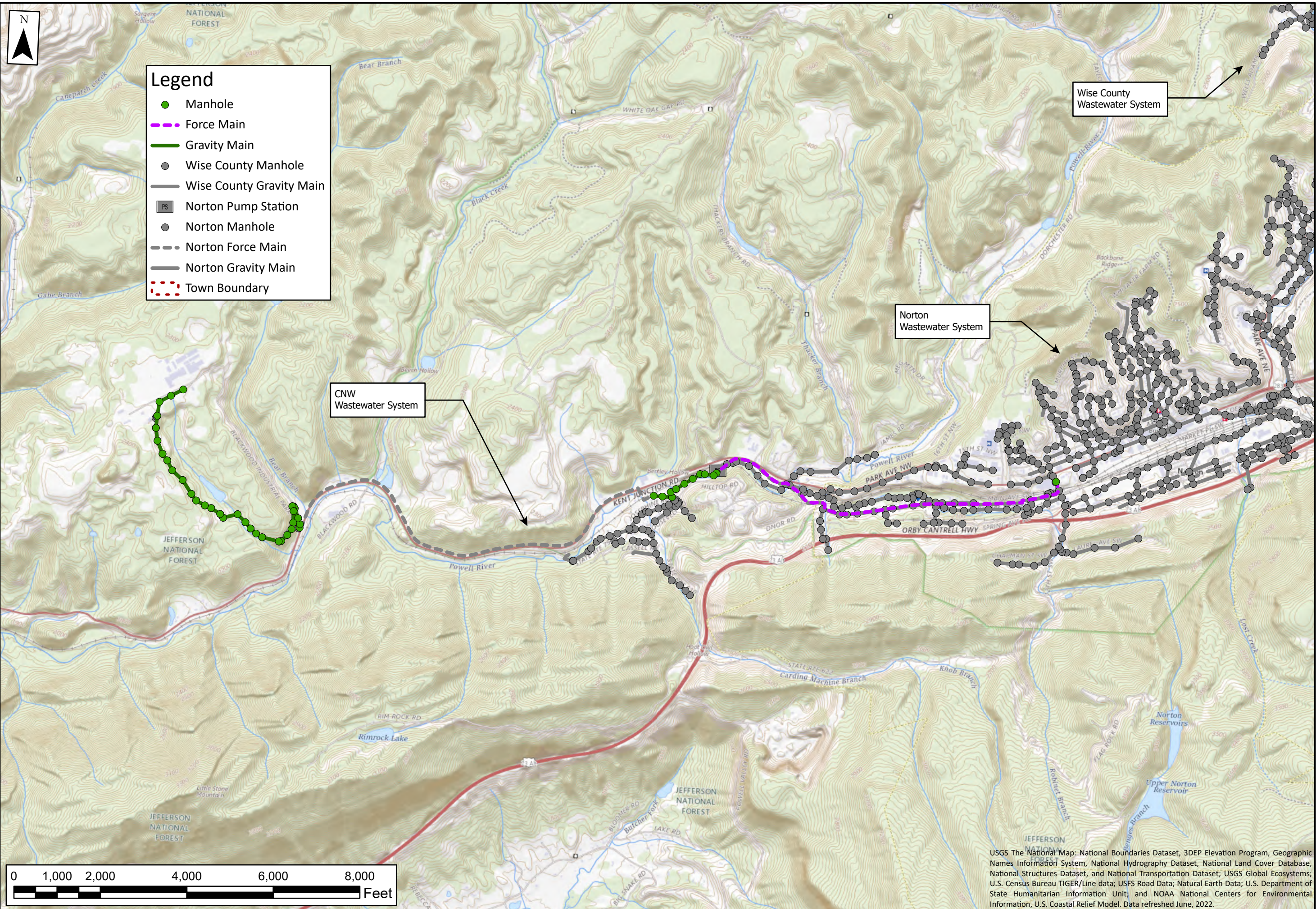
SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

CNW  
 WASTEWATER  
 SYSTEM - NORTH

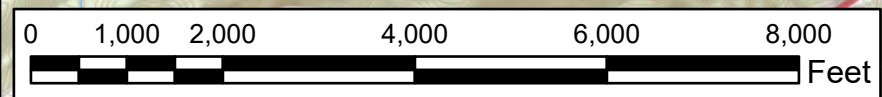


DATE:	12/28/2022
SHEET:	
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CHECKED BY:	
PROJECT NO.:	2248
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- Legend**
- Manhole
  - Force Main
  - Gravity Main
  - Wise County Manhole
  - Wise County Gravity Main
  - PS Norton Pump Station
  - Norton Manhole
  - - - Norton Force Main
  - Norton Gravity Main
  - ⋯ Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

CNW  
WASTEWATER  
SYSTEM - WEST



DATE:	12/28/2022
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PROJECT NO.:	2248
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# TOWN OF COEBURN COLLECTION SYSTEM

## TOWN OF COEBURN, VIRGINIA

LENOWISCO Planning District Commission

System Description – The Town of Coeburn is located in Wise County, Virginia along U.S. Route 58 and provides public sewer service to 996 +/- customers both within and outside of the Town’s corporate limits. The sewage collection system includes approximately 19 +/- miles of 4”-10” gravity/force main sewer lines and four (4) pump stations. The sewer is treated at the Coeburn-Norton-Wise Regional Wastewater Treatment Plant.

The approximate number of customers served by the system was reported to be:

<u>865</u>	Residential Customers
<u>131</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>996</b>	<b>Total Number of Customers</b>

The collection system consists of 4” through 10” gravity/force main sewer lines. It is estimated that approximately 75% of the system consists of terra cotta or concrete lines and approximately 75% of the manholes are masonry brick. The newest area of the system was constructed in 2017 known as Sheffield Acres-Route 72 Sewer. The oldest areas of the system are estimated to have been constructed in the 1950’s.

The system experiences capacity problems due to infiltration/inflow and inadequately sized lines.

The system includes four pump stations:

- **Marty Pump Station** – Pump capacity of 100 GPM. Upgraded in 2007
- **Sheffield Acres 1 Pump Station** – Pump capacity of 150 GPM. Constructed in 2017
- **Sheffield Acres 2 Pump Station** – Pump capacity of 115 GPM. Constructed in 2017
- **Cordertown Pump Station** – Pump capacity of 25 GPM. Upgraded in 2017

Treatment is ultimately provided at the Coeburn-Norton-Wise Regional Wastewater Treatment Plant. (VPDES Permit #VA0077828).

System Flows - A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	30,892,000	3,163,158	10.2%
February	37,684,000	3,422,537	9.0%
March	41,020,000	2,378,130	5.7%
April	30,258,000	3,363,420	11.1%
May	28,080,000	3,718,690	13.2%
June	13,008,000	3,483,140	26.7%
July	6,820,000	3,078,910	45.1%
August	14,083,000	3,871,230	27.4%
September	13,124,000	3,107,547	23.6%
October	8,429,000	3,548,830	42.1%
November	6,559,000	2,690,111	41.1%
December	8,910,000	3,081,263	34.5%
<b>Monthly Average</b>	<b>19,905,583</b>	<b>3,242,247</b>	<b>16.2%</b>
<b>Daily Average</b>	<b>663,519</b>	<b>108,074</b>	

### Permit Violations/System Overflows/Consent Order

- The collection system had 0?\_reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- Infiltration/Inflow and Roots

System Needs – Improvement projects that have identified include:

As a result of the SSES/PER prepared in 2017, seven priorities were outlined. The Town has received funding application to VDEQ in the amount of \$1,869,028 for the Phase I Coeburn Infiltration & Inflow Improvements Project. The Virginia Resources Authority later capped the amount to \$1,500,000 due to financial concerns. The proposed project includes replacement of approximately 3,850 LF of 10-inch gravity sewer line, 2,000 LF of 8-inch gravity sewer line, 2,300 LF of 4-inch gravity sewer line and 30 manholes in the Banner section of Town. The Bondtown section of Town includes replacement of approximately 1,800 LF of 10-inch gravity sewer line, 350 LF of 4-inch gravity sewer line, and nine manholes.

Construction of Phase I Improvements are schedule to begin in the spring of 2023.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

A SSES was performed on the entire area of the system by The Lane Group in 2017.

### Capital Improvements Plan

The Town does not have a CIP.

### Asset Management Plan

The Town does not have a AMP.

### Sewer Rate Structure

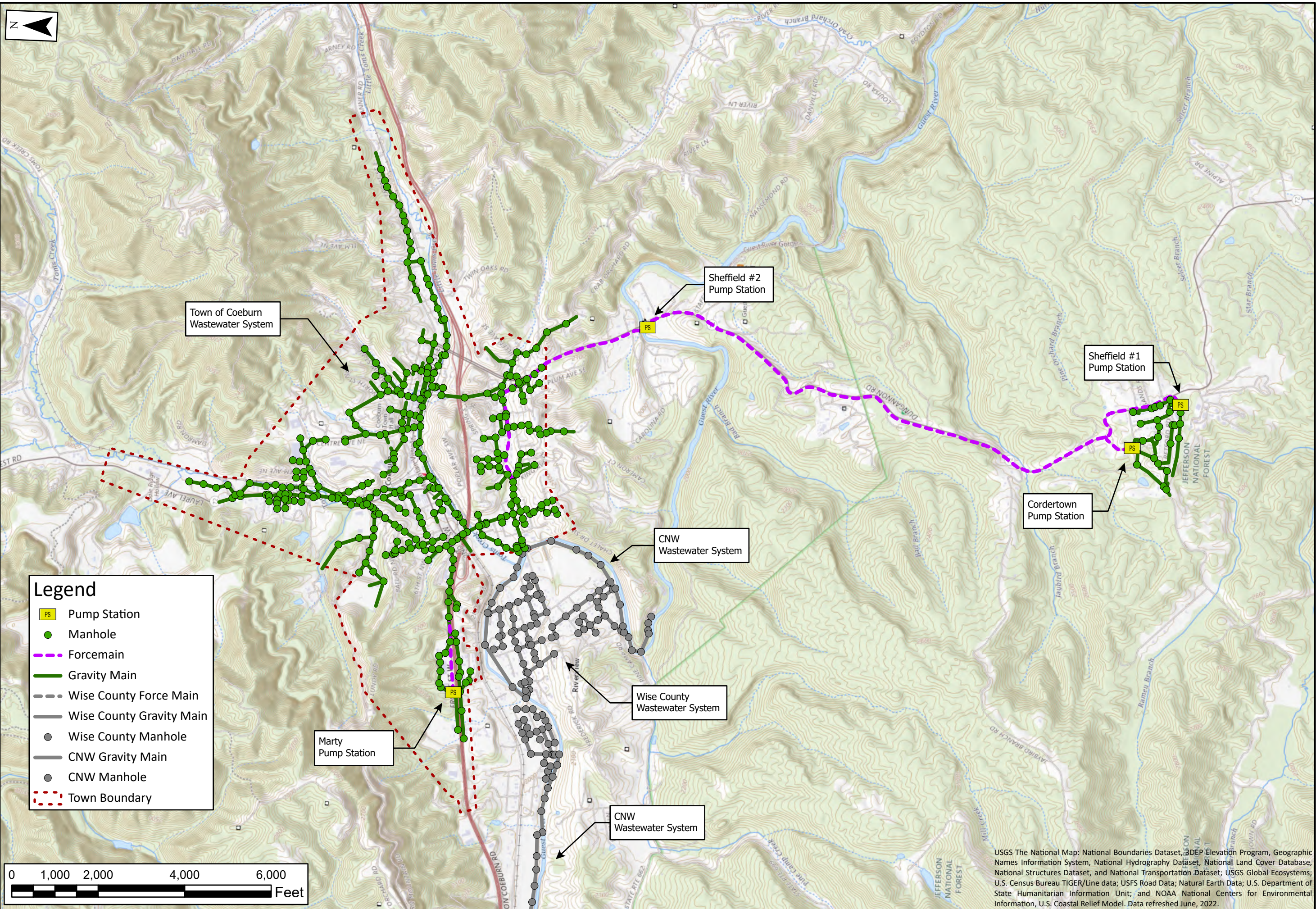
The following sewer rate structure was last modified in 2021

- Residential (in-town) - \$34.49/2,000 gallons
- Residential (out-of-town) – \$58.23/2,000 gallons
- Commercial (in-town) - \$34.49/2,000 gallons
- Commercial (out-of-town) - \$58.23/2,200 gallons

### System Dept and Maturity Date of Outstanding Loans

Sheffield Acres-Route 72 Sewer Project - \$908,635.64 – Virginia Resources Authority – May 2035





- Legend**
- Pump Station
  - Manhole
  - Forcemain
  - Gravity Main
  - Wise County Force Main
  - Wise County Gravity Main
  - Wise County Manhole
  - CNW Gravity Main
  - CNW Manhole
  - Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF COEBURN  
WASTEWATER  
SYSTEM**



DATE:	12/15/2022
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PROJECT NO.:	2248
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# DUNGANNON COLLECTION SYSTEM

## TOWN OF DUNGANNON

LENOWISCO Planning District Commission

System Description – The Dungannon collection system serves the Town of Dungannon located in northeastern Scott County at the US Rte. 58 Alt. and US Rte. 72 intersection. The oldest portions of the collection system were constructed in 1987.

The approximate number of customers served by the system was reported to be:

<u>228</u>	Residential Customers
<u>3</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>231</b>	<b>Total Number of Customers</b>

The system's customer billing flows for 2021 were estimated to be approximately 99% residential and 1% non-residential.

The collection system consists of 6" through 8" gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 1987. The oldest areas of the system are estimated to have been constructed in 1987.

No area of the system experiences problems with capacity due to inadequately sized lines.

The system includes one pump station:

- Cassell Chapel Pump Station – 75 GPM submersible grinder pump station located approximately 600 ft west of the SR 65/72 and Scott County Horse Park entrance road intersection. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line along SR65/72 approximately 0.83 miles northeast of the pump station.

The system also collects flow from the N/A system(s).

Flow collected by the system is conveyed to the Dungannon WWTP. Treatment is ultimately provided at the Dungannon WWTP (VPDES Permit #VA0070670).

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	983,221	N/A
February	N/A	632,197	N/A
March	N/A	540,741	N/A
April	N/A	412,740	N/A
May	N/A	482,246	N/A
June	N/A	612,792	N/A
July	N/A	624,537	N/A
August	N/A	540,063	N/A
September	N/A	665,128	N/A
October	N/A	634,672	N/A
November	N/A	507,487	N/A
December	N/A	529,899	N/A
<b>Monthly Average</b>	<b>0</b>	<b>597,144</b>	N/A
<b>Daily Average</b>	<b>0</b>	<b>19,905</b>	N/A
<b>Avg / Customer</b>	<b>0</b>	<b>87</b>	



### Permit Violations/System Overflows/Consent Order

- The Dungannon collection system had **0** reported sewer system overflows during calendar year 2021. **N/A** were due to excessive Infiltration and Inflow, **N/A** were due to line blockages created by root intrusion, grease or other debris.
- The system has had **0** permit violations over the past 2 years. The violations were the result of **N/A**.
- The system is **not** under consent order with the DEQ. The consent order is dated **N/A** and was issued because **N/A**.

### Other Maintenance Related Issues Experienced by System

- Hydraulic overloading during high rainfall events

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system **is** governed by an existing sewer use ordinance. The ordinance **does** address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

A partial SSES was performed on the **manholes** of the system in **2021** by **the Lane Group**. The SSES identified **\$ 75,000** of recommended system rehabilitation project(s) (**SSES reports that existing manholes are in good condition, minimal I/I, recommends smoke testing for locating sources of I/I**).

### Capital Improvements Plan

The system currently has a CIP adopted in **N/A**. The CIP includes **N/A** of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by **N/A** in **N/A**.

### Sewer Rate Structure

The following sewer rate structure was last modified on **January 1, 2021**:

#### **Residential – In Town**

First 2000 gallons	\$ 30.00
All over 2000 gallons	\$ 6.00

#### **Residential –Out of Town**

First 2000 gallons	\$ 34.00
All over 2000 gallons	\$ 6.00

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is **\$TBD**. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The Town of Dungannon has an **\$8,558** annual debt service.

The system currently has approximately **\$N/A** in outstanding loan amount.

## **DUNGANNON WWTP – VPDES PERMIT # VA0070670**

### **TOWN OF DUNGANNON**

*LENOWISCO Planning District Commission*

Facility Description – The treatment facility is located at the **end of SR T1018** (see attached general vicinity map). The facility was originally constructed in **1987**. The last major upgrade/expansion was completed in **N/A** and involved **N/A**. The facility utilizes a 0.04 MGD aerobic package treatment plant as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the **Dungannon** collection system(s). The facility **does not** receive and treat septage. The permitted capacity of the facility is **0.0399** MGD.

The average daily flow treated at the facility during calendar year 2021 was **0.0199** MGD.

The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was **0.0239** MGD.

The facility exceeded 80% capacity for **5** days during this period. Effluent from the plant is discharged to **Clinch River**.

Sludge from the facility is disposed of at/by **M&M Pumping Services**.

Facility Operation – The facility is operated and maintained by **Town of Dungannon**. Currently, **0** full time and **2** part time licensed operators work at the facility.  Class 1,  Class 2. The facility is required to be staffed **8** hours/day.

Permit Violations – The facility has had **0** permit violations over the past 2 years. The violations were the result of **N/A**.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

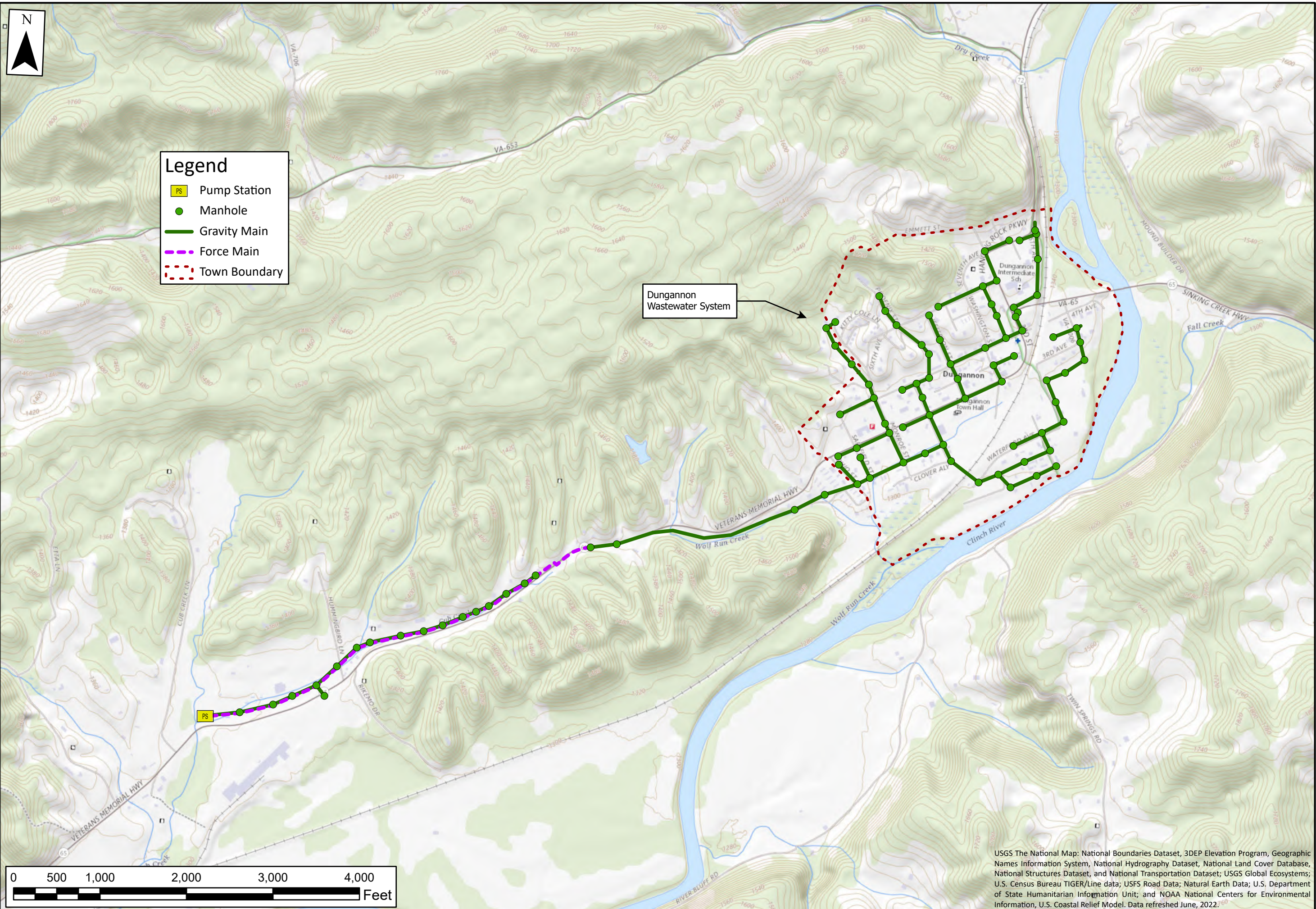
- Hydraulic overloading during high rainfall events

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Inflow and infiltration identification and remediation
- Increased system capacity

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is **\$TBD**. (Include table breakdown if possible)

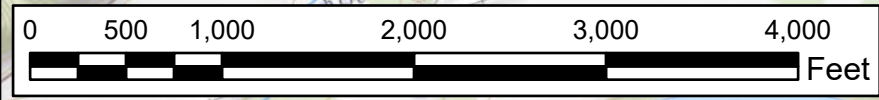




**Legend**

- PS Pump Station
- Manhole
- Gravity Main
- Force Main
- Town Boundary

Dungannon Wastewater System



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

TOWN OF  
 DUNGANNON  
 WASTEWATER  
 SYSTEM



DATE:	12/13/2022
SHEET:	
DRAWN BY:	JJR
CHECKED BY:	
PROJECT NO.:	2248
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# GATE CITY SANITATION AUTHORITY COLLECTION SYSTEM

## TOWN OF GATE CITY, VIRGINIA

LENOWISCO Planning District Commission

System Description – The Town of Gate City is in Scott County, Virginia and provides public sewer service to 939 +/- customers within the Town’s corporate limits as well as some adjacent areas of Scott County. The sewage collection system includes approximately 20 +/- miles of 4”-18” gravity/force main sewer lines, 565 manholes, and five (5) pump stations. The sewer is treated by the Scott County Public Service Authority’s Holston Regional Wastewater Treatment Plant.

The approximate number of customers served by the system was reported to be:

<u>803</u>	Residential Customers
<u>136</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>939</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **83%** residential and **17%** non-residential.

The collection system consists of 4” through 18” gravity/force main sewer lines. It is estimated that approximately 50% of the system consists of terra cotta or concrete lines and approximately 15% of the manholes are masonry brick. The newest area of the system was constructed in 2020. The oldest areas of the system are estimated to have been constructed in the 1960’s.

The system experiences no problems with capacity due to inadequately sized lines.

The system includes five pump stations:

- **619 Pump Station** – Pump capacity of 100 GPM. Constructed in 1991 and upgraded in 2017
- **Shoemaker Pump Station** – Pump capacity of 100 GPM. Constructed in 1991 and upgraded in 2018
- **Grogan Pump Station #1** – Pump capacity of 50 GPM. Constructed in 2000
- **Grogan Pump Station #2** – Pump capacity of 50 GPM. Constructed in 2000
- **Grogan Pump Station #3** – Pump capacity of 50 GPM. Constructed in 2009

Treatment is ultimately provided at the Scott County Public Service Authority’s Holston Regional Wastewater Treatment Plant. (VPDES Permit #VA0067351.

System Flows - A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	10,934,000	3,325,200	30.4%
February	13,017,900	3,159,900	24.2%
March	18,676,800	3,041,934	16.2%
April	10,177,500	3,499,400	34.3%
May	8,292,600	3,242,400	39%
June	8,736,800	3,226,900	36.9%
July	7,107,600	3,365,552	47.3%
August	9,318,800	3,794,300	40.7%
September	7,352,600	3,917,600	53.2%
October	7,508,400	3,896,367	51.8%
November	6,974,200	3,256,100	46.6%



December	8,463,600	3,256,100	38.4%
<b>Monthly Average</b>	<b>9,713,400</b>	<b>3,415,146</b>	<b>35.05%</b>
<b>Daily Average</b>	<b>323,780</b>	<b>113,838</b>	
<b>Avg / Customer</b>	<b>344.8</b>	<b>121</b>	

Permit Violations/System Overflows/Consent Order

- The collection system had **0** reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Line blockages due to root intrusions, deteriorating pipes, and foreign items in sewer.

System Needs – Improvement projects that have identified include:

- SSES #1 – High School Area Collector
- SSES #2 – East Jackson Street Area Collector
- SSES #3 – West Jackson Street Area Trunkline
- SSES #4 – East Highland Street Area Collector

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the entire area of the system in 2016. This information was utilized to obtain DEQ funding to replace/rehabilitate approximately 6,200 LF of existing sewer line in 2020.

Capital Improvements Plan

The Town does not have a CIP.

Asset Management Plan

The system has an asset management plan prepared by Mattern & Craig in October 2020.

Sewer Rate Structure

The following sewer rate structure was last modified in 2018

- Residential (in-town) - \$28.85
- Residential (out-of-town) – N/A
- Commercial (in-town) - \$29.50
- Commercial (out-of-town) - \$N/A

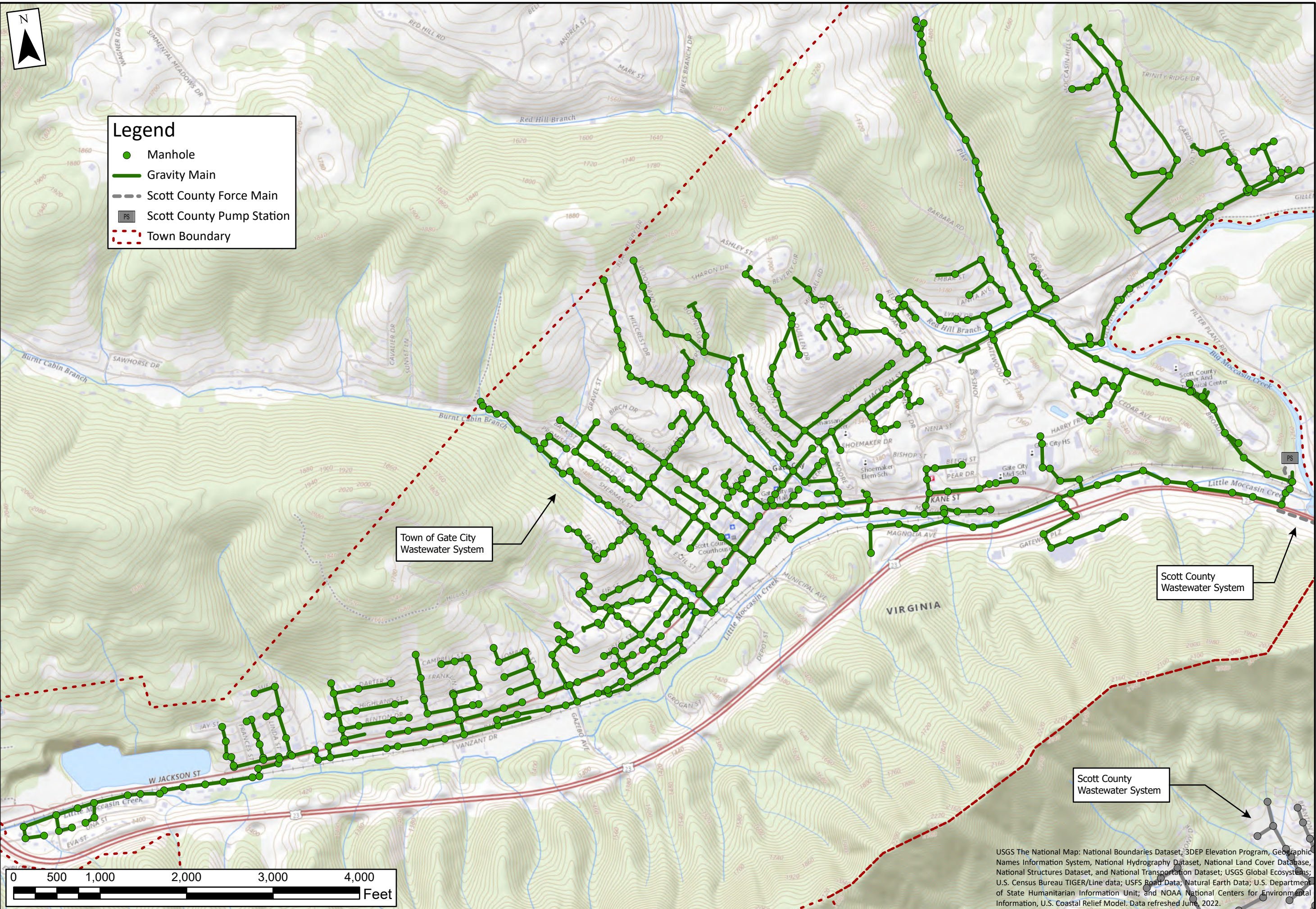
Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$4,451,000.

System Dept and Maturity Date of Outstanding Loans

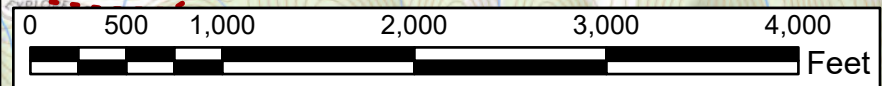
New Peoples Bank - SA Series Refunding 2015: Original Debt: \$595,143.54 - Retirement Date: 11/12/2025

VDEQ – Wastewater Line Replacement: Original Debt: \$765,396.22 - Retirement Date: 04/01/2041





- Legend**
- Manhole
  - Gravity Main
  - - - Scott County Force Main
  - Scott County Pump Station
  - - - Town Boundary



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF  
GATE CITY  
WASTEWATER  
SYSTEM**



DATE:	12/12/2022
SHEET:	
DRAWN BY:	JR
CHECKED BY:	
PROJECT NO.:	2248
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USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



# TOWN OF JONESVILLE COLLECTION SYSTEM

## TOWN OF JONESVILLE, VIRGINIA

LENOWISCO Planning District Commission

System Description – The Town of Jonesville is located in Lee County, Virginia and provides public sewer service to 510 +/- customers within the Town’s corporate limits. The sewage collection system includes approximately 5.7 +/- miles of gravity sewer lines. There are no pump stations and sewer is treatment at the Lee County PSA’s Hickory Flats Wastewater Treatment Plant. The collection system was constructed in the 1960’s.

The approximate number of customers served by the system was reported to be:

<u>490</u>	Residential Customers
<u>20</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>510</b>	<b>Total Number of Customers</b>

**NOTE:** Due to a complete turn-over of both field and office staff, there are no billing information available.

The collection system consists of mostly 8” gravity lines. It is estimated that approximately 60% of the system consists of terra cotta or concrete lines and approximately 40% of the manholes are masonry brick. The newest area of the system was constructed in 1987. The oldest areas of the system are estimated to have been constructed in the 1960’s.

The system includes no pump stations:

Treatment is ultimately provided at the Lee County PSA Hickory Flats WWTP (VPDES Permit #VA0089397).

System Flows - A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	1,475,000	TBD	TBD
February	1,398,000	TBD	TBD
March	1,632,000	TBD	TBD
April	2,225,000	TBD	TBD
May	1,148,000	TBD	TBD
June	1,228,000	TBD	TBD
July	1,339,000	TBD	TBD
August	1,195,000	TBD	TBD
September	1,137,000	TBD	TBD
October	1,120,000	TBD	TBD
November	1,127,000	TBD	TBD
December	1,056,000	TBD	TBD
<b>Monthly Average</b>	<b>1,340,000</b>	TBD	TBD
<b>Daily Average</b>	<b>44,666</b>	TBD	TBD
<b>Avg / Customer</b>	<b>87.5</b>	TBD	

### Permit Violations/System Overflows/Consent Order

- The collection system had **0** reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- No information provided.

#### System Needs

- Manhole Rehabilitation.

#### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

#### SSES

A SSES has not been performed.

#### Capital Improvements Plan

The Town does not have a CIP.

#### Asset Management Plan

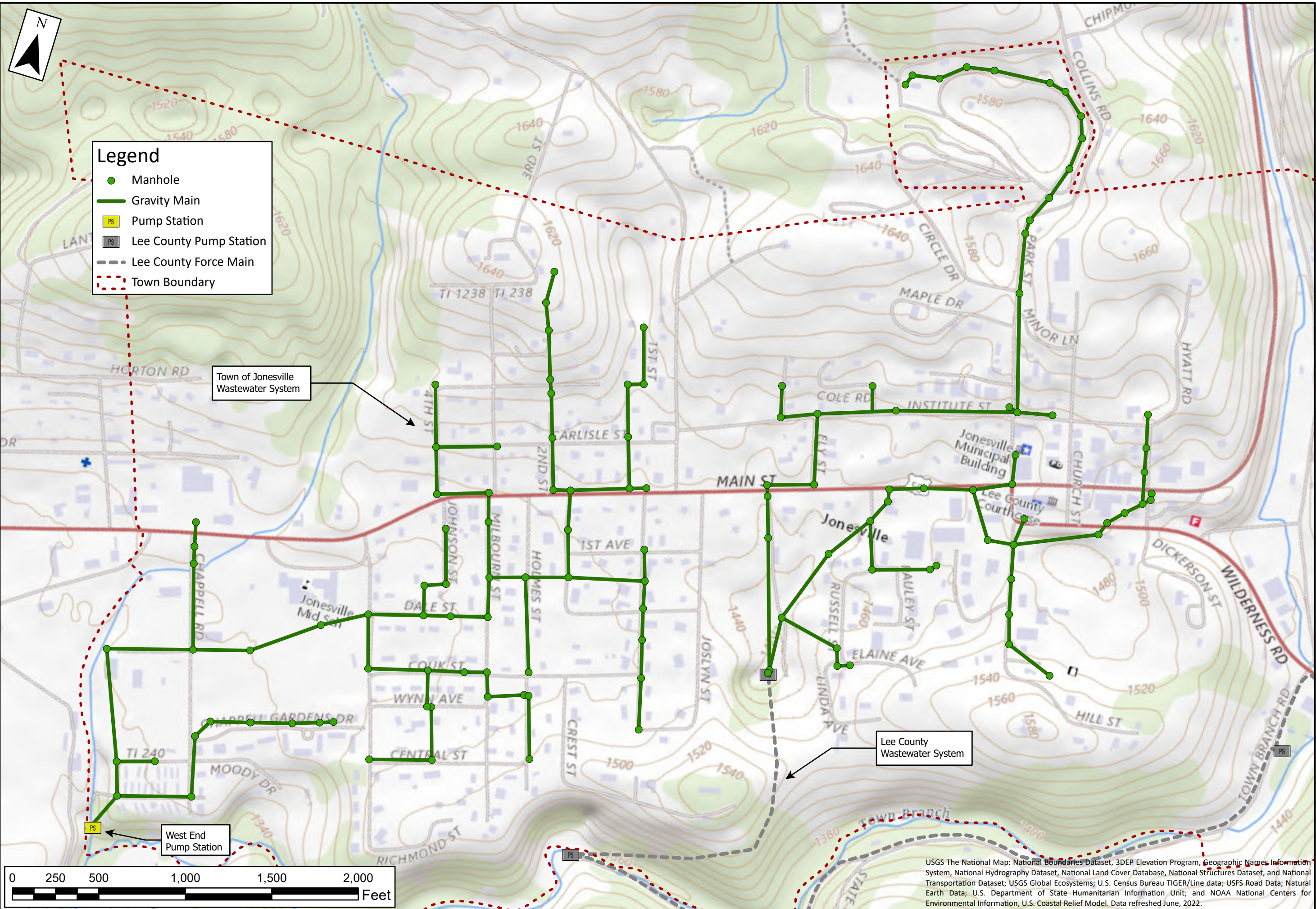
The Town does not have AMP.

#### Sewer Rate Structure

The following sewer rate structure was last modified in 2021

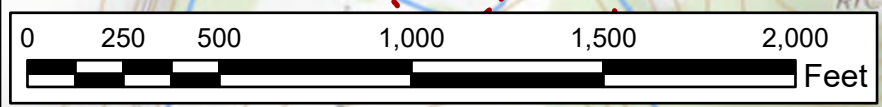
- \$13.91 for first 1,500 gallons of water
- \$9.04 for every 1,000 after
- Sewer is 87% of the total water bill
- \$10.50 sewer maintenance fee





**Legend**

- Manhole
- Gravity Main
- PS Pump Station
- Lee County Pump Station
- - - Lee County Force Main
- ⋯ Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF  
JONESVILLE  
WASTEWATER  
SYSTEM



DATE:	11/16/2022
SHEET:	
DRAWN BY:	JR
CHECKED BY:	
PROJECT NO.:	2248
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**BEN HUR COLLECTION SYSTEM**  
**LEE COUNTY PUBLIC SERVICE AUTHORITY**

*Lenowischo Planning District Commission*

System Description – The Ben Hur wastewater collection system serves the Ben Hur Community, located along U.S. ALT 58 just outside the Town of Pennington Gap in Lee County, VA. System-wide, piping is comprised of primarily polyvinyl chloride pipe (PVC). The collection system is treated at the Pennington Gap Wastewater Treatment Plant and discharges into the Powell River.

The approximate number of customers served by the system was reported to be:

<u>75</u>	Residential Customers
<u>12</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>87</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **90%** residential and **10%** non-residential.

The collection system consists of 4” through 8” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 2005. The oldest areas of the system are estimated to have been constructed in 1988.

The system does not experience any problems with capacity due to inadequately sized lines.

The system includes 2 pump stations:

Central Lee Pump Station - Solids handling sewer pump station serving the Central Lee service area. It is capable of handling 85 gallons per minute (gpm) of raw, unscreened, domestic sanitary sewage and pump directly to the Ben Hur Pump Station. The Pump Station is located along US ALT 58, across from Fisher Rd. in Lee County, Virginia.

Ben Hur Pump Station – Solids handling sewer pump station serving the Central Lee service area. It is capable of handling 175 gallons per minute (gpm) of raw, unscreened, domestic sanitary sewage and pump directly to the Town of Pennington Gap Wastewater Treatment Plant. The Pump Station is located along US ALT 58 within the Ben Hur community of Lee County, Virginia.

The system does not collect flow from additional systems.

Treatment is ultimately provided at the Pennington Gap WWTP (VPDES Permit #VA0029599).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the Ben Hur Pump Station. A summary of the system’s collected and billed flows for the 2021-2022 fiscal year is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
July 2021	1,672,917	301,800	18%
August	1,672,917	337,900	20%
September	1,672,917	432,200	26%
October	1,672,917	447,500	27%
November	1,672,917	382,900	23%
December	1,672,917	783,500	47%
January 2022	1,672,917	1,559,700	93%
February	1,672,917	1,092,500	65%
March	1,672,917	1,101,300	66%
April	1,672,917	780,000	47%



May	1,672,917	800,000	48%
June	1,672,917	519,000	31%
<b>Monthly Average</b>	<b>1,672,917</b>	<b>711,525</b>	<b>43%</b>
<b>Daily Average</b>	<b>55,000</b>	<b>23,393</b>	<b>43%</b>
<b>Avg / Customer</b>	<b>632</b>	<b>269</b>	

Permit Violations/System Overflows/Consent Order

- The Ben Hur community collection system had no reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES has not been performed on the Ben Hur Community collection system.

Capital Improvements Plan

The system currently does not have a CIP adopted.

Asset Management Plan

The system has not had an asset management plan prepared.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Residential Sewer

Base Rate (2000 Gallons) - \$41.64  
Per 1000 Gallons After - \$11.27

Flat Rate Sewer - \$58.63

Non-Residential Sewer

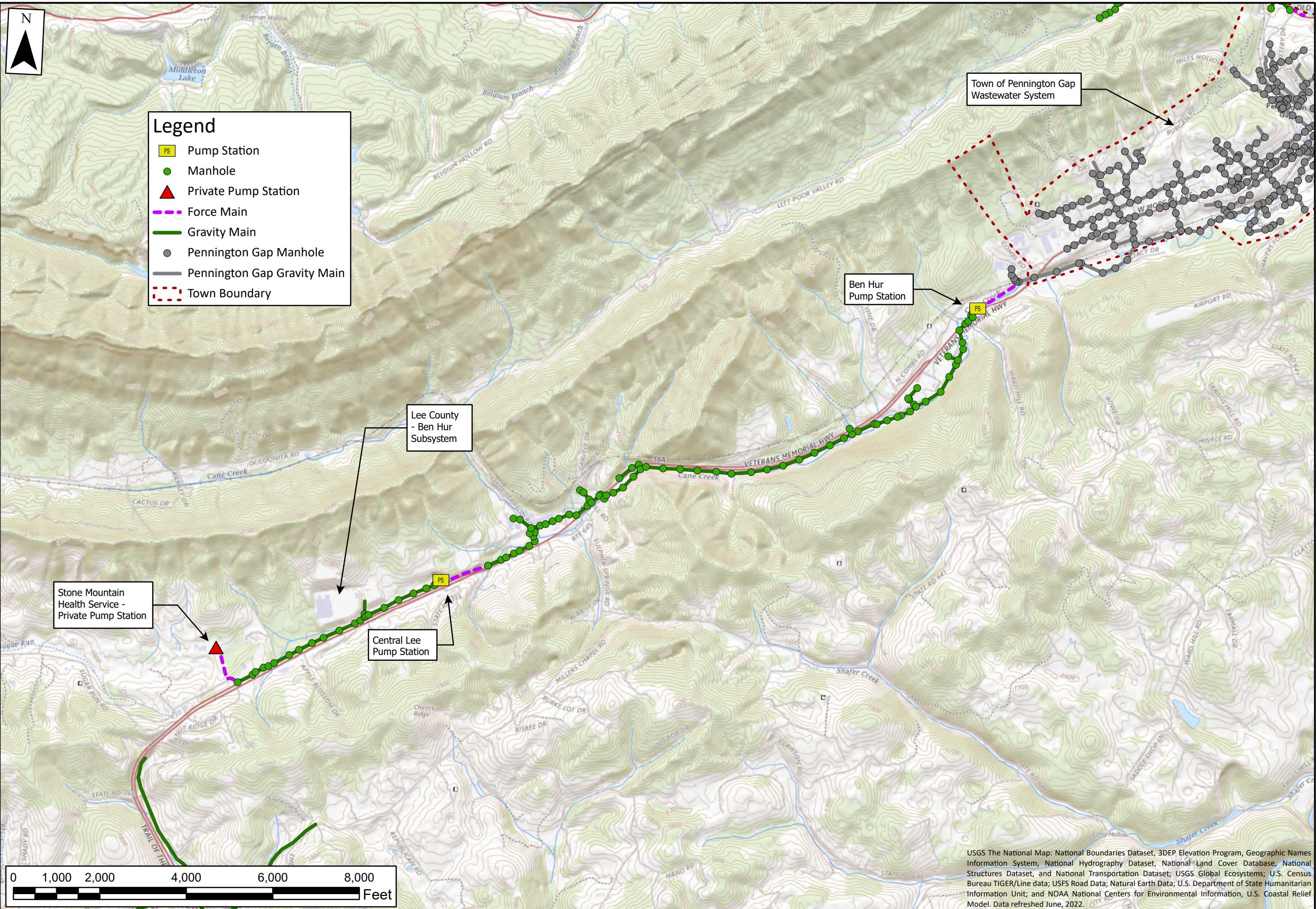
Base Rate (2000 Gallons) - \$42.44  
2001-3499 Gallons - \$18.60  
3500 – 42,499 Gallons - \$14.00  
42,500 – 55,000 Gallons - \$11.70  
55,000+ Gallons - \$10.50

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$TBD.

Lee County PSA Dept and Maturity Date of Outstanding Loans

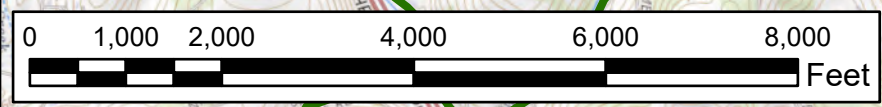
The Lee County PSA system currently has an annual sewer dept of approximately \$300,000 and an outstanding loan of \$7,000,000.





**Legend**

- PS Pump Station
- Manhole
- Private Pump Station
- Force Main
- Gravity Main
- Pennington Gap Manhole
- Pennington Gap Gravity Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**LEE COUNTY  
WASTEWATER  
SYSTEM - BEN HUR**



DATE: 12/13/2022	
SHEET:	
DRAWN BY: JLR	CHECKED BY:
PROJECT NO.:	2248
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# CROSS CREEK SUBDIVISION COLLECTION SYSTEM

## LEE COUNTY PUBLIC SERVICE AUTHORITY

Lenowisco Planning District Commission

System Description – The Cross Creek Subdivision wastewater collection system serves the Cross Creek Community located along U.S. ALT 58 within the Town of Dryden of Lee County, VA. System-wide, piping is comprised of primarily polyvinyl chloride pipe (PVC). The Cross Creek Wastewater Treatment Plant is located on the western side of the subdivision along the Powell River. The packaged treatment plant has a capacity of 0.03 million gallon per day (MGD).

The approximate number of customers served by the system was reported to be:

<u>88</u>	Residential Customers
<u>0</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>88</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately **100%** residential and **0%** non-residential.

The collection system consists of 6" through 8" gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 1989. The oldest areas of the system are estimated to have been constructed in 1989.

The system does not experience any problems with capacity due to inadequately sized lines.

The system includes no pump stations.

The system does not collect flow from additional systems.

Treatment is ultimately provided at the Cross Creek Estates WWTP (VPDES Permit #VA0075515).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the Cross Creek Estates Wastewater Treatment Plant. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	300,000	N/A	N/A
February	300,000	N/A	N/A
March	300,000	N/A	N/A
April	300,000	N/A	N/A
May	300,000	N/A	N/A
June	300,000	N/A	N/A
July	300,000	N/A	N/A
August	300,000	N/A	N/A
September	300,000	N/A	N/A
October	300,000	N/A	N/A
November	300,000	N/A	N/A
December	300,000	N/A	N/A
<b>Monthly Average</b>	<b>300,000</b>	<b>N/A</b>	<b>N/A</b>
<b>Daily Average</b>	<b>10,000</b>	<b>N/A</b>	<b>N/A</b>
<b>Avg / Customer</b>	<b>113</b>	<b>N/A</b>	



### Permit Violations/System Overflows/Consent Order

- The Cross Creek Subdivision collection system had no reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

### System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

A SSES has not been performed on the Cross Creek Subdivision collection system.

### Capital Improvements Plan

The system currently does not have a CIP adopted.

### Asset Management Plan

The system has not had an asset management plan prepared.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

#### Residential Sewer

Base Rate (2000 Gallons) - \$41.64  
Per 1000 Gallons After - \$11.27

Flat Rate Sewer - \$58.63

#### Non-Residential Sewer

Base Rate (2000 Gallons) - \$42.44  
2001-3499 Gallons - \$18.60  
3500 – 42,499 Gallons - \$14.00  
42,500 – 55,000 Gallons - \$11.70  
55,000+ Gallons - \$10.50

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$TBD.

### Lee County PSA Dept and Maturity Date of Outstanding Loans

The Lee County PSA system currently has an annual sewer dept of approximately \$300,000 and an outstanding loan of \$7,000,000.

**CROSS CREEK ESTATES WASTEWATER TREATMENT PLANT –  
VPDES PERMIT #VA0075515  
LEE COUNTY PUBLIC SERVICE AUTHORITY  
*Lenowisco Planning District Commission***

Facility Description – The treatment facility is located at 158 Rose Bud Dr., Dryden, VA. (see attached general vicinity map). The facility was originally constructed in 1989. The plant has not received any major upgrades or expansions since it was originally constructed. The facility utilizes extended aeration as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Cross Creek Subdivision collection system. The facility does not receive and treat septage. The permitted capacity of the facility is 0.03 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.01 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.01 MGD. The facility did not exceed capacity during this period. Effluent from the plant is discharged to the Powell River. Sludge from the facility is disposed of by hauling to the Hickory Flats WWTP.

Facility Operation – The facility is operated and maintained by the Lee County Public Service Authority. Currently, 5 full time licensed operators work at the facility. 1 Class 2 and 4 Class 4. The facility is required to be staffed 4 hours/day.

Permit Violations – The facility has received no permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

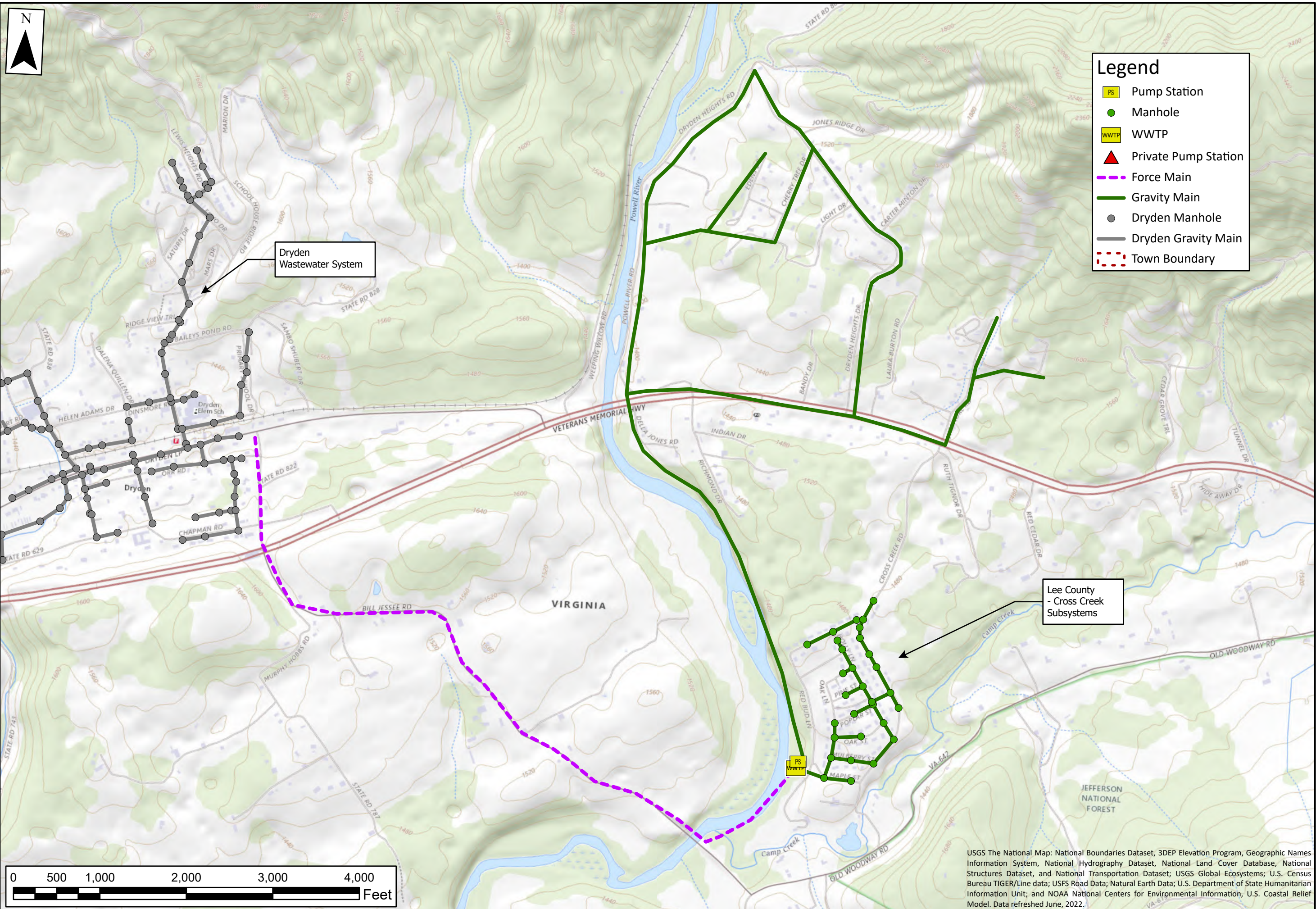
- Plumbing is deteriorating and needs replacement
- Difficulty of obtaining repair parts

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Replace the existing packaged wastewater treatment plant with a new and more reliable system

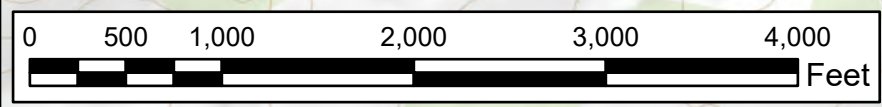
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$1,800,000. (Include table breakdown if possible)





### Legend

- PS Pump Station
- Manhole
- WWTP
- Private Pump Station
- Force Main
- Gravity Main
- Dryden Gravity Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**LEE COUNTY  
WASTEWATER  
SYSTEM - CROSS  
CREEK RD**



DATE:	12/13/2022
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DRAWN BY:	CHECKED BY:
PROJECT NO.:	2248
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**DRYDEN COLLECTION SYSTEM**  
**LEE COUNTY PUBLIC SERVICE AUTHORITY**

*Lenowisco Planning District Commission*

System Description – The Dryden wastewater collection system serves the Dryden Community, located along U.S. ALT 58 in the Eastern portion of Lee County, VA. System-wide, piping is comprised of terra cotta, asbestos, and primarily polyvinyl chloride pipe (PVC). The collection system is treated at the Pennington Gap Wastewater Treatment Plant and discharges into the Powell River.

The approximate number of customers served by the system was reported to be:

<u>211</u>	Residential Customers
<u>14</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>225</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 94% residential and 6% non-residential.

The collection system consists of 4” through 8” gravity lines. It is estimated that approximately 50% of the system consists of terra cotta or concrete lines and approximately 50% of the manholes are masonry brick. The newest area of the system was constructed in 1991. The oldest areas of the system are estimated to have been constructed in 1991.

The system does not experience any problems with capacity due to inadequately sized lines.

The system includes two (2) pump stations:

- Dryden #1 Pump Station – A duplex sewer pump station serving the Dryden Community service area. The Pump Station is located along State Route 629 and discharges through a 6-inch forcemain to the Dryden #2 Pump Station.
- Dryden #2 Pump Station – A duplex sewer pump station serving the Dryden Community service area. The Pump Station is located along US ALT 58 and discharges through a 6-inch forcemain to the Pennington Gap Wastewater Treatment Plant.

The system does not collect flow from additional systems.

Treatment is ultimately provided at the Pennington Gap WWTP (VPDES Permit #VA0029599).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the Dryden #2 Pump Station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	1,649,374	1,452,028	88%
February	1,649,374	712,865	43%
March	1,649,374	871,257	53%
April	1,649,374	693,692	42%
May	1,649,374	766,304	46%
June	1,649,374	826,936	50%
July	1,649,374	825,997	50%
August	1,649,374	599,347	36%
September	1,649,374	704,205	43%
October	1,649,374	703,323	43%
November	1,649,374	691,368	42%



December	1,649,374	690,148	42%
<b>Monthly Average</b>	<b>1,649,374</b>	<b>794,789</b>	<b>48%</b>
<b>Daily Average</b>	<b>54,225</b>	<b>26,130</b>	<b>48%</b>
<b>Avg / Customer</b>	<b>241</b>	<b>116</b>	

Permit Violations/System Overflows/Consent Order

- The Dryden community collection system had no reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the Dryden sewer system in May 2021 by The Lane Group, Inc. The SSES identified \$600,000 of recommended system rehabilitation projects.

Capital Improvements Plan

The system currently does not have a CIP adopted.

Asset Management Plan

The system has not had an asset management plan prepared.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Residential Sewer

Base Rate (2000 Gallons) - \$41.64  
Per 1000 Gallons After - \$11.27

Flat Rate Sewer - \$58.63

Non-Residential Sewer

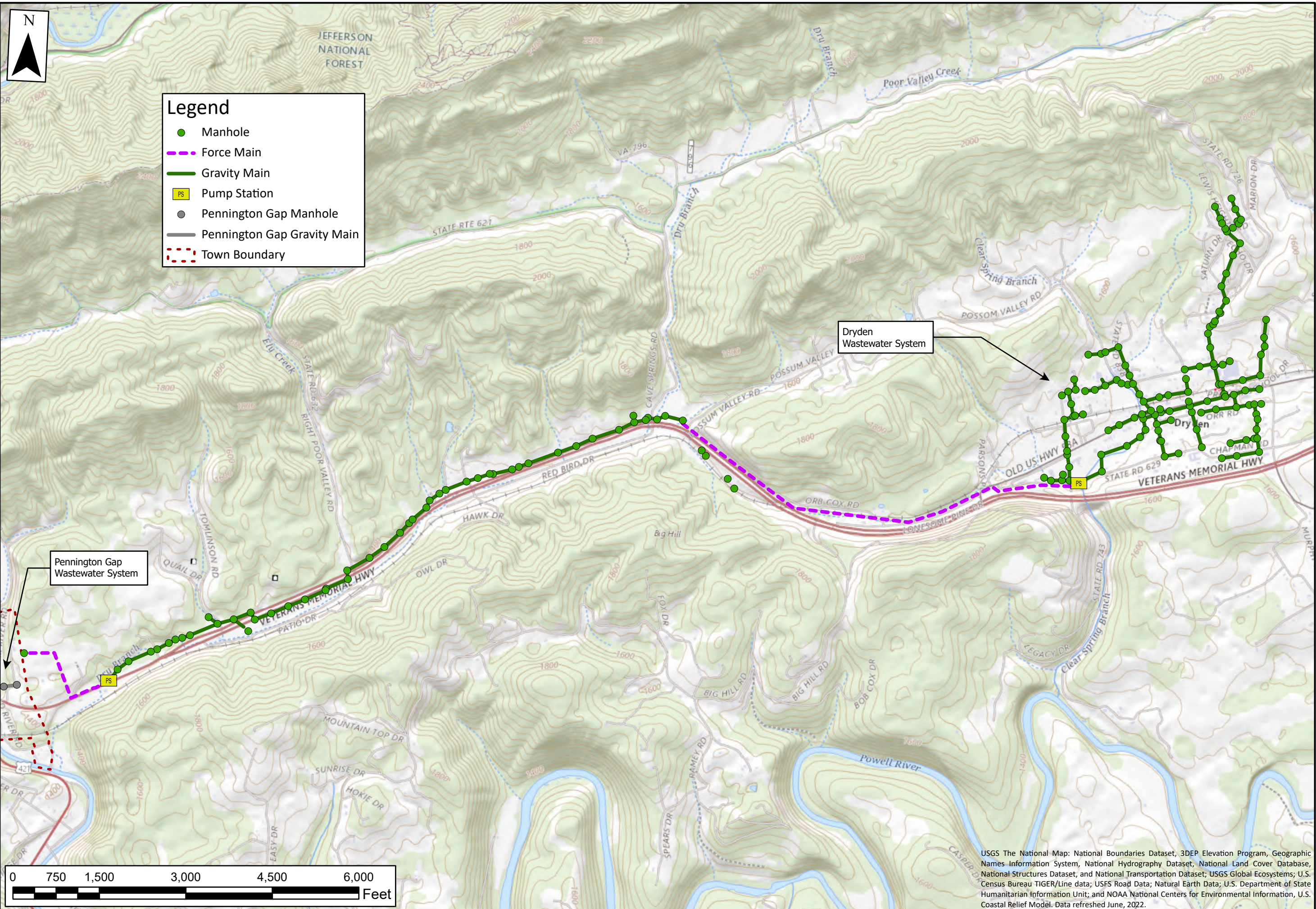
Base Rate (2000 Gallons) - \$42.44  
2001-3499 Gallons - \$18.60  
3500 – 42,499 Gallons - \$14.00  
42,500 – 55,000 Gallons - \$11.70  
55,000+ Gallons - \$10.50

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$600,000. (Include table breakdown is possible).

Lee County PSA Dept and Maturity Date of Outstanding Loans

The Lee County PSA system currently has an annual sewer dept of approximately \$300,000 and an outstanding loan of \$7,000,000.



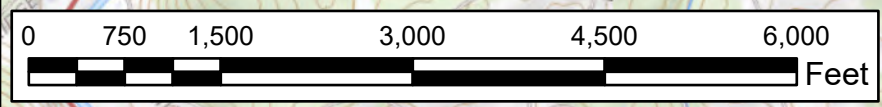


**Legend**

- Manhole
- - - Force Main
- Gravity Main
- PS Pump Station
- Pennington Gap Manhole
- Pennington Gap Gravity Main
- - - Town Boundary

Dryden Wastewater System

Pennington Gap Wastewater System



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

DRYDEN  
WASTEWATER  
SYSTEM



DATE:	12/28/2022
SHEET:	
DRAWN BY:	JR
CHECKED BY:	
PROJECT NO.:	2248
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**EWING COLLECTION SYSTEM  
LEE COUNTY PUBLIC SERVICE AUTHORITY**

**\*NEED MORE INFO**

*Lenowisco Planning District Commission*

System Description – The Ewing wastewater collection system serves the Ewing Community located along U.S. ALT 58 in the Western portion of Lee County, VA. System-wide, piping is comprised of primarily polyvinyl chloride pipe (PVC). The Ewing Wastewater Treatment Plant is located \_\_\_\_\_, and discharges into \_\_\_\_\_. The packaged treatment plant has a capacity of \_\_\_\_ million gallon per day (MGD).

The approximate number of customers served by the system was reported to be:

<u>12</u>	Residential Customers
<u>0</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>12</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **100%** residential and **0%** non-residential.

The collection system consists of 6” through 8” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in \_\_\_\_\_. The oldest areas of the system are estimated to have been constructed in \_\_\_\_\_.

The system does not experience any problems with capacity due to inadequately sized lines.

The system includes no pump stations.

The system does not collect flow from additional systems.

Treatment is ultimately provided at the Ewing WWTP (VPDES Permit #VA\_\_\_\_\_).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the Ewing Wastewater Treatment Plant. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	29,700	N/A
February	N/A	24,100	N/A
March	N/A	28,200	N/A
April	N/A	26,000	N/A
May	N/A	52,400	N/A
June	N/A	29,100	N/A
July	N/A	39,400	N/A
August	N/A	31,800	N/A
September	N/A	36,100	N/A
October	N/A	30,700	N/A
November	N/A	29,200	N/A
December	N/A	30,100	N/A
<b>Monthly Average</b>	N/A	<b>32,233</b>	N/A
<b>Daily Average</b>	N/A	<b>1,060</b>	N/A
<b>Avg / Customer</b>	N/A	<b>106</b>	



Permit Violations/System Overflows/Consent Order

- The Ewing community collection system had no reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES has not been performed on the Ewing Community collection system.

Capital Improvements Plan

The system currently does not have a CIP adopted.

Asset Management Plan

The system has not had an asset management plan prepared.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Residential Sewer

Base Rate (2000 Gallons) - \$41.64  
Per 1000 Gallons After - \$11.27

Flat Rate Sewer - \$58.63

Non-Residential Sewer

Base Rate (2000 Gallons) - \$42.44  
2001-3499 Gallons - \$18.60  
3500 – 42,499 Gallons - \$14.00  
42,500 – 55,000 Gallons - \$11.70  
55,000+ Gallons - \$10.50

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$\_\_\_\_\_. (Include table breakdown is possible).

Lee County PSA Dept and Maturity Date of Outstanding Loans

The Lee County PSA system currently has an annual sewer dept of approximately \$300,000 and an outstanding loan of \$7,000,000.

# EWING WASTEWATER TREATMENT PLANT – VPDES PERMIT

#VA \_\_\_\_\_

**\*NEED MORE INFO**

LEE COUNTY PUBLIC SERVICE AUTHORITY

*Lenowisco Planning District Commission*

Facility Description – The treatment facility is located at \_\_\_\_\_ (see attached general vicinity map). The facility was originally constructed in \_\_\_\_\_. The plant has not received any major upgrades or expansions since it was originally constructed. The facility utilizes extended aeration as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Ewing Community collection system. The facility does not receive and treat septage. The permitted capacity of the facility is \_\_\_\_\_ MGD. The average daily flow treated at the facility during calendar year 2021 was 0.0010 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.0014 MGD. The facility exceeded 80% capacity for \_\_\_\_ days during this period. Effluent from the plant is discharged to \_\_\_\_\_. Sludge from the facility is disposed of by hauling to the Hickory Flats WWTP.

Facility Operation – The facility is operated and maintained by the Lee County Public Service Authority. Currently, 5 full time licensed operators work at the facility. 1 Class 2 and 4 Class 4. The facility is required to be staffed \_\_\_\_\_ hours/day.

Permit Violations – The facility has received no permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Plumbing is deteriorating and needs replacement
- Difficulty of obtaining repair parts

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Replace the existing packaged wastewater treatment plant with a new and more reliable system

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$\_\_\_\_\_. (Include tale breakdown if possible)



# HICKORY FLATS WASTEWATER COLLECTION SYSTEM

## LEE COUNTY PUBLIC SERVICE AUTHORITY

*Lenowischo Planning District Commission*

System Description – The Hickory Flats wastewater collection system is located along U.S. Route 58 in Lee County, Virginia and serves the Hickory Flats Community, USP-Lee Federal Prison, and Town of Jonesville. System-wide, piping is comprised of primarily polyvinyl chloride pipe (PVC). The Hickory Flats Wastewater Treatment Plant Facility has a permitted capacity of 0.80 million gallon per day (MGD).

The approximate number of customers served by the system was reported to be:

<u>21</u>	Residential Customers
<u>1</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>1</u>	<u>Other Municipal Systems</u>
<b>23</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately 91% residential and 9% non-residential.

The collection system consists of 4" through 12" gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 1989. The oldest areas of the system are estimated to have been constructed in 1989.

The system does not experience any problems with capacity due to inadequately sized lines.

The system includes six (6) pump stations:

- Super Sac Pump Station – A sewer lift station and forcemain that serves the existing Hickory Flats Industrial Park in Lee County, VA. It is designed to handle flows up to 52 gallons per minute (gpm). The pump station discharges through a 3-inch forcemain into the Litton Pump Station.
- Allen Minor Pump Station – A duplex sewer pump system that serves a small community in the western portion of the Town of Jonesville. The station is designed to handle flows up to 250 gpm. The pump station discharges into the Old Jonesville Pump Station through a 6-inch forcemain.
- West Jonesville Pump Station – Serves the west half of the Town of Jonesville. The station is designed to handle flows up to 130 gpm. Sewage enters the pump station via an 8-inch sanitary sewer inlet and passes immediately through an influent grinder once entering the wet well. The pump station discharges into the Old Jonesville Pump Station through a 4-inch forcemain.
- Old Jonesville Pump Station – Located at the Old Jonesville WWTP, the pump station collects flows from the existing Jonesville collection system and the flows from the West Jonesville Pump Station. The station is designed to handle flows up to 365 gpm. Sewage enters the pump station via an 8-inch sanitary sewer inlet and passes immediately through an influent grinder once entering the wet well. The pump station discharges into the Town Branch Pump Station through a 6-inch force main.
- Town Branch Pump Station – The grinder pump station is located in East Jonesville and is capable of handling flows up to 400 gpm. Sewage enters the pump station from an 8" force main. The pump station discharges through an 8-inch forcemain into the 1230 pump station.
- 1230 Pump Station – The pump station receives wastewater from the Town Branch Pump Station and is pumped to the Hickory Flats WWTP. The station is designed to handle flows up to 400 gpm. Sewage enters the pump station from the Town Branch Pump Station via an 8-inch forcemain.
- Litton Pump Station – The pump station receives wastewater from the Lee County Federal Prison and the Lee County Industrial Park and pumps it to the Hickory Flats WWTP through a 12-inch forcemain. The station is designed to handle flows up to 1,000 gpm. Sewage enters the pump station via a 12-inch gravity sewer.

The system also collects flow from the Town of Jonesville system.

Treatment is ultimately provided at the Hickory Flats WWTP (VPDES Permit #VA0089397).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the Hickory Flats Wastewater Treatment Plant. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	7,308,500	7,308,500	100%
February	7,655,600	7,655,600	100%
March	6,316,300	6,316,300	100%
April	7,291,800	7,291,800	100%
May	7,028,200	7,028,200	100%
June	8,066,200	8,066,200	100%
July	7,258,500	7,258,500	100%
August	7,725,300	7,725,300	100%
September	7,030,000	7,030,000	100%
October	7,121,000	7,121,000	100%
November	7,083,200	7,083,200	100%
December	7,325,500	7,325,500	100%
<b>Monthly Average</b>	<b>7,267,508</b>	<b>7,267,508</b>	<b>100%</b>
<b>Daily Average</b>	<b>238,932</b>	<b>238,932</b>	<b>100%</b>
<b>Avg / Customer</b>	<b>10,388</b>	<b>10,388</b>	

#### Permit Violations/System Overflows/Consent Order

- The Hickory Flats wastewater collection system had no reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

#### Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

#### System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

#### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

#### SSES

A SSES has not been performed on the Hickory Flats wastewater collection system.

#### Capital Improvements Plan

The system currently does not have a CIP adopted.



Asset Management Plan

The system has not had an asset management plan prepared.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Residential Sewer

Base Rate (2000 Gallons) - \$41.64

Per 1000 Gallons After - \$11.27

Flat Rate Sewer - \$58.63

Non-Residential Sewer

Base Rate (2000 Gallons) - \$42.44

2001-3499 Gallons - \$18.60

3500 – 42,499 Gallons - \$14.00

42,500 – 55,000 Gallons - \$11.70

55,000+ Gallons - \$10.50

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$TBD.

Lee County PSA Dept and Maturity Date of Outstanding Loans

The Lee County PSA system currently has an annual sewer dept of approximately \$300,000 and an outstanding loan of \$7,000,000.

**HICKORY FLATS WASTEWATER TREATMENT PLANT – VPDES  
PERMIT #VA0089397  
LEE COUNTY PUBLIC SERVICE AUTHORITY  
*Lenowisco Planning District Commission***

Facility Description – The treatment facility is located at 309 Treatment Plant Rd., Pennington Gap, VA (see attached general vicinity map). The facility was originally constructed in 1999. The last major upgrade/expansion was completed in 2015 and involved additions and upgrades to the headworks building, mechanical building, laboratory building, digesters, blowers, UV disinfection system and miscellaneous plumbing and electrical. The facility utilizes activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from Town of Jonesville collection system and USP-Lee Federal Prison. The facility does receive and treat septage. The permitted capacity of the facility is 0.80 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.24 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.26 MGD. The facility did not exceed capacity during this period. Effluent from the plant is discharged to the Powell River. Sludge from the facility is pressed and hauled to the landfill.

Facility Operation – The facility is operated and maintained by the Lee County Public Service Authority. Currently, 5 full time licensed operators work at the facility. 1 Class 2 and 4 Class 4. The facility is required to be staffed 8 hours/day.

Permit Violations – The facility has received no permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

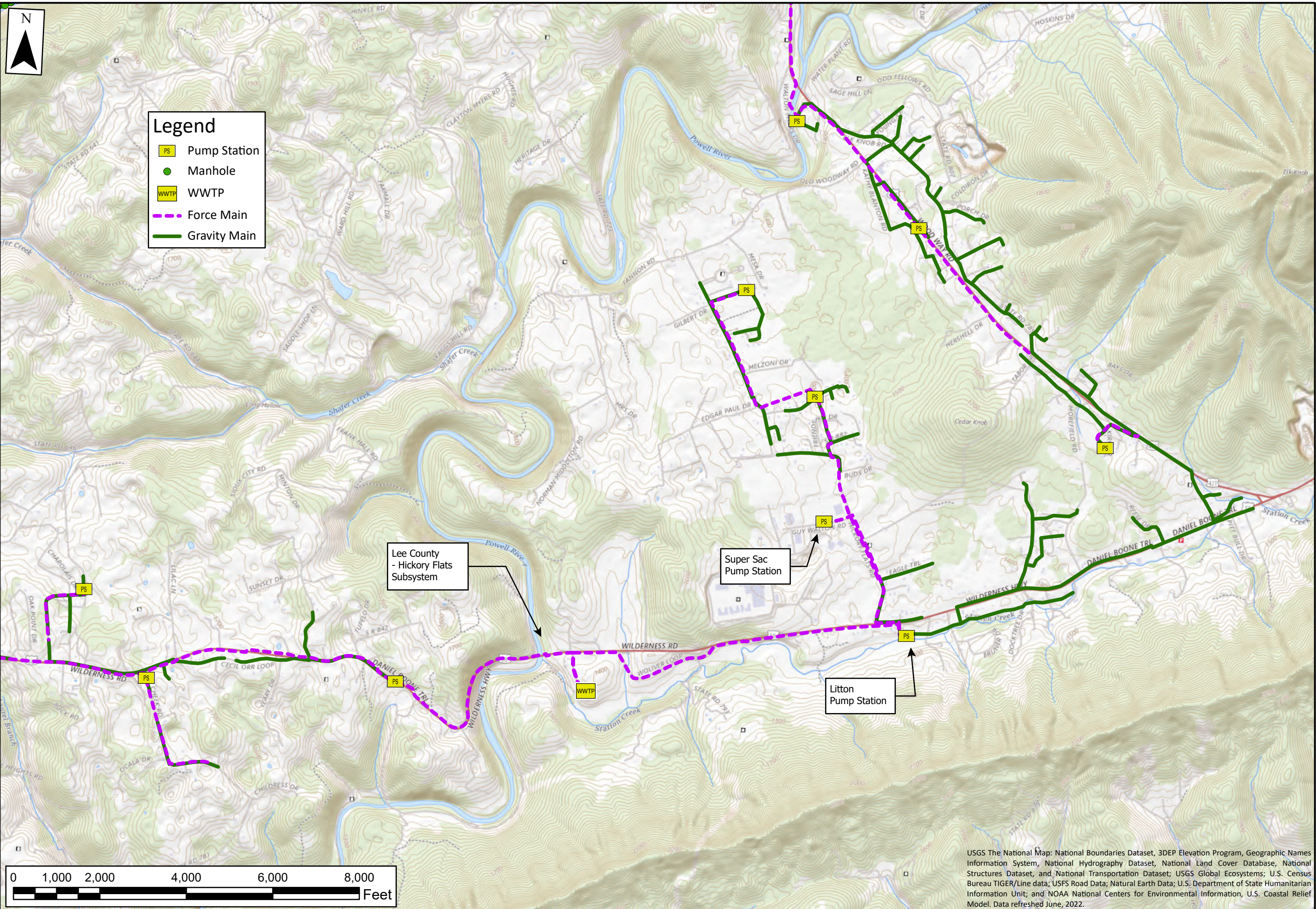
- Blower motor belts breaking often
- Unreliability of monitoring equipment

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Plant control upgrades

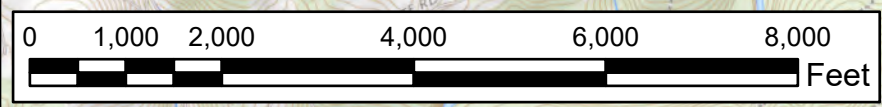
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$TBD.





**Legend**

- PS Pump Station
- Manhole
- WWTP
- Force Main
- Gravity Main



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



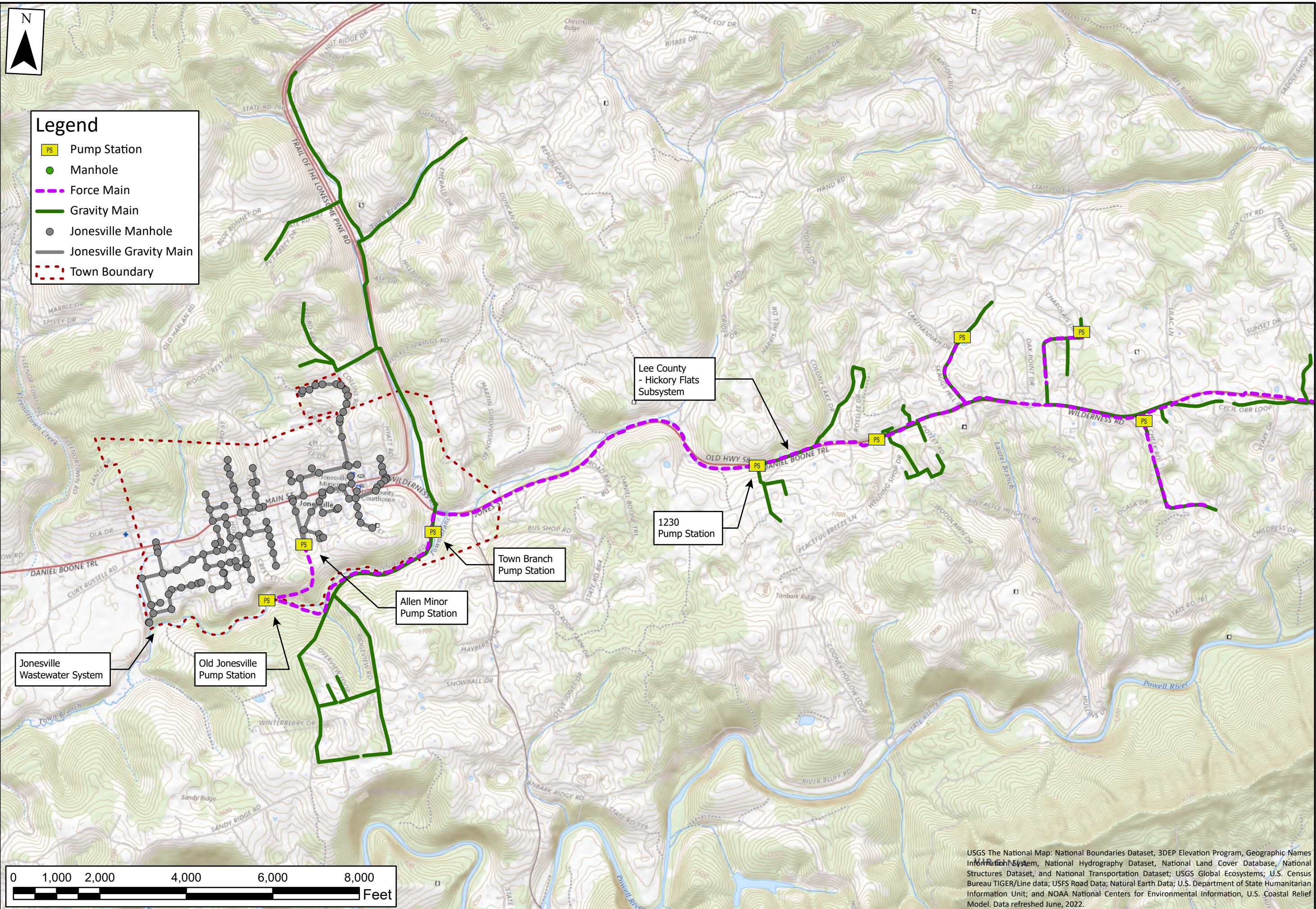
**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**LEE COUNTY  
WASTEWATER  
SYSTEM - HICKORY  
FLATS EAST**



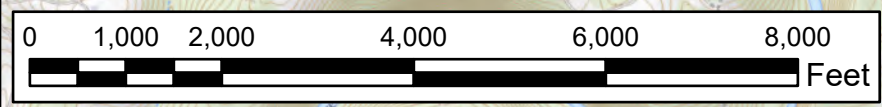
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**Legend**

- Pump Station
- Manhole
- Force Main
- Gravity Main
- Jonesville Manhole
- Jonesville Gravity Main
- Town Boundary



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

LEE COUNTY  
WASTEWATER  
SYSTEM - HICKORY  
FLATS WEST



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USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**ROSE HILL COLLECTION SYSTEM**  
**LEE COUNTY PUBLIC SERVICE AUTHORITY**

*Lenowisco Planning District Commission*

System Description – The Rose Hill wastewater collection system serves the Rose Hill Community located along U.S. ALT 58 in the Western portion of Lee County, VA. System-wide, piping is comprised of primarily polyvinyl chloride pipe (PVC). The Rose Hill Wastewater Treatment Plant is located along State Route 672, south of the community, and discharges into Martin’s Creek. The packaged treatment plant has a capacity of 0.06 million gallon per day (MGD).

The approximate number of customers served by the system was reported to be:

<u>129</u>	Residential Customers
<u>14</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>143</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **90%** residential and **10%** non-residential.

The collection system consists of 4” through 8” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 1995. The oldest areas of the system are estimated to have been constructed in 1995.

The system does not experience any problems with capacity due to inadequately sized lines.

The system includes no pump stations.

The system does not collect flow from additional systems.

Treatment is ultimately provided at the Rose Hill WWTP (VPDES Permit #VA0088111).

System Flows - Flows for the collection system are estimated based upon metering equipment located at Rose Hill Wastewater Treatment Plant. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	2,025,000	401,900	20%
February	2,199,000	311,900	14%
March	1,665,000	336,800	20%
April	2,817,000	384,700	14%
May	1,698,000	377,200	22%
June	1,632,000	415,600	25%
July	1,698,000	404,500	24%
August	1,557,000	382,400	25%
September	1,683,000	443,000	26%
October	1,518,000	471,300	31%
November	1,527,000	385,700	25%
December	1,437,000	392,500	27%
<b>Monthly Average</b>	<b>1,788,000</b>	<b>392,292</b>	<b>22%</b>
<b>Daily Average</b>	<b>58,783</b>	<b>12,897</b>	<b>22%</b>
<b>Avg / Customer</b>	<b>411</b>	<b>90</b>	



### Permit Violations/System Overflows/Consent Order

- The Rose Hill community collection system had no reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

### System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SES

A SSES was performed on the Rose Hill sewer system in July 2021 by The Lane Group, Inc. The SSES identified \$170,000 of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently does not have a CIP adopted.

### Asset Management Plan

The system has not had an asset management plan prepared.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

#### Residential Sewer

Base Rate (2000 Gallons) - \$41.64  
Per 1000 Gallons After - \$11.27

Flat Rate Sewer - \$58.63

#### Non-Residential Sewer

Base Rate (2000 Gallons) - \$42.44  
2001-3499 Gallons - \$18.60  
3500 – 42,499 Gallons - \$14.00  
42,500 – 55,000 Gallons - \$11.70  
55,000+ Gallons - \$10.50

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$170,000. (Include table breakdown is possible).

### Lee County PSA Dept and Maturity Date of Outstanding Loans

The Lee County PSA system currently has an annual sewer dept of approximately \$300,000 and an outstanding loan of \$7,000,000.

# **ROSE HILL WASTEWATER TREATMENT PLANT – VPDES PERMIT #VA0088111**

## **LEE COUNTY PUBLIC SERVICE AUTHORITY**

*Lenowisco Planning District Commission*

Facility Description – The treatment facility is located at 826 Martins Creek Rd., Rose Hill, VA (see attached general vicinity map). The facility was originally constructed in 1995. The plant has not received any major upgrades or expansions since it was originally constructed. The facility utilizes extended aeration as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Rose Hill Community collection system. The facility does not receive and treat septage. The permitted capacity of the facility is 0.06 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.06 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.06 MGD. The facility exceeded 80% capacity for 128 days during this period. Effluent from the plant is discharged to Martin’s Creek. Sludge from the facility is disposed of by hauling to the Hickory Flats WWTP.

Facility Operation – The facility is operated and maintained by the Lee County Public Service Authority. Currently, 5 full time licensed operators work at the facility. 1 Class 2 and 4 Class 4. The facility is required to be staffed 8 hours/day.

Permit Violations – The facility has received no permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

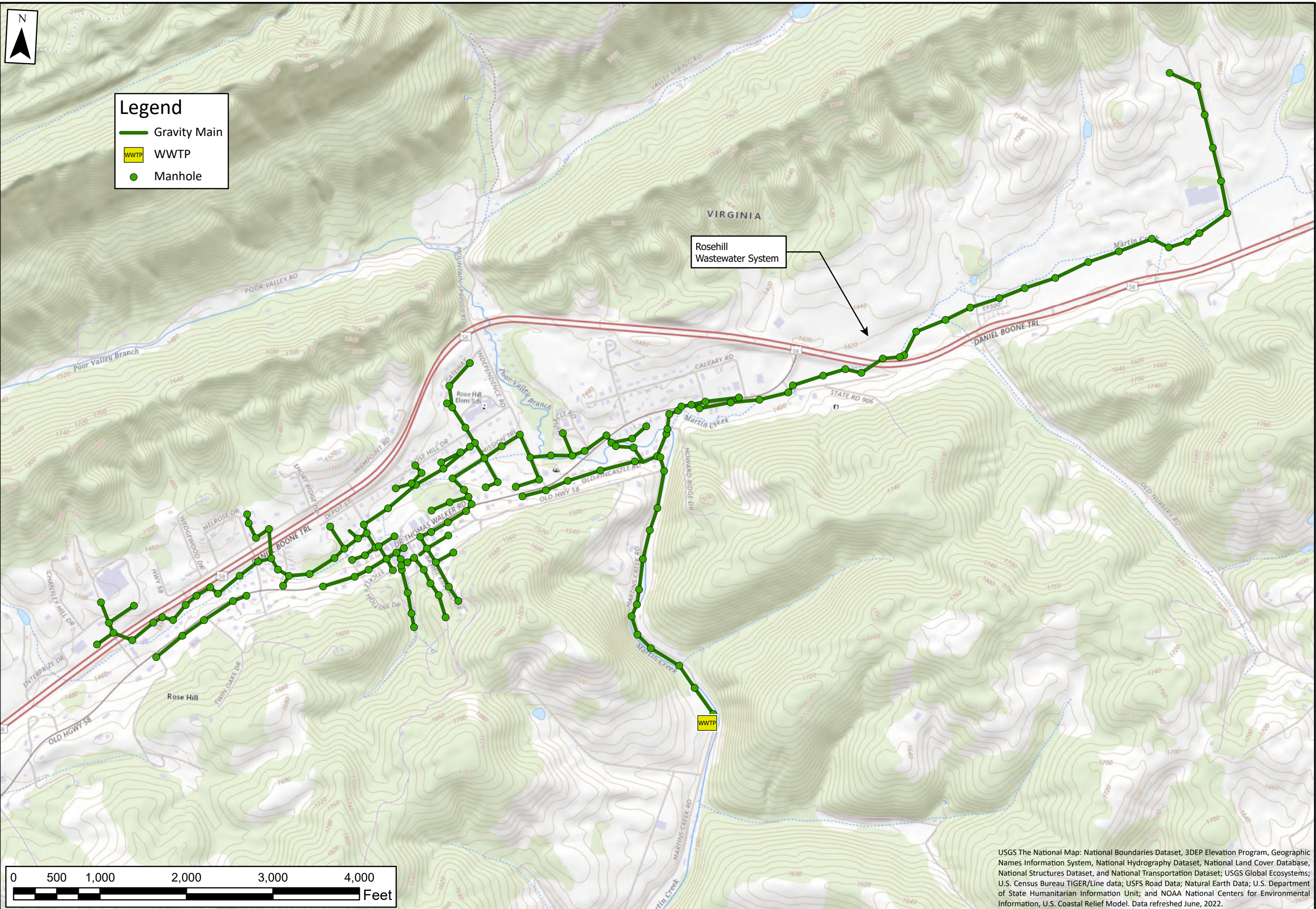
- Plumbing is deteriorating and needs replacement
- Difficulty of obtaining repair parts

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Replace the existing packaged wastewater treatment plant with a new and more reliable system

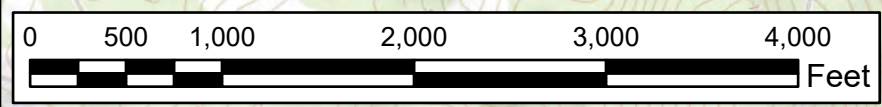
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$TBD.





**Legend**

- Gravity Main
- WWTP WWTP
- Manhole



Rosehill  
Wastewater System

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



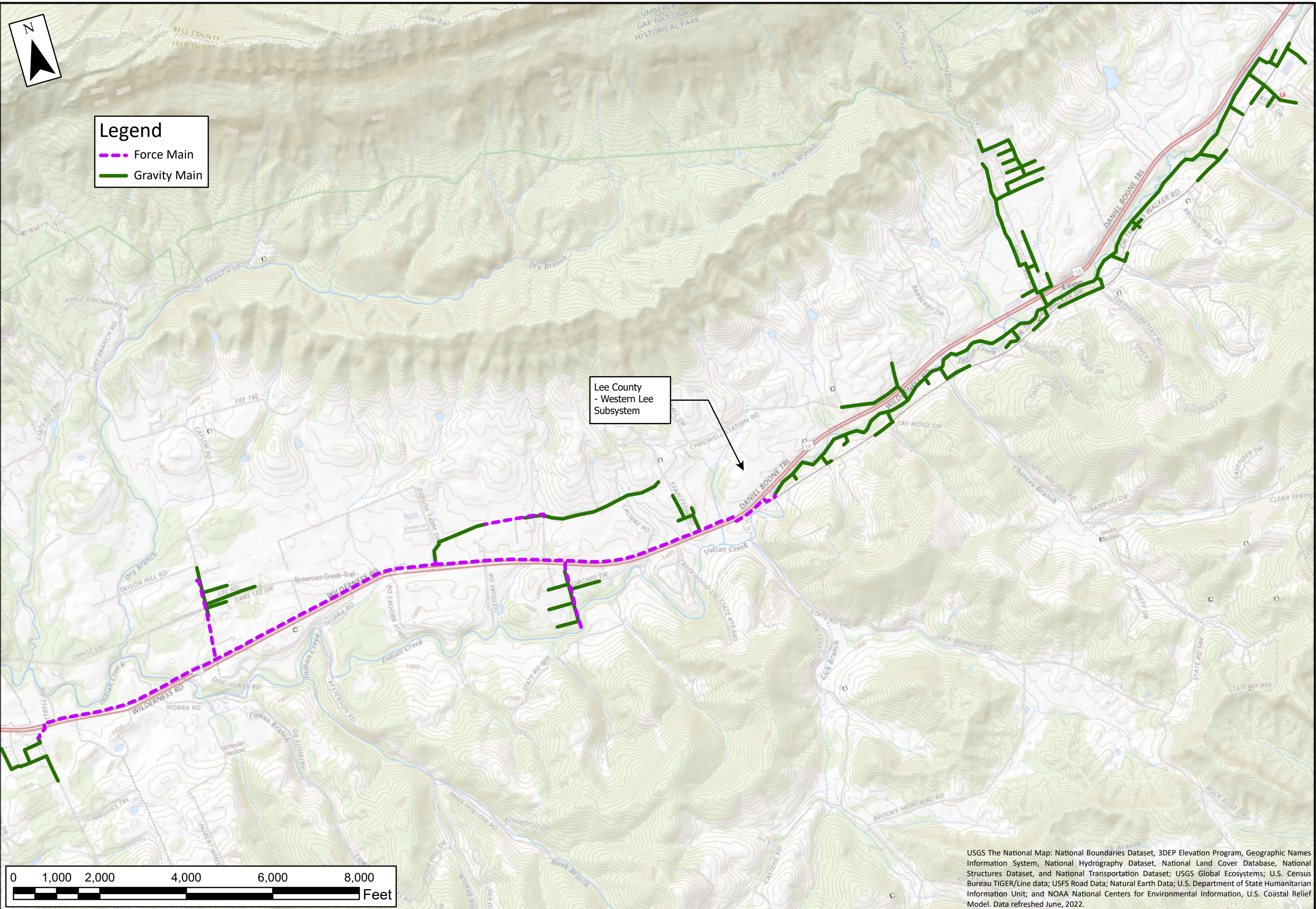
SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

ROSEHILL  
 WASTEWATER  
 SYSTEM



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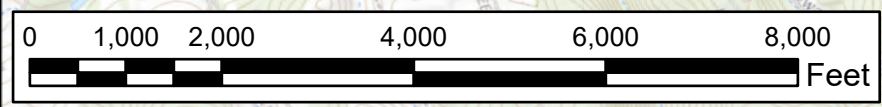




**Legend**

- Force Main
- Gravity Main

Lee County  
- Western Lee  
Subsystem



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



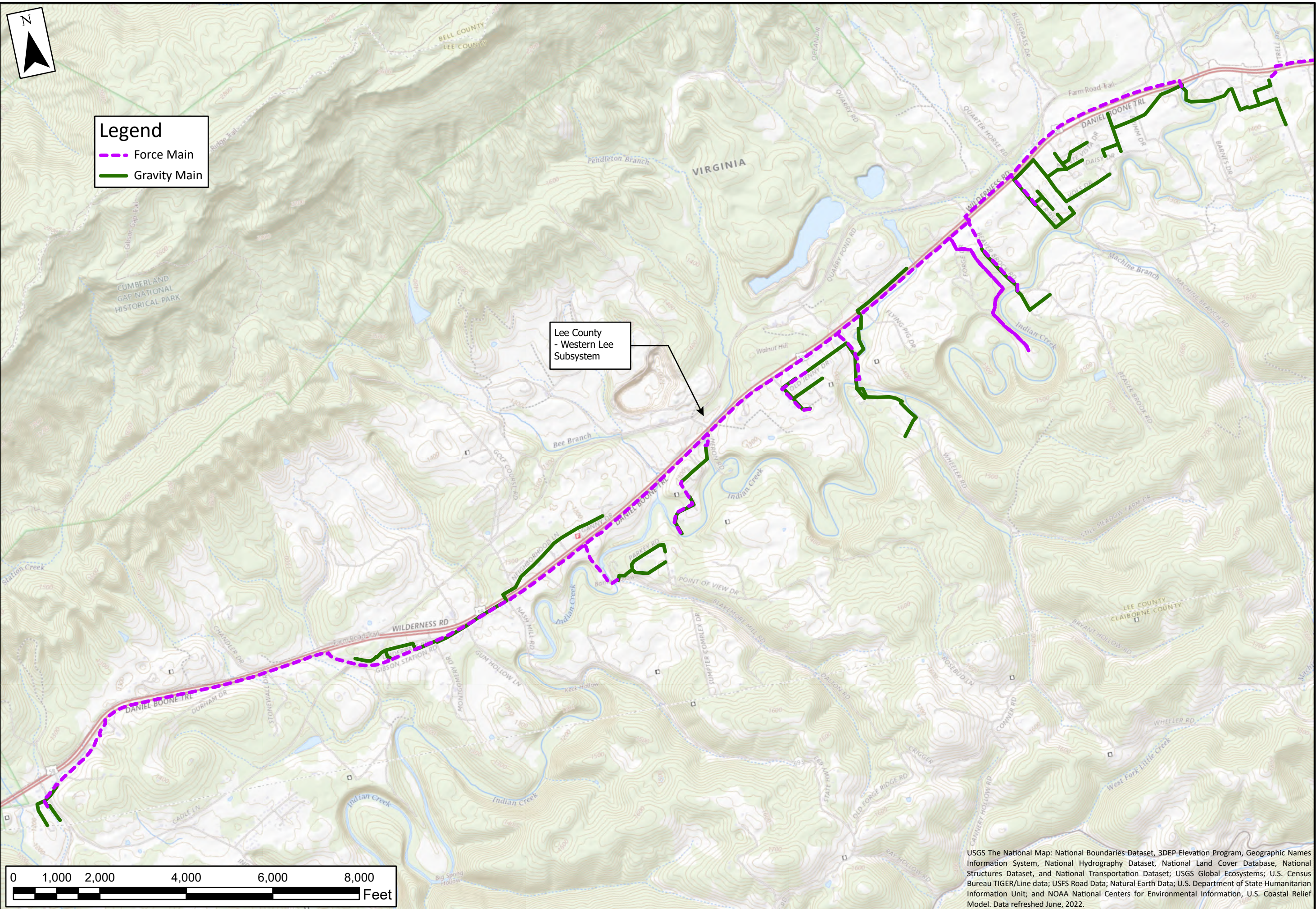
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COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

LEE COUNTY  
WASTEWATER  
SYSTEM - WESTERN  
LEE COUNTY



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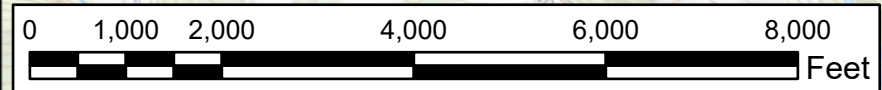




**Legend**

- Force Main
- Gravity Main

Lee County  
- Western Lee  
Subsystem



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**LEE COUNTY  
WASTEWATER  
SYSTEM - WESTERN  
LEE COUNTY**



DATE:	12/13/2022
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# ST. CHARLES COLLECTION SYSTEM

## LEE COUNTY PUBLIC SERVICE AUTHORITY

Lenowisco Planning District Commission

System Description – The St. Charles wastewater collection system serves the St. Charles Community, located along U.S. ALT 58, north of the Town of Pennington Gap in Lee County, VA. System-wide, piping is comprised primarily of terra cotta, cast iron and polyvinyl chloride pipe (PVC). The collection system is treated at the Pennington Gap Wastewater Treatment Plant and discharges into the Powell River.

The approximate number of customers served by the system was reported to be:

<u>187</u>	Residential Customers
<u>2</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>189</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 99% residential and 1% non-residential.

The collection system consists of 4” through 15” gravity lines. It is estimated that approximately 30% of the system consists of terra cotta or ductile iron lines and approximately 30% of the manholes are masonry brick. The newest area of the system was constructed in 2007. The oldest areas of the system are estimated to have been constructed in N/A.

The system does not experience any problems with capacity due to inadequately sized lines.

The system includes three (3) pump stations:

- North St. Charles Pump Station – Serves the North St. Charles community. The pump station is designed to handle flows up to 45 gpm. Sewage enters the pump station via an 8-inch sanitary sewer inlet and passes immediately through an influent grinder once entering the wet well. The pump station discharges into the St. Charles collection system through a 3-inch forcemain.
- Red Hill Poor Valley Pump Station – Serves the Red Hill and Poor Valley communities. The pump station is designed to handle flows up to 66 gpm. Sewage enters the pump station via an 8-inch sanitary sewer inlet and passes immediately through an influent grinder once entering the wet well. The pump station discharges into the St. Charles collection system through a 3-inch forcemain.
- Pennington Gap Interceptor Pump Station – Solids handling sewer pump station serving the Town of St. Charles service area. It operates to convey sewage flows up to 0.41 million gallons per day (MGD). The pump station discharges to the Pennington Gap WWTP through a 6-inch forcemain. The station located at the intersection of US Route 421 and State Route 606 on Straight Creek, just above its confluence with the North Fork of the Powell River.

The system does not collect flow from additional systems.

Treatment is ultimately provided at the Pennington Gap WWTP (VPDES Permit #VA0029599).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the Pennington Gap Interceptor Pump Station. A summary of the system’s collected and billed flows for the 2021-2022 fiscal year is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	1,977,083	437,850	22%
February	1,977,083	424,730	21%
March	1,977,083	360,612	18%
April	1,977,083	379,320	19%
May	1,977,083	387,211	20%



June	1,977,083	485,007	25%
July	1,977,083	448,016	23%
August	1,977,083	527,415	27%
September	1,977,083	441,915	22%
October	1,977,083	408,718	21%
November	1,977,083	428,245	22%
December	1,977,083	435,891	22%
<b>Monthly Average</b>	<b>1,977,083</b>	<b>430,411</b>	<b>22%</b>
<b>Daily Average</b>	<b>65,000</b>	<b>14,150</b>	<b>22%</b>
<b>Avg / Customer</b>	<b>344</b>	<b>75</b>	

Permit Violations/System Overflows/Consent Order

- The St. Charles community collection system had no reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

System Needs

- Line and Manhole Rehabilitation
- I/I Remediation

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES has not been performed on the St. Charles Community collection system.

Capital Improvements Plan

The system currently does not have a CIP adopted.

Asset Management Plan

The system has not had an asset management plan prepared.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Residential Sewer

Base Rate (2000 Gallons) - \$41.64  
Per 1000 Gallons After - \$11.27

Flat Rate Sewer - \$58.63

Non-Residential Sewer

Base Rate (2000 Gallons) - \$42.44  
2001-3499 Gallons - \$18.60  
3500 – 42,499 Gallons - \$14.00  
42,500 – 55,000 Gallons - \$11.70  
55,000+ Gallons - \$10.50

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ **TBD**.

Lee County PSA Dept and Maturity Date of Outstanding Loans

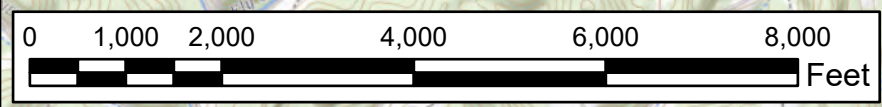
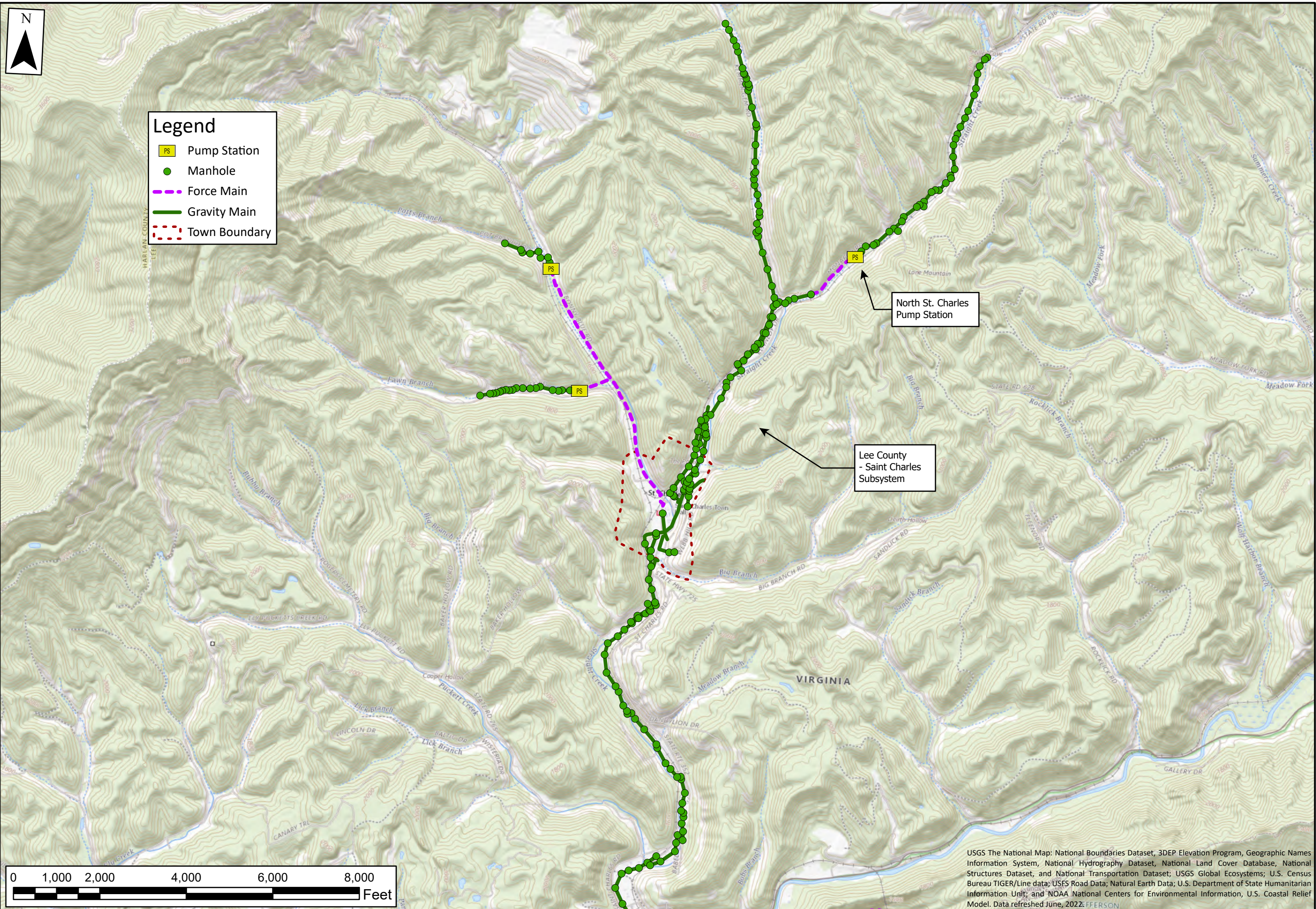
The Lee County PSA system currently has an annual sewer dept of approximately \$300,000 and an outstanding loan of \$7,000,000.





**Legend**

- PS Pump Station
- Manhole
- Force Main
- Gravity Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022; FFERSON



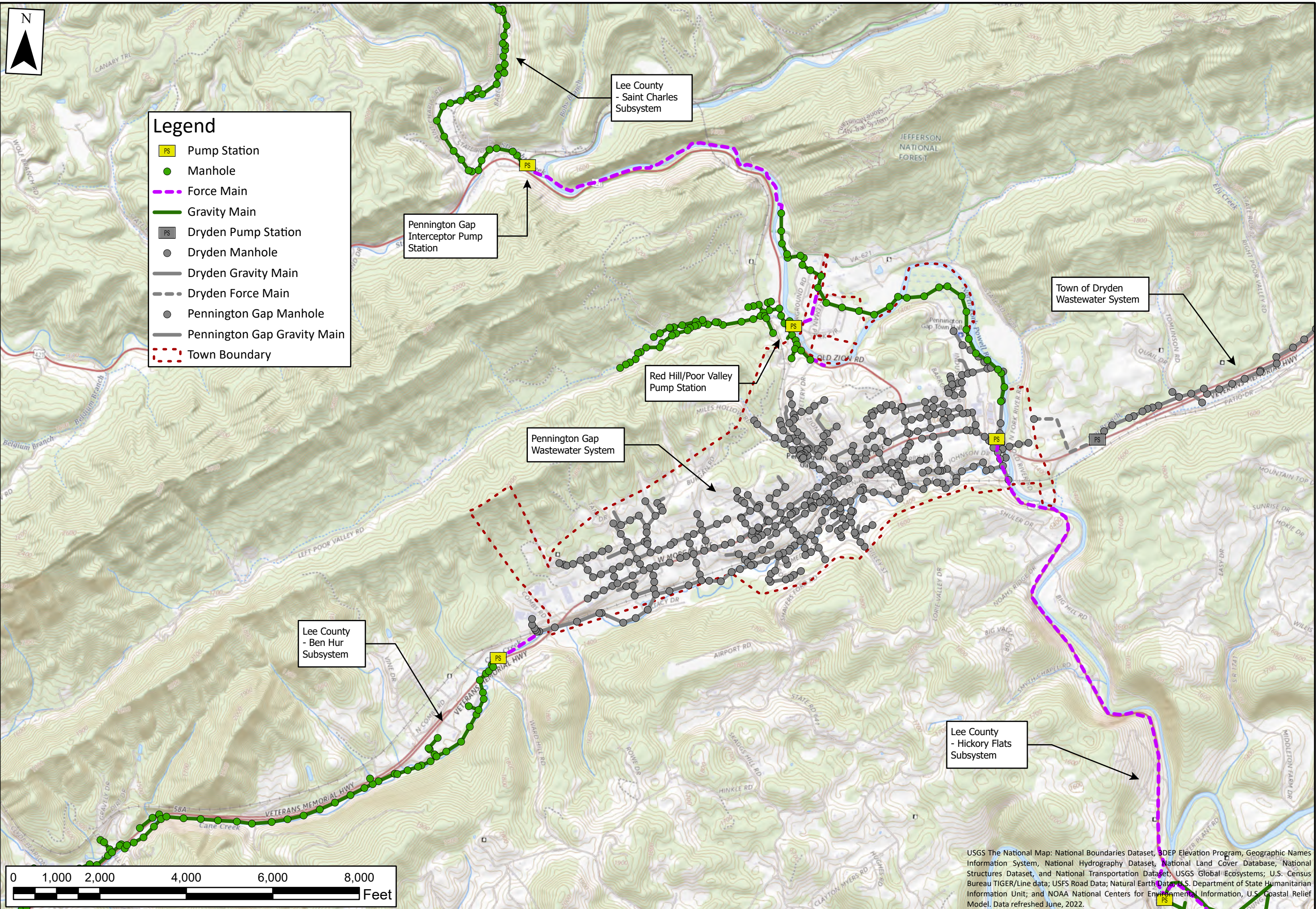
**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**LEE COUNTY  
WASTEWATER  
SYSTEM - SAINT  
CHARLES NORTH**



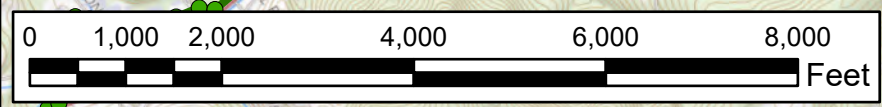
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**Legend**

- PS Pump Station
- Manhole
- Force Main
- Gravity Main
- PS Dryden Pump Station
- Dryden Manhole
- Dryden Gravity Main
- Dryden Force Main
- Pennington Gap Manhole
- Pennington Gap Gravity Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

LEE COUNTY  
 WASTEWATER  
 SYSTEM - SAINT  
 CHARLES NORTH



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# CITY OF NORTON COLLECTION SYSTEM

## CITY OF NORTON

*Lenowisco Planning District Commission*

System Description – The City of Norton is a residential and commercial center situated at the intersection of U.S. Route 23 and U.S. Route 58 Alternate in central Wise County, Virginia. The City’s sanitary sewer system piping is comprised of terra cotta, asbestos cement, and polyvinyl chloride (PVC) material and were constructed in the 1950’s. Manholes date from the same time period and are constructed of brick and mortar. The system provides sanitary sewer collection for approximately 4,500 persons.

The approximate number of customers served by the system was reported to be:

<u>1850</u>	Residential Customers
<u>344</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>1</u>	Other Municipal Systems
<b>2,195</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **85%** residential and **15%** non-residential.

The collection system consists of 4” through 12” gravity lines. It is estimated that approximately 85% of the system consists of terra cotta or concrete lines and approximately 85% of the manholes are masonry brick. The newest area of the system was constructed in 2012. The oldest areas of the system are estimated to have been constructed in the 1940’s.

No areas of the system have experienced problems with capacity due to inadequately sized lines.

The system includes one pump station:

- Josephine Pump Station – Grinder sewer pump station serving the Josephine Community within the City of Norton service area. It is capable of handling 27.5 GPM of raw, domestic sanitary sewage to the City of Norton Collection System. The Pump Station is located along State Route 610 within the Josephine Community.

The system also collects flow from the Wise County Public Service Authority system.

Flow collected by the system is conveyed to CNW Regional Wastewater Authority. Treatment is ultimately provided at the CNW Regional WWTP (VPDES Permit #VA0077828).

System Flows - Flows for the collection system are estimated based upon metering equipment located at the CNW Regional Wastewater Treatment Plant A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	83,044,000	9,148,200	11%
February	114,267,000	9,148,200	8%
March	113,687,000	9,148,200	8%
April	66,216,000	9,148,200	14%
May	61,735,000	9,148,200	15%
June	52,744,000	9,148,200	17%
July	49,702,000	9,148,200	18%
August	70,149,000	9,148,200	13%
September	64,584,000	9,148,200	14%
October	56,745,000	9,148,200	16%
November	47,821,000	9,148,200	19%
December	54,882,000	9,148,200	17%



<b>Monthly Average</b>	<b>69,631,333</b>	<b>9,148,200</b>	<b>13%</b>
<b>Daily Average</b>	<b>2,289,249</b>	<b>300,762</b>	<b>13%</b>
<b>Avg / Customer</b>	<b>1,043</b>	<b>137</b>	

Permit Violations/System Overflows/Consent Order

- The City of Norton collection system had 1 reported sewer system overflows during calendar year 2021. None were due to excessive Infiltration and Inflow, 1 was due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration & Inflow

System Needs

- Line Rehabilitation
- Manhole Rehabilitation
- I/I Remediation

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES is being performed on the City of Norton collection system by Mattern & Craig. The survey is currently incomplete.

Capital Improvements Plan

The system currently has a CIP adopted in 2022. The CIP includes \$17,000,000 of projects for completion in the next 5 years.

Asset Management Plan

The system currently does not have an asset management plan.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

Inside City Limits

Water - \$19.10 (<2,000 gallons)  
 Each additional 1,000 gallons - \$6.65  
 Sewer Rate – 175% of Water Bill

Outside City Limits

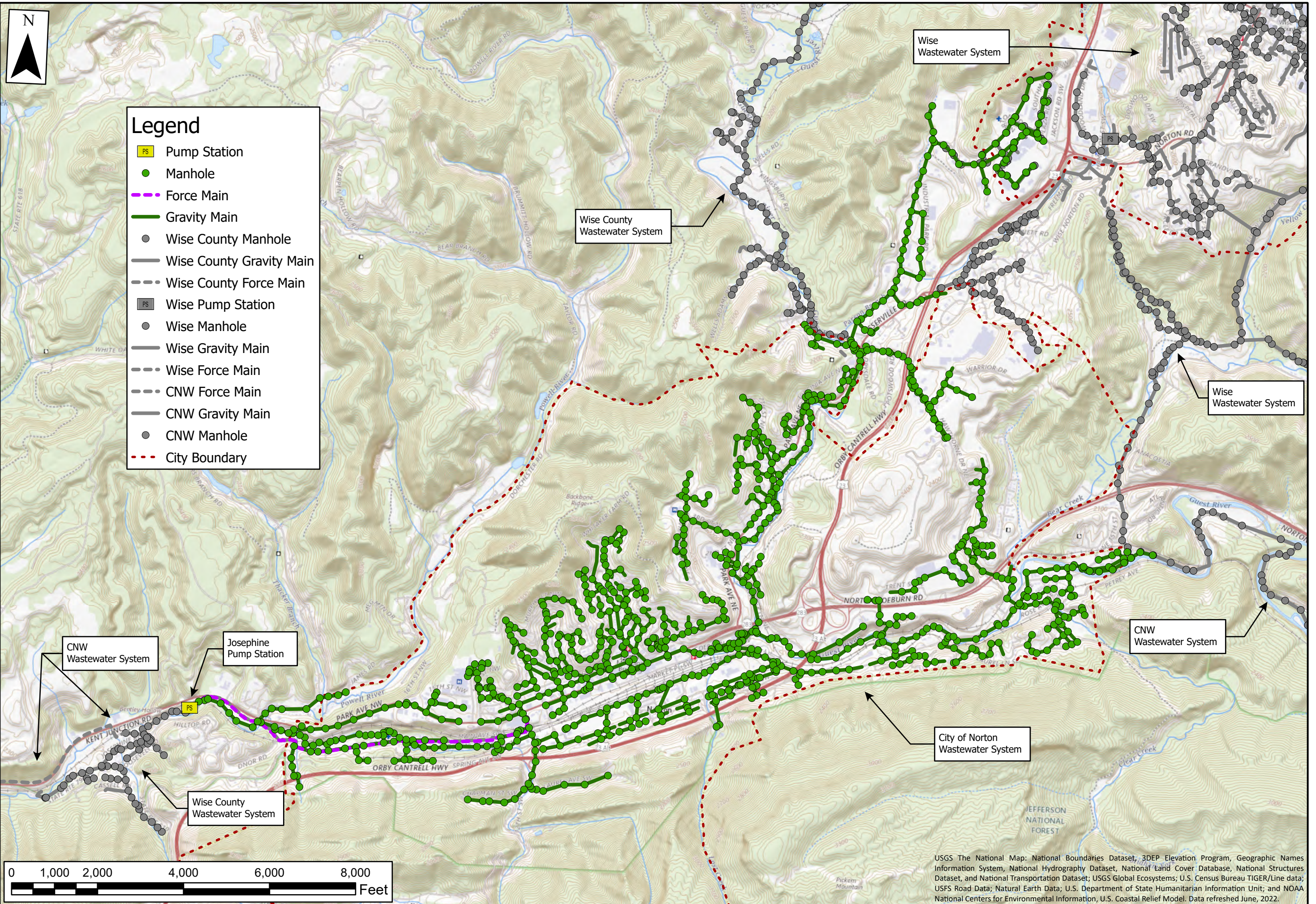
Water - \$28.65 (<2,000 gallons)  
 Each additional 1,000 gallons - \$13.30  
 Sewer Rate – 200% of Water Bill

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$17,000,000.

System Dept and Maturity Date of Outstanding Loans

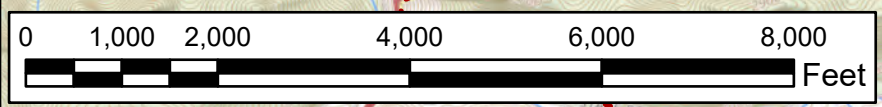
The system currently has an existing annual debt service of \$126,623 and N/A in outstanding loan.





### Legend

- Pump Station
- Manhole
- Force Main
- Gravity Main
- Wise County Manhole
- Wise County Gravity Main
- Wise County Force Main
- Wise Pump Station
- Wise Manhole
- Wise Gravity Main
- Wise Force Main
- CNW Force Main
- CNW Gravity Main
- CNW Manhole
- City Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

CITY OF NORTON  
 WASTEWATER  
 SYSTEM



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# PENNINGTON GAP COLLECTION SYSTEM

## TOWN OF PENNINGTON GAP

LENOWISCO Planning District Commission

System Description – The Pennington Gap collection system is located in central Lee County near the US Rte. 58 Alt. and US Rte. 421 intersection. The system is primarily located within road right-of-way and serves the Town of Pennington Gap and adjacent areas of Lee County.

The approximate number of customers served by the system was reported to be:

<u>840</u>	Residential Customers
<u>130</u>	Commercial Customers
<u>10</u>	Industrial Customers
<u>942</u>	<u>Other Municipal Systems</u>
<b>1922</b>	<b>Total Number of Customers</b>

The system's flows for 2021 were estimated to be approximately 90% residential and 10% non-residential.

The collection system consists of 15" through 6" gravity lines. It is estimated that approximately 60% of the system consists of terra cotta or concrete lines and approximately 75% of the manholes are masonry brick. The newest area of the system was constructed in 1991. The oldest areas of the system are estimated to have been constructed in 1963.

The system experiences blockages and overflow problems due to material and age-related line deterioration; line capacity problems due to inadequately sized lines and inflow and infiltration problems due to line separation and breakages.

The system includes one pump station:

- Kentucky Avenue Pump Station – 240 GPM pump station serving the town of Pennington Gap west of Morgan Ave. and Anderson St. intersection. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line northwest of the main influent lift station.

The system also collects flow from the Lee County PSA - Dryden, Ben Hur and St. Charles system(s).

Flow collected by the system is conveyed to the Pennington Gap WWTP. Treatment is ultimately provided at the Town of Pennington Gap WWTP (VPDES Permit #VA0029599).

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	7,811,000	N/A	N/A
February	9,340,000	N/A	N/A
March	14,493,000	N/A	N/A
April	10,678,000	N/A	N/A
May	7,014,000	N/A	N/A
June	6,735,000	N/A	N/A
July	6,581,000	N/A	N/A
August	8,926,000	N/A	N/A
September	8,336,000	N/A	N/A
October	8,815,000	N/A	N/A
November	7,456,000	N/A	N/A
December	8,566,000	N/A	N/A
<b>Monthly Average</b>	<b>8,729,250</b>	<b>0</b>	<b>0.00%</b>
<b>Daily Average</b>	<b>290,975</b>	<b>0</b>	<b>0.00%</b>
<b>Avg / Customer</b>	<b>151</b>	<b>0</b>	



### Permit Violations/System Overflows/Consent Order

- The Pennington Gap collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is not under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

### Other Maintenance Related Issues Experienced by System

- Age related line breaks and blockages

### System Needs

- Infiltration and inflow identification and remediation.
- Line replacement/upgrades

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in N/A. The CIP includes \$N/A of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

### Sewer Rate Structure

The following sewer rate structure was last modified on **July 1, 2022: (See Attached Step Rates)**

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$**TBD**. (Include table breakdown if possible).

### System Debt and Maturity Date of Outstanding Loans

Town of Pennington Gap has a \$**56,725** annual sewer debt service.

The system currently has approximately N/A in outstanding loan amount.



## **PENNINGTON GAP WWTP – VPDES PERMIT # VA0029599**

### **TOWN OF PENNINGTON GAP**

*LENOWISCO Planning District Commission*

Facility Description – The treatment facility is located at 391 S. Fork River Rd., Pennington Gap, VA (see attached general vicinity map). The facility was originally constructed in **1964**. The last major upgrade/expansion was completed in **1992** and involved upgrade from 0.3 MGD to 0.6 MGD. The facility utilizes an **oxidation ditch** as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the **Town of Pennington Gap, Lee Co. PSA – Ben Hur, Lee Co. PSA – Dryden and Lee Co. PSA - St. Charles** collection system(s). The facility **does** receive and treat septage. The permitted capacity of the facility is **0.6** MGD. The average daily flow treated at the facility during calendar year 2021 was **0.287** MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was **0.383** MGD. The facility exceeded 80% capacity for **28** days during this period. Effluent from the plant is discharged to **North Fork Powell River**. Sludge from the facility is disposed of at/by **land application**.

Facility Operation – The facility is operated and maintained by **Town of Pennington Gap**. Currently, **3** full time and **0** part time licensed operators work at the facility. \_\_\_\_\_ Class 1, **X** Class 2. The facility is required to be staffed **8** hours/day.

Permit Violations – The facility has had **0** permit violations over the past 2 years. The violations were the result of **N/A**.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

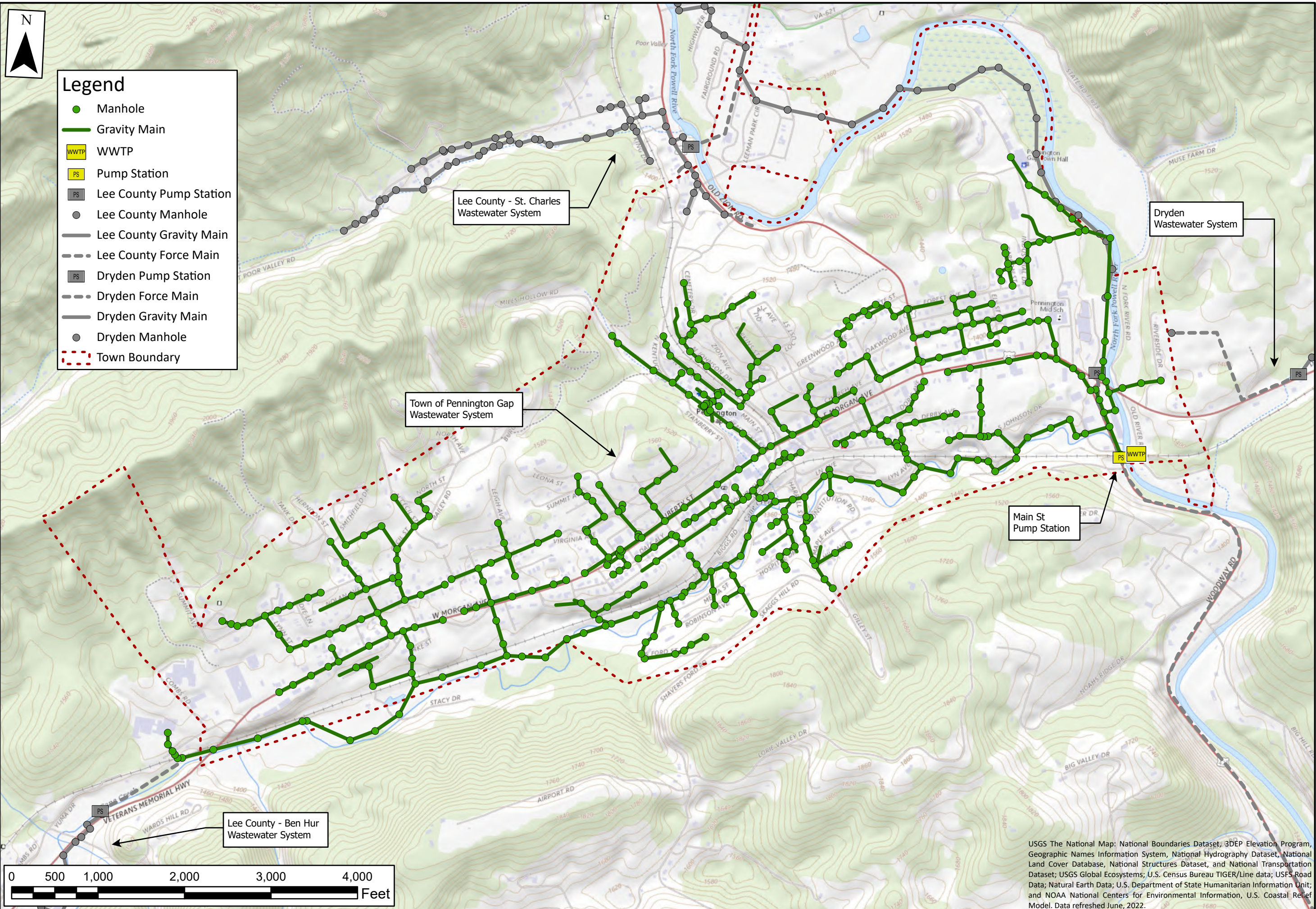
- Belt Press Bearings
- Oxidation Ditch drive coupler bearings
- RAS Pumps – replace impeller, seals and check valve, issues with clogging

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Grit Removal System
- Sludge Dewatering Press with feed pumps
- Emergency Generator
- Chlorine and Sulphur Dioxide system upgrade
- Blower equipment roof
- Upgraded monitoring equipment for flow and treatment parameters
- Variable Frequency Drive control motors for Oxidation Ditch
- RAS Pump Replacement

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is **\$4,000,000**. (Include table breakdown if possible)





**Legend**

- Manhole
- Gravity Main
- WWTP WWTP
- PS Pump Station
- PS Lee County Pump Station
- Lee County Manhole
- Lee County Gravity Main
- - - Lee County Force Main
- PS Dryden Pump Station
- - - Dryden Force Main
- Dryden Gravity Main
- Dryden Manhole
- - - Town Boundary

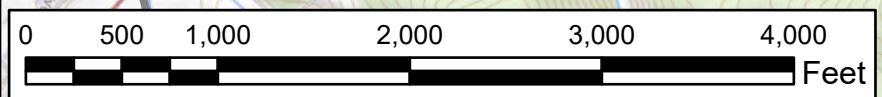
Lee County - St. Charles Wastewater System

Dryden Wastewater System

Town of Pennington Gap Wastewater System

Main St Pump Station

Lee County - Ben Hur Wastewater System



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF  
PENNINGTON GAP  
WASTEWATER  
SYSTEM**



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**DUFFIELD COLLECTION SYSTEM**  
**SCOTT COUNTY PUBLIC SERVICE AUTHORITY**

*LENOWISCO Planning District Commission*

System Description – The Duffield collection system serves the town of Duffield located in central Scott County near the US Rte. 58 Alt. and US Rte. 23 intersection. The oldest portions of the collection system were constructed in 1977.

The approximate number of customers served by the system was reported to be:

<u>99</u>	Residential Customers
<u>32</u>	Commercial Customers
<u>20</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>151</b>	<b>Total Number of Customers</b>

The system’s customer billing flows for 2021 were estimated to be approximately **40%** residential and **60%** non-residential. The collection system consists of **6”** through **8”** gravity lines. It is estimated that approximately **0%** of the system consists of terra cotta or concrete lines and approximately **0%** of the manholes are masonry brick. The newest area of the system was constructed in **2018**. The oldest areas of the system are estimated to have been constructed in **1977**.

**No** area of the system experiences problems with capacity due to inadequately sized lines.

The system includes two pump stations:

- Main Lift Pump Station – 330/420/550 GPM suction pump station serving the entire collection system. The pump station discharges through an **8”** force main that empties into an **8”** gravity sewer line north of the Duffield WWTP.
- Thomas Village Pump Station – 200 GPM submersible grinder pump station serving the north side of the intersection. The pump station discharges through a **3”** force main that empties into an **8”** gravity sewer line along Duff Patt Hwy.

The system also collects flow from the **N/A** system(s).

Flow collected by the system is conveyed to the **Duffield WWTP**. Treatment is ultimately provided at the **Duffield WWTP (VPDES Permit #VA0029564)**.

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	7,223,000	3,480,794	48.19%
February	8,708,000	4,060,000	46.62%
March	9,021,000	3,299,000	36.57%
April	6,072,000	3,433,000	56.54%
May	6,014,000	3,655,000	60.77%
June	5,730,000	2,978,000	51.97%
July	5,921,000	2,817,000	47.58%
August	5,859,000	3,042,000	51.92%
September	5,400,000	2,021,000	37.43%
October	4,092,000	2,202,000	53.81%
November	3,480,000	2,125,000	61.06%
December	4,247,000	2,135,000	50.27%
<b>Monthly Average</b>	<b>5,980,583</b>	<b>2,937,316</b>	<b>49.11%</b>
<b>Daily Average</b>	<b>199,353</b>	<b>97,911</b>	<b>49.11%</b>
<b>Avg / Customer</b>	<b>1,320</b>	<b>648</b>	



Permit Violations/System Overflows/Consent Order

- The Duffield collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is **not** under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

Other Maintenance Related Issues Experienced by System

- Frequent issues with pump stations maintenance including trash in wet wells

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system **is** governed by an existing sewer use ordinance. The ordinance **does** address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

Capital Improvements Plan

The system currently has a CIP adopted in N/A. The CIP includes N/A of projects for completion in the next 5 years.

Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

Sewer Rate Structure

The following sewer rate structure was last modified on **August 1, 2022**:

Residential.....\$33.18 first 2,000 gal; \$14.41 per 1,000 gal over 2,000 gal

Non-residential.....\$64.63 first 4,000 gal; \$14.41 per 1,000 gal over 4,000 gal

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is **\$TBD**. (Include table breakdown is possible).

System Dept and Maturity Date of Outstanding Loans

The Scott Co. PSA has a **\$247,577** annual sewer debt service.

The system currently has approximately N/A in outstanding loan amount.



**DUFFIELD WWTP – VPDES PERMIT # VA0029564**  
**SCOTT COUNTY PUBLIC SERVICE AUTHORITY**  
*LENOWISCO Planning District Commission*

Facility Description – The treatment facility is located at 293 Duff Patt Hwy in Duffield, VA (see attached general vicinity map). The facility was originally constructed in **1987**. The last major upgrade/expansion was completed in **2018** and involved **updating grit equipment, chlorination system, sewer grinder and aeration diffusers**. The facility utilizes a 0.40 MGD oxidation ditch as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the **Duffield** collection system(s). The facility **does** receive and treat septage. The permitted capacity of the facility is **0.40 MGD**. The average daily flow treated at the facility during calendar year 2021 was **0.20 MGD**. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was **0.277 MGD**. The facility exceeded 80% capacity for **75** days during this period. Effluent from the plant is discharged to **North Fork Clinch River**. Sludge from the facility is disposed of at/by **landfill**.

Facility Operation – The facility is operated and maintained by **Scott Co. PSA**. Currently, **3** full time and **1** part time licensed operators work at the facility. \_\_\_\_\_ Class 1, **X** Class 2. The facility is required to be staffed **8** hours/day.

Permit Violations – The facility has had **0** permit violations over the past 2 years. The violations were the result of **N/A**.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Primary Pumps and Emergency Pump maintenance at Main Lift Station
- Trash in wet wells

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Plant control valves need to be replaced
- Chlorine and Sulfur Dioxide scales need to be replaced
- Block walls for sludge drying beds need repair

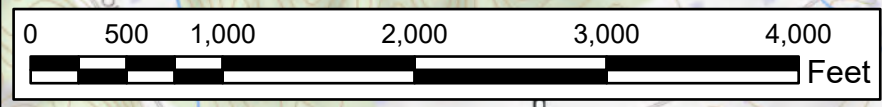
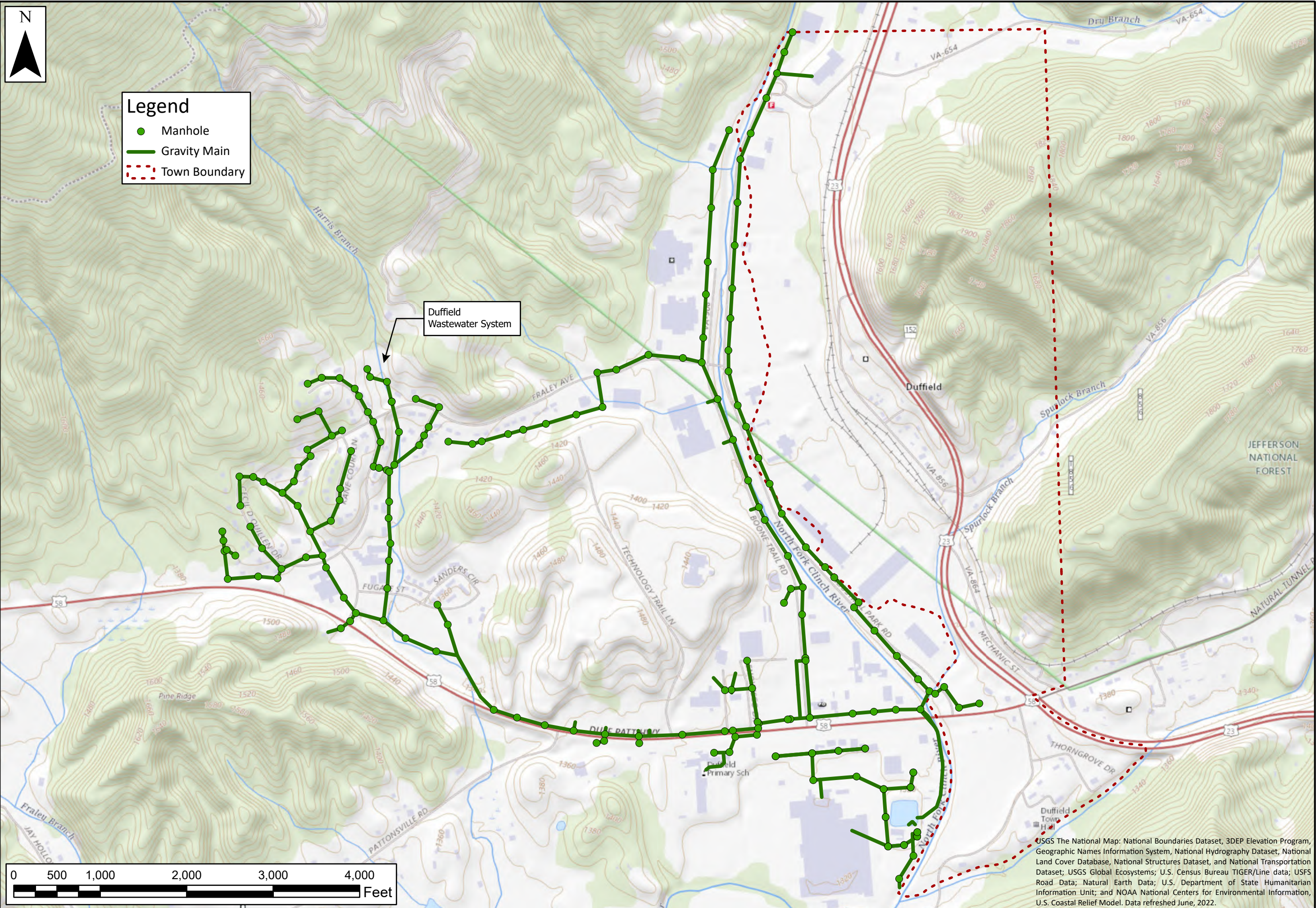
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is **\$TBD**. (Include breakdown if possible)





**Legend**

- Manhole
- Gravity Main
- - - Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

DUFFIELD  
WASTEWATER  
SYSTEM



DATE:	12/01/2022
SHEET:	
DRAWN BY:	JR
CHECKED BY:	
PROJECT NO.:	2248
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# HOLSTON REGIONAL COLLECTION SYSTEM

## SCOTT COUNTY PUBLIC SERVICE AUTHORITY

LENOWISCO Planning District Commission

System Description – The Holston Regional collection system serves Webber City and adjacent communities of located in southern central Scott County at the US Rte. 58 Alt. and US Rte. 23 intersection. The oldest portions of the collection system were constructed in 2002.

The approximate number of customers served by the system was reported to be:

<u>955</u>	Residential Customers
<u>31</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>986</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately **90%** residential and **10%** non-residential.

The collection system consists of **12"** through **6"** gravity lines. It is estimated that approximately **0%** of the system consists of terra cotta or concrete lines and approximately **0%** of the manholes are masonry brick. The newest area of the system was constructed in **2010**. The oldest areas of the system are estimated to have been constructed in **1982**.

**No** area(s) of the system experiences problems with capacity due to inadequately sized lines.

The system includes three pump stations:

- Yuma 1 Pump Station – 100 GPM submersible grinder pump station serving the south side of intersection. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line. The receiving sewer system is part of the Scott County PSA's Sewer System.
- Yuma 2 – 80 GPM submersible grinder pump station serving the north side of the intersection. The pump station discharges through a 2" force main that empties into an 8" gravity sewer line. The receiving sewer system is part of the Scott County PSA's Sewer System.
- Oakwood & Holston Terrace Pump Station – 150-300 & 41 GPM suction lift sewage pump station that receives all flow from this collection system. The pump station discharges through a 6" force main that empties into an 8" gravity sewer line. The receiving sewer system is part of the Scott County PSA's Sewer System.
- Moccasin Gap & Gate City Pump Station – 400-450 & 900 GPM suction lift sewage pump station that receives all flow from Moccasin Gap and Gate City areas. The pump station discharges through an 8" force main that empties into HRSS system. The receiving sewer system is part of the Scott County PSA's Sewer System.

The system also collects flow from the **N/A** system(s).

Flow collected by the system is conveyed to the **Holston Regional (HRSS) WWTP**. Treatment is ultimately provided at the **Holston Regional (HRSS) WWTP (VPDES Permit # VA0067351)**.

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	6,009,000	983,221	16.36%
February	6,873,000	632,197	9.20%
March	7,784,000	540,741	6.95%
April	4,790,000	412,740	8.62%



May	3,476,000	482,246	13.87%
June	3,651,000	612,792	16.78%
July	3,853,000	624,537	16.21%
August	4,593,000	540,063	11.76%
September	3,334,000	665,128	19.95%
October	2,441,000	634,672	26.00%
November	2,388,000	507,487	21.25%
December	2,373,000	529,899	22.33%
<b>Monthly Average</b>	<b>4,297,083</b>	<b>597,144</b>	<b>13.90%</b>
<b>Daily Average</b>	<b>143,236</b>	<b>19,905</b>	<b>13.90%</b>
<b>Avg / Customer</b>	<b>145</b>		

\*\*\*Note: The flows above do not include flows or billings from Gate City.

#### Permit Violations/System Overflows/Consent Order

- The HRSS collection system had **1** reported sewer system overflows during calendar year 2021. **100%** were due to excessive Infiltration and Inflow (**I/I from Gate City System**), **0** were due to line blockages created by root intrusion, grease or other debris.
- The system has had **0** permit violations over the past 2 years. The violations were the result of **N/A**.
- The system is **not** under consent order with the DEQ. The consent order is dated **N/A** and was issued because **N/A**.

#### Other Maintenance Related Issues Experienced by System

- Infiltration and inflow during heavy rain events

#### System Needs

- Infiltration and inflow identification and remediation.

#### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

#### SSES

SSES was performed on the **N/A** are of the system in **N/A** by **N/A**. The SSES identified \$ **N/A** of recommended system rehabilitation projects.

#### Capital Improvements Plan

The system currently has a CIP adopted in **N/A**. The CIP includes **N/A** of projects for completion in the next 5 years.

#### Asset Management Plan

The system has an asset management plan prepared by **N/A** in **N/A**.

#### Sewer Rate Structure

The following sewer rate structure was last modified on **August 1, 2022**:

Residential.....\$33.18 first 2,000 gal; \$14.41 per 1,000 gal over 2,000 gal

Non-residential.....\$64.63 first 4,000 gal; \$14.41 per 1,000 gal over 4,000 gal

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is **\$TBD**. (Include table breakdown is possible).

#### System Dept and Maturity Date of Outstanding Loans

The Scott Co. PSA has a **\$247,577** annual sewer debt service.

The system currently has approximately **N/A** in outstanding loan amount.



# **HOLSTON REGIONAL (HRSS) WWTP – VPDES PERMIT # VA0067351 SCOTT COUNTY PUBLIC SERVICE AUTHORITY**

*LENOWISCO Planning District Commission*

Facility Description – The treatment facility is located at 650 Quail Run Lane, Weber City, VA (see attached general vicinity map). The facility was originally constructed in **1984**. The last major upgrade/expansion was completed in **2008** and involved **expanding the plant from 0.3 MGD to 1.25 MGD**. The facility utilizes an oxidation ditch as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the **HRSS and Gate City** collection system(s). The facility **does** receive and treat septage. The permitted capacity of the facility is **1.25** MGD. The average daily flow treated at the facility during calendar year 2021 was **0.143** MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was **0.230** MGD. The facility exceeded 80% capacity for **18** days during this period. Effluent from the plant is discharged to **North Fork Holston River**. Sludge from the facility is disposed of at/by **landfill**.

Facility Operation – The facility is operated and maintained by **Scott Co. PSA**. Currently, **2** full time and **0** part time licensed operators work at the facility. \_\_\_\_\_ Class 1, **X** Class 2. The facility is required to be staffed **16** hours/day.

Permit Violations – The facility has had **0** permit violations over the past 2 years. The violations were the result of **N/A**.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

During periods of heavy rain I/I causes:

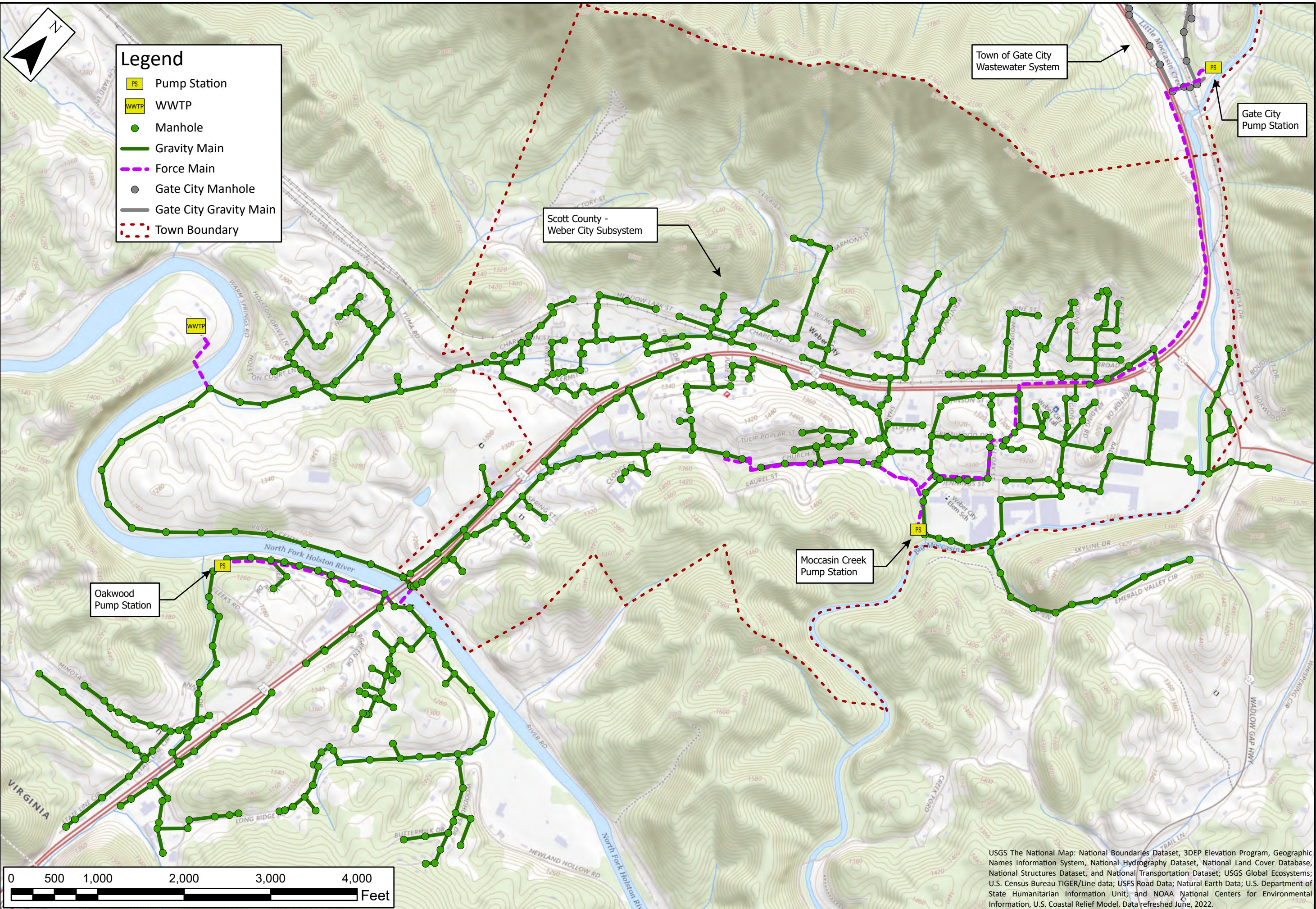
- Overflows at bar screen and UV channel
- Rising solids in clarifier
- Entrance Road washout

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Additional drying bed space and/or belt press
- Main Lift Station roof repair
- Digester Dewatering Valve repair/replacement
- Install Equalization Basin

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is **\$TBD**. (Include breakdown if possible)





SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

SCOTT COUNTY  
WASTEWATER  
SYSTEM - WEBER  
CITY



DATE:	12/16/2022
SHEET:	
DRAWN BY:	JR
CHECKED BY:	
PROJECT NO.:	2248
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USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



# NICKELSVILLE COLLECTION SYSTEM

## SCOTT COUNTY PUBLIC SERVICE AUTHORITY

LENOWISCO Planning District Commission

System Description – The Nickelsville collection system serves the town of Nickelsville located in eastern Scott County along US Rte. 71 approximately 4.5 miles from the Scott/Russell county line. The oldest portions of the collection system were constructed in 1987.

The approximate number of customers served by the system was reported to be:

<u>227</u>	Residential Customers
<u>20</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>247</b>	<b>Total Number of Customers</b>

The system's customer billing flows for 2021 were estimated to be approximately 90% residential and 10% non-residential.

The collection system consists of 6" through 8" gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 1987. The oldest areas of the system are estimated to have been constructed in 1987.

No area of the system experiences problems with capacity due to inadequately sized lines.

The system includes three pump stations:

- Taylor Street Pump Station – 12 GPM submersible grinder pump station serving the Taylor St. area. The pump station discharges through a 2" force main that empties into an 8" gravity sewer.
- Lamplight Pump Station – 26 GPM submersible grinder pump station serving the north side of the intersection. The pump station discharges through a 2" force main that empties into an 8" gravity sewer line.
- Meade Street Pump Station – 13 GPM submersible grinder pump station that receives flow from Meade and Green St areas. The pump station discharges through a 2" force main that empties into an 8" gravity sewer line.

The system also collects flow from N/A system(s).

Flow collected by the system is conveyed to the Nickelsville WWTP. Treatment is ultimately provided at the Nickelsville WWTP (VPDES Permit # VA0087955).

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	1,054,000	614,000	58.25%
February	924,000	685,000	74.13%
March	1,860,000	585,000	31.45%
April	1,500,000	571,000	38.07%
May	1,550,000	728,000	46.97%
June	1,300,000	701,000	53.92%
July	1,085,000	643,000	59.26%
August	992,000	695,000	70.06%
September	780,000	623,000	79.87%



October	775,000	766,000	98.84%
November	660,000	700,000	106.06%
December	713,000	612,000	85.83%
<b>Monthly Average</b>	<b>1,099,417</b>	<b>660,250</b>	60.05%
<b>Daily Average</b>	<b>36,647</b>	<b>22,008</b>	60.05%
<b>Avg / Customer</b>	<b>148</b>	<b>89</b>	

Permit Violations/System Overflows/Consent Order

- The Nickelsville collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is **not** under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

Other Maintenance Related Issues Experienced by System

- Frequent issues with pump stations maintenance

System Needs

- Pump Stations rehab
- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system **is** governed by an existing sewer use ordinance. The ordinance **does** address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

Capital Improvements Plan

The system currently has a CIP adopted in N/A. The CIP includes N/A of projects for completion in the next 5 years.

Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

Sewer Rate Structure

The following sewer rate structure was last modified on **August 1, 2022**:

Residential.....\$33.18 first 2,000 gal; \$14.41 per 1,000 gal over 2,000 gal

Non-residential.....\$64.63 first 4,000 gal; \$14.41 per 1,000 gal over 4,000 gal

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is **\$TBD**. (Include table breakdown if possible).

System Dept and Maturity Date of Outstanding Loans

The Scott Co. PSA has a **\$247,577** annual sewer debt service.

The system currently has approximately N/A in outstanding loan amount.



**NICKELSVILLE WWTP – VPDES PERMIT # VA0087955**  
**SCOTT COUNTY PUBLIC SERVICE AUTHORITY**  
*LENOWISCO Planning District Commission*

Facility Description – The treatment facility is located at the **end of SR T1018** (see attached general vicinity map). The facility was originally constructed in **1987**. The last major upgrade/expansion was completed in **N/A** and involved **N/A**. The facility utilizes a 0.070 MGD secondary-activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the **Nickelsville** collection system(s). The facility **does** receive and treat septage. The permitted capacity of the facility is **0.070 MGD**. The average daily flow treated at the facility during calendar year 2021 was **0.036 MGD**. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was **0.054 MGD**. The facility exceeded 80% capacity for **75** days during this period. Effluent from the plant is discharged to **North Fork Clinch River**. Sludge from the facility is disposed of at/by **landfill**.

Facility Operation – The facility is operated and maintained by **Scott Co. PSA**. Currently, **3** full time and **1** part time licensed operators work at the facility. \_\_\_\_\_ Class 1, **X** Class 2. The facility is required to be staffed **8** hours/day.

Permit Violations – The facility has had **0** permit violations over the past 2 years. The violations were the result of **N/A**.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

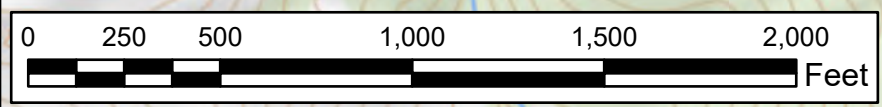
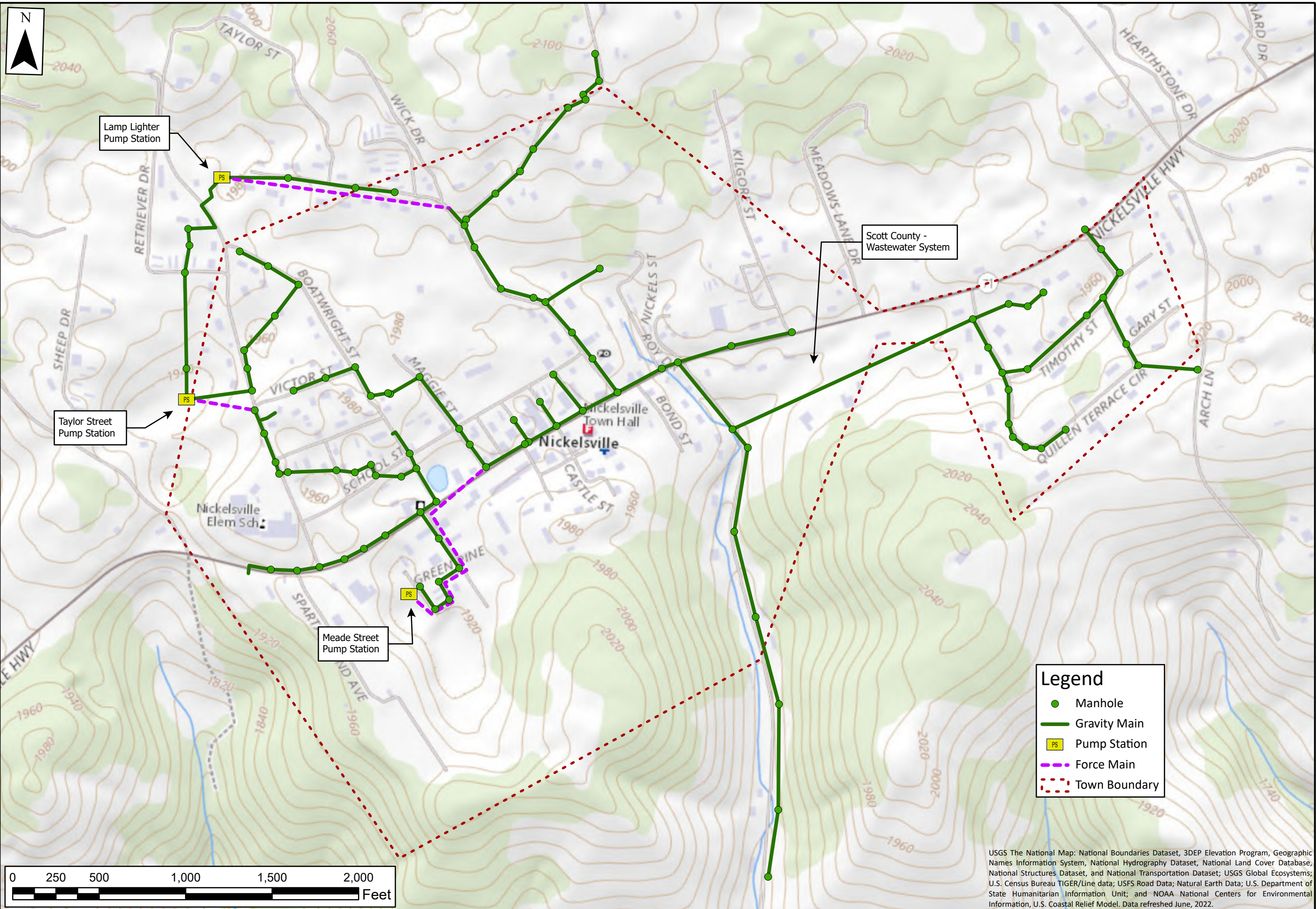
- Adjusting air to reactors and digester

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- New air piping and diffusers
- New electrical controls including a timer on blowers
- Alarms for equipment failures

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is **\$TBD**. (Include table breakdown if possible)





- Legend**
- Manhole
  - Gravity Main
  - PS Pump Station
  - - - Force Main
  - - - Town Boundary

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

SCOTT COUNTY  
WASTEWATER  
SYSTEM -  
NICKELSVILLE



DATE:	12/16/2022
SHEET:	
DRAWN BY:	JR
CHECKED BY:	
PROJECT NO.:	2248
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# TOWN OF ST. PAUL COLLECTION SYSTEM

## TOWN OF ST. PAUL, VIRGINIA

LENOWISCO Planning District Commission

System Description – The Town of St. Paul is located in Wise County, Virginia on the Russell County line and provides public sewer service to 410 +/- customers within the Town’s corporate limits. The sewage collection system includes approximately 8 +/- miles of 4”-12” gravity/force main sewer lines and four (4) pump stations. The sewer is treated at the Town’s Wastewater Treatment Plant.

The approximate number of customers served by the system was reported to be:

<u>334</u>	Residential Customers
<u>76</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>410</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **78%** residential and **22%** non-residential.

The collection system consists of 4” through 12” gravity/force main sewer lines. It is estimated that approximately 25% of the system consists of terra cotta or concrete lines and approximately 25% of the manholes are masonry brick. The newest area of the system was constructed in 2019. The oldest areas of the system are estimated to have been constructed in the 1970’s.

The system experiences no problems with capacity due to inadequately sized lines.

The system includes five pump stations:

- **Main Pump Station** – Pump capacity of 1000 GPM. Constructed in 1972 and upgraded in 2015
- **South St. Paul Pump Station** – Pump capacity of 100 GPM. Constructed in 1980 and upgraded in 2014
- **West Hill Main Pump Station** – Pump capacity of 50 GPM.
- **West Hill Pump Station** – Pump capacity of 10 GPM. Constructed in 2021

Treatment is ultimately provided at the Town of St. Paul Wastewater Treatment Plant. (VPDES Permit #VA0026221).

System Flows - A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	2,446,000	1,313,000	53.6%
February	2,808,100	1,322,700	47.1%
March	3,637,000	1,327,490	36.4%
April	2,728,000	1,490,850	54.6%
May	2,180,000	1,323,560	60.7%
June	1,976,900	1,607,330	81.3%
July	2,177,000	1,363,170	62.6%
August	2,483,800	1,536,400	61.8%
September	2,143,800	1,541,700	71.9%
October	2,374,100	1,596,770	67.2%
November	2,167,500	1,641,580	75.7%
December	2,395,600	1,397,110	58.3%
<b>Monthly Average</b>	<b>2,459,816</b>	<b>1,455,138</b>	<b>60.9%</b>
<b>Daily Average</b>	<b>81,993</b>	<b>48,504</b>	



Permit Violations/System Overflows/Consent Order

- The collection system had 0 reported sewer system overflows during calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Infiltration/Inflow

System Needs – Improvement projects that have identified include:

As a result of the SSES prepared in May 2022, the Town has submitted a funding application to VDEQ in the amount of \$892,300 for the St. Paul Sewer System Improvements Project. The proposed project includes CIPP liner of 3,370 LF of existing 8-inch gravity sewer line, as well as the rehabilitation via geo-polymer coating of 421 VF of manhole walls, replacement of 6 manhole frames and covers, and replacement of two manholes. These improvements to the existing sewer system are intended to reduce RDII from entering the system. Additionally, the CIPP liner is proposed for existing vitrified clay pipe (VCP) which is nearing the end of its anticipated lifespan. Lining of VCP-portion of the system will prevent future excessive RDII entrance, which is expected in the upcoming years if the existing VCP is left in-place, as-is.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the entire area of the system by The Lane Group in May 2022.

Capital Improvements Plan

The Town does not have a CIP.

Asset Management Plan

The system has an asset management plan prepared by The Lane Group in May 2022.

Sewer Rate Structure

The following sewer rate structure was last modified in 2018

- Residential (in-town) - \$14.25/1,500 gallons - \$6.45/over 1,500 gallons – Sewer is 110% of water bill
- Residential (out-of-town) – \$26.00/1,500 gallons - \$10.25/over 1,500 gallons – Sewer is 110% of water bill
- Commercial (in-town) - \$14.25/1,500 gallons - \$6.45/over 1,500 gallons – Sewer is 110% of water bill
- Commercial (out-of-town) - \$26.00/1,500 gallons - \$10.25/over 1,500 gallons – Sewer is 110% of water bill

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$892,300. There is an application currently submitted to VDEQ for these improvements.

System Dept and Maturity Date of Outstanding Loans

Downtown/West Hills Sewer Project - \$1,449,674 - USDA Rural Development – June 2059

Wastewater Treatment Plant - \$1,853,560 – VDEQ/VRA – October 2038

Dominion Project - \$1,520,379 (1/3 water, 1/3 sanitary sewer, 1/3 industrial wastewater)

Miners Exchange Bank – January 2030



**TOWN OF ST. PAUL WWTP – VPDES PERMIT #VA0026221**  
**TOWN OF ST. PAUL, VIRGINIA**  
*LENOWISCO PDC*

Facility Description – The treatment facility is located at 16379 Bush Drive, St. Paul, Virginia 24283 (see attached general vicinity map). The facility was originally constructed in 2016. The last major upgrade/expansion was completed in 2016. The facility utilizes membrane filtration as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of St. Paul collection system along with Russell County Public Service Authority’s Castlewood and Dante sewer systems. The facility does not receive and treat septage. The permitted capacity of the facility is 0.50 MGD. The average daily flow treated at the facility during calendar year 2021 was 81,993. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 101,9223. The facility did not exceed 80% capacity during this period. Effluent from the plant is discharged to the Clinch River. Sludge from the facility is disposed of at the landfill.

Facility Operation – The facility is operated and maintained by the Town of St. Paul. Currently four full time and four part time licensed operators work at the facility. One is a Class 1, one is a Class 2, and two Class 3 operators. The facility is required to be staffed 8 hours/day/5 days per week and 4 hours/day/weekends.

Permit Violations – The facility has had no permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

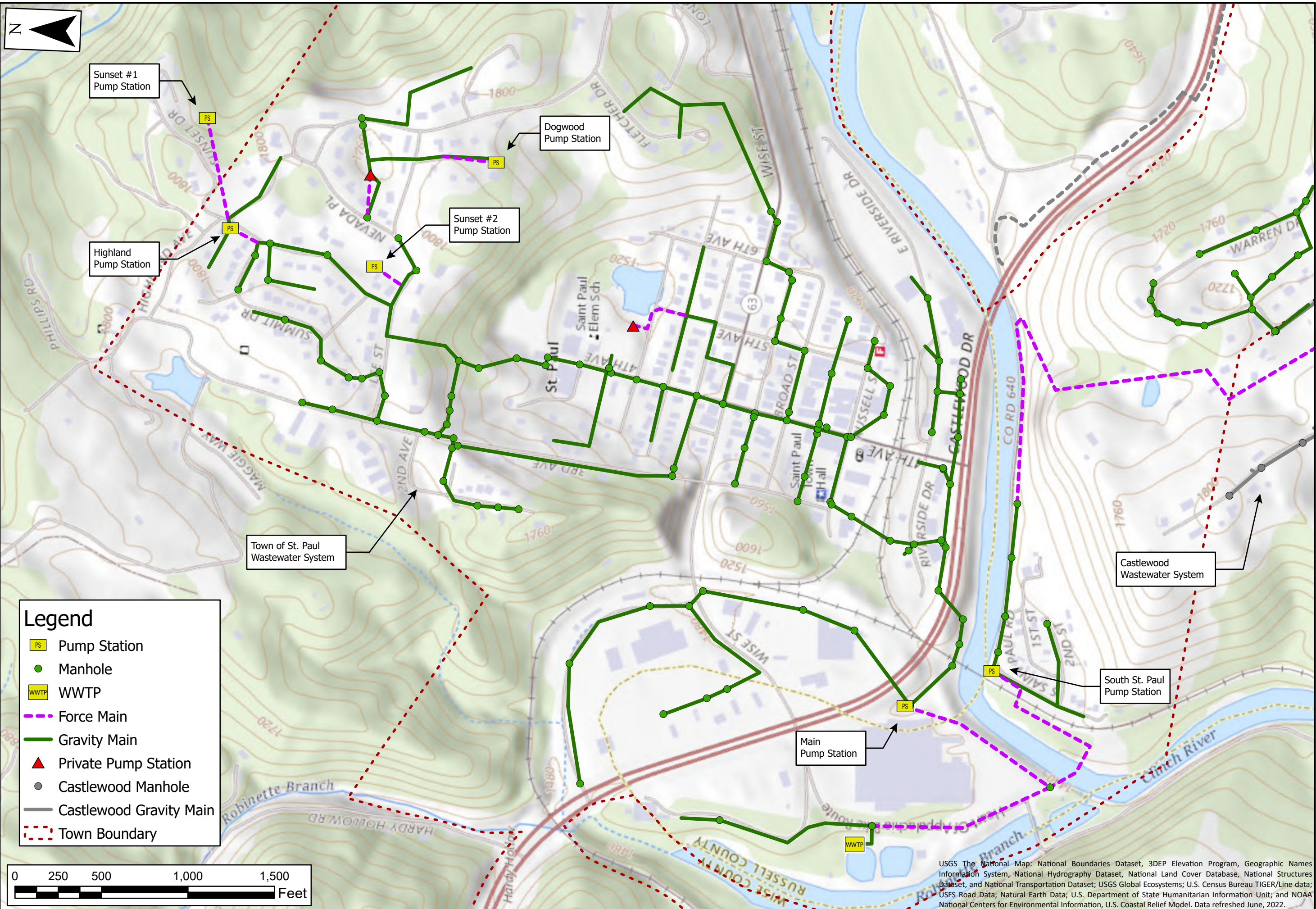
- Age of equipment
- Availability of replacement parts for existing equipment.

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- A second Drum Screen

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$? (Including related costs and contingencies)





- Legend**
- Pump Station
  - Manhole
  - WWTP
  - Force Main
  - Gravity Main
  - Private Pump Station
  - Castlewood Manhole
  - Castlewood Gravity Main
  - Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF ST. PAUL  
WASTEWATER  
SYSTEM - NORTH  
AREA



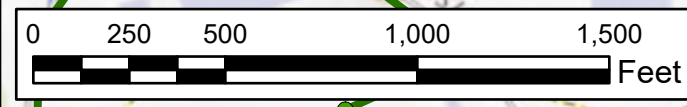
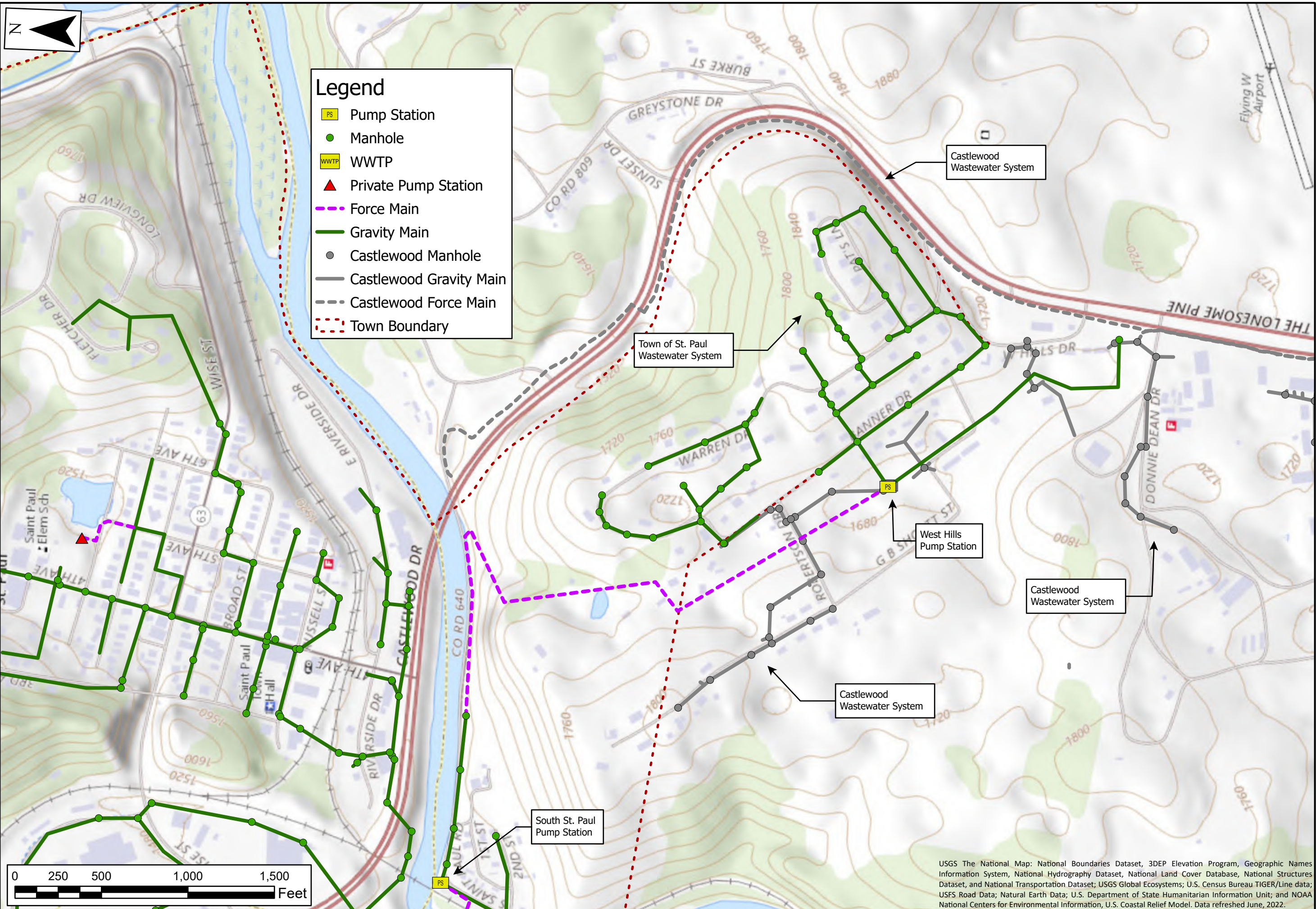
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**Legend**

- Pump Station
- Manhole
- WWTP
- Private Pump Station
- Force Main
- Gravity Main
- Castlewood Manhole
- Castlewood Gravity Main
- Castlewood Force Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF ST. PAUL  
WASTEWATER  
SYSTEM - SOUTH  
AREA**



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# EXETER/IMBODEN COLLECTION SYSTEM

## WISE COUNTY PUBLIC SERVICE AUTHORITY

LENOWISCO Planning District Commission

System Description – The Exeter/Imboden collection system serves the unincorporated communities of Exeter and Imboden located in western Wise County along SR 68 between Appalachia and Keokee. The oldest portions of the collection system were constructed in 2002.

The approximate number of customers served by the system was reported to be:

<u>152</u>	Residential Customers
<u>0</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>152</b>	<b>Total Number of Customers</b>

The system’s customer billing flows for 2021 were estimated to be approximately **100%** residential and **0%** non-residential. The collection system consists of **6”** through **8”** gravity lines. It is estimated that approximately **0%** of the system consists of terra cotta or concrete lines and approximately **0%** of the manholes are masonry brick. The newest area of the system was constructed in **2020**. The oldest areas of the system are estimated to have been constructed in **2002**.

**No** area(s) of the system experience problems with capacity due to inadequately sized lines.

The system includes one pump station:

- Upper Exeter Pump Station – 150 GPM pump station with self-priming suction pumps serving the Upper Exeter area located along SR 68 approximately 600 ft north east of the SR68 and SR 870 intersection. The pump station discharges through a 4” force main that empties into an 8” gravity sewer.

The system also collects flow from the N/A system(s).

Flow collected by the system is conveyed to the Appalachia collection system. Treatment is ultimately provided at the **Big Stone Gap WWTP (VPDES Permit #VA0020940)**.

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	253,200	N/A
February	N/A	265,700	N/A
March	N/A	251,000	N/A
April	N/A	297,600	N/A
May	N/A	242,900	N/A
June	N/A	549,400	N/A
July	N/A	273,500	N/A
August	N/A	308,900	N/A
September	N/A	283,300	N/A
October	N/A	242,000	N/A
November	N/A	239,900	N/A
December	N/A	255,300	N/A
<b>Monthly Average</b>	<b>0</b>	<b>288,558</b>	N/A
<b>Daily Average</b>	<b>0</b>	<b>9,619</b>	N/A
<b>Avg / Customer</b>	<b>0</b>	<b>84</b>	



### Permit Violations/System Overflows/Consent Order

- The Exeter/Imboden collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is not under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

### Other Maintenance Related Issues Experienced by System

- Frequent issues with FOG, STEP/STEG and decentralized treatment

### System Needs

- Remove septic tanks and install traditional gravity lines to pump station.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in 2021. The CIP includes \$ 12,075,300 of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Sewer w/Public Water:	\$42.00 1st 1500 gallons + \$14.00 every 1000 gallons after;
Sewer w/Well Water Flat Fee:	\$63.00

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ TBD. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The Wise Co. PSA has a \$ 304,690 annual sewer debt service.

The system currently has approximately N/A in outstanding loan amount.



# FAIRGROUNDS COLLECTION SYSTEM

## WISE COUNTY PUBLIC SERVICE AUTHORITY

LENOWISCO Planning District Commission

System Description – The Fairgrounds collection system serves the unincorporated areas located in central Wise County along SR 680 and SR 802. The oldest portions of the collection system were constructed in 2010.

The approximate number of customers served by the system was reported to be:

<u>26</u>	Residential Customers
<u>1</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>27</b>	<b>Total Number of Customers</b>

The system’s customer billing flows for 2021 were estimated to be approximately **98%** residential and **2%** non-residential.

The collection system consists of **6”** through **8”** gravity lines. It is estimated that approximately **0%** of the system consists of terra cotta or concrete lines and approximately **0%** of the manholes are masonry brick. The newest area of the system was constructed in **2022**. The oldest areas of the system are estimated to have been constructed in **2010**.

**No** area(s) of the system experience problems with capacity due to inadequately sized lines.

The system includes **one** pump station(s):

- Airport Hollow Pump Station – 180 GPM sewage pump station that receives flow from this collection system. The pump station discharges through a 4” force main that empties into an 8” gravity sewer line. The receiving sewer system is part of the Wise County PSA’s Sewer System.

The system also collects flow from **N/A** system(s).

Flow collected by the system is conveyed to the **Town of Wise** system. Treatment is ultimately provided at the **C-N-W Regional WWTP (VPDES Permit #VA0077828)**.

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	93,600	N/A
February	N/A	85,400	N/A
March	N/A	77,800	N/A
April	N/A	84,500	N/A
May	N/A	87,700	N/A
June	N/A	92,900	N/A
July	N/A	149,300	N/A
August	N/A	103,600	N/A
September	N/A	89,100	N/A
October	N/A	109,300	N/A
November	N/A	100,400	N/A
December	N/A	82,300	N/A
<b>Monthly Average</b>	<b>0</b>	<b>96,325</b>	N/A
<b>Daily Average</b>	<b>0</b>	<b>3,211</b>	N/A
<b>Avg / Customer</b>	<b>0</b>	<b>119</b>	



### Permit Violations/System Overflows/Consent Order

- The Fairgrounds collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is **not** under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

### Other Maintenance Related Issues Experienced by System

- Issues with I/I and intermittent high flow from fairground activities.

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system **is** governed by an existing sewer use ordinance. The ordinance **does** address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in **2021**. The CIP includes \$**12,075,300** of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

### Sewer Rate Structure

The following sewer rate structure was last modified on **July 1, 2022**:

Sewer w/Public Water:	\$42.00 1st 1500 gallons + \$14.00 every 1000 gallons after;
Sewer w/Well Water Flat Fee:	\$63.00

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$**TBD**. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The Wise Co. PSA has a **\$304,690** annual sewer debt service.

The system currently has approximately N/A in outstanding loan amount.

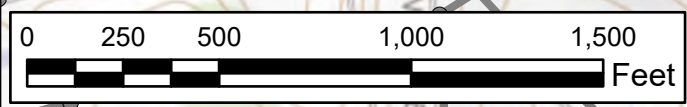
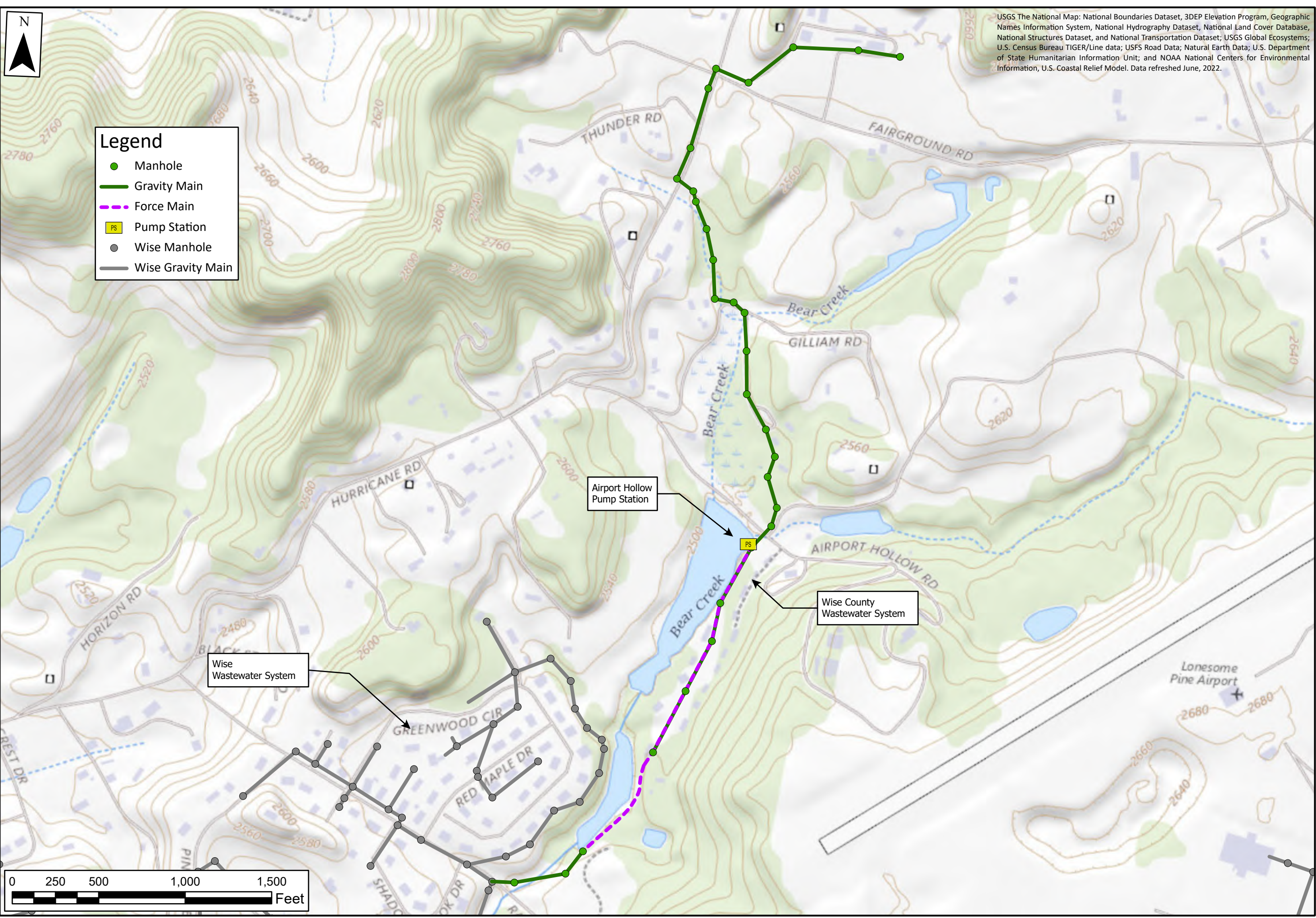




USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.

**Legend**

- Manhole
- Gravity Main
- - - Force Main
- PS Pump Station
- Wise Manhole
- Wise Gravity Main



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WISE COUNTY PSA  
WASTEWATER SYSTEM  
- FAIRGROUNDS SEWER



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# GUEST RIVER COLLECTION SYSTEM

## WISE COUNTY PUBLIC SERVICE AUTHORITY

LENOWISCO Planning District Commission

System Description – The Guest River collection system serves the unincorporated areas along the Guest River in central Wise County along SR 620 north of the City of Norton. The oldest portions of the collection system were constructed in 2009.

The approximate number of customers served by the system was reported to be:

<u>139</u>	Residential Customers
<u>2</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>141</b>	<b>Total Number of Customers</b>

The system's customer billing flows for 2021 were estimated to be approximately 95% residential and 5% non-residential.

The collection system consists of 6" through 24" gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 2020. The oldest areas of the system are estimated to have been constructed in 2009.

No area of the system experiences problems with capacity due to inadequately sized lines.

There are no pump stations within this system.

The system also collects flow from then N/A system(s).

Flow collected by the system is conveyed to the City of Norton system. Treatment is ultimately provided at the C-N-W Regional WWTP (VPDES Permit #VA0077828).

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	394,300	N/A
February	N/A	373,000	N/A
March	N/A	336,400	N/A
April	N/A	388,000	N/A
May	N/A	350,900	N/A
June	N/A	379,300	N/A
July	N/A	508,500	N/A
August	N/A	483,100	N/A
September	N/A	378,200	N/A
October	N/A	352,800	N/A
November	N/A	330,400	N/A
December	N/A	371,400	N/A
<b>Monthly Average</b>	<b>0</b>	<b>387,192</b>	N/A
<b>Daily Average</b>	<b>0</b>	<b>12,906</b>	N/A
<b>Avg / Customer</b>	<b>0</b>	<b>92</b>	



### Permit Violations/System Overflows/Consent Order

- The Guest River collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is not under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

### Other Maintenance Related Issues Experienced by System

- The main trunkline installed between 2009-2010 was increased to 24” due to slope issues. I/I due to construction issues is known.

### System Needs

- I/I identification and remediation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in 2021. The CIP includes \$12,075,300 of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Sewer w/Public Water: \$42.00 1st 1500 gallons + \$14.00 every 1000 gallons after;

Sewer w/Well Water Flat Fee: \$63.00

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$TBD. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The Wise Co. PSA has a \$304,690 annual sewer debt service.

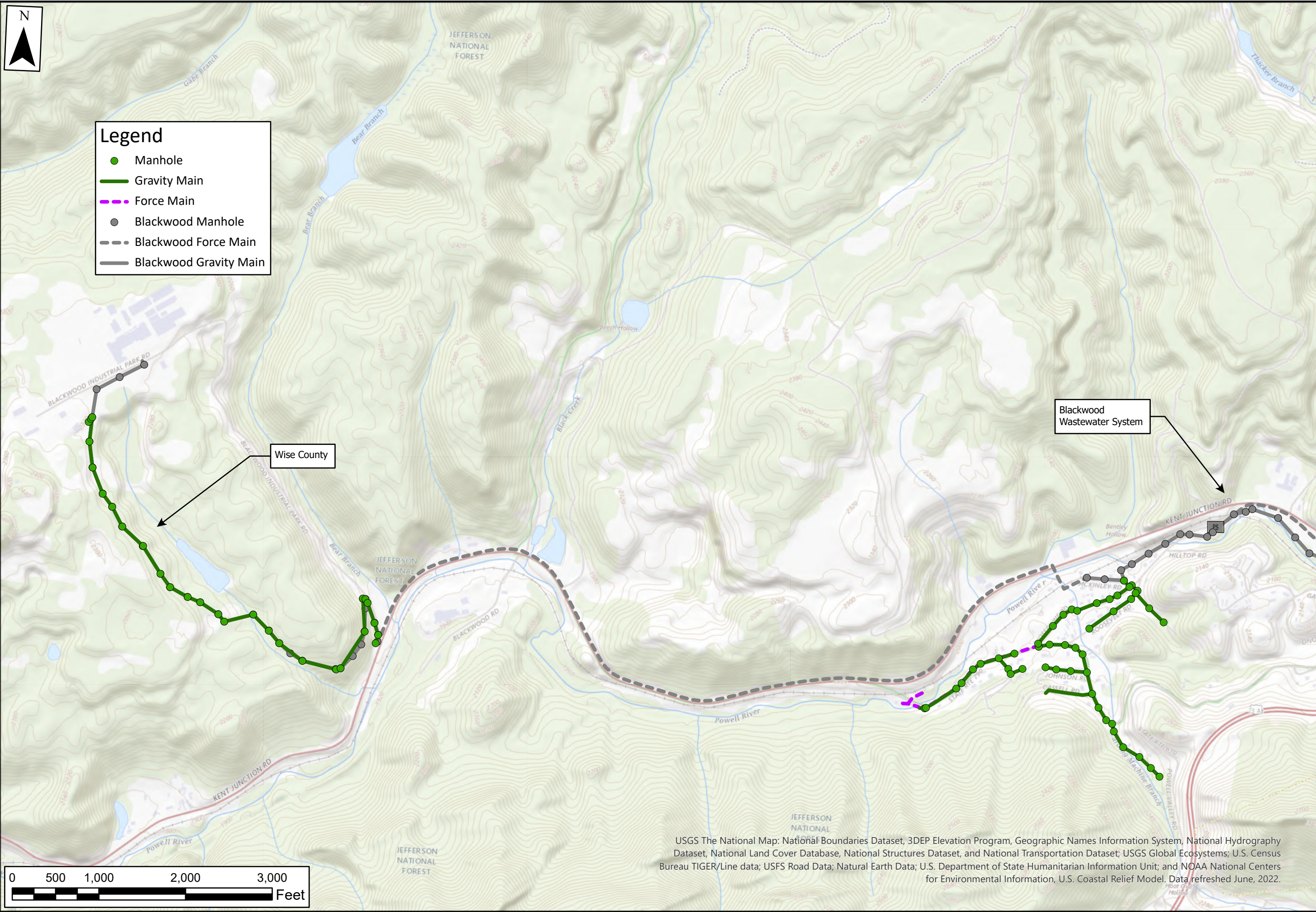
The system currently has approximately N/A in outstanding loan amount.





### Legend

- Manhole
- Gravity Main
- - - Force Main
- Blackwood Manhole
- - - Blackwood Force Main
- Blackwood Gravity Main



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**WISE COUNTY PSA  
WASTEWATER  
SYSTEM -  
BLACKWOOD**



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**JOSEPHINE COLLECTION SYSTEM  
WISE COUNTY PUBLIC SERVICE AUTHORITY**

*LENOWISCO Planning District Commission*

System Description – The Josephine collection system serves the unincorporated area of Josephine in central Wise County located to the west and adjacent to the City of Norton along SR 610. The oldest portions of the collection system were constructed in 2012.

The approximate number of customers served by the system was reported to be:

<u>74</u>	Residential Customers
<u>3</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>77</b>	<b>Total Number of Customers</b>

The system’s customer billing flows for 2021 were estimated to be approximately **96%** residential and **4%** non-residential.

The collection system consists of **6”** through **8”** gravity lines. It is estimated that approximately **0%** of the system consists of terra cotta or concrete lines and approximately **0%** of the manholes are masonry brick. The newest area of the system was constructed in **2012**. The oldest areas of the system are estimated to have been constructed in **2012**.

**No** area of the system experiences problems with capacity due to inadequately sized lines.

The system includes two pump stations:

- Josephine Pump Station – **27.5** GPM suction lift sewage pump station that receives all flow from this collection system. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line. The receiving sewer system is part of the City of Norton Sewer System.

The system also collects flow from the **City of Norton** collection system(s).

Flow collected by the system is conveyed to the **City of Norton** system. Treatment is ultimately provided at the **C-N-W Regional WWTP (VPDES Permit #VA0077828)**.

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	267,600	N/A
February	N/A	219,100	N/A
March	N/A	280,000	N/A
April	N/A	247,300	N/A
May	N/A	264,500	N/A
June	N/A	277,500	N/A
July	N/A	310,400	N/A
August	N/A	295,500	N/A
September	N/A	301,400	N/A
October	N/A	301,500	N/A
November	N/A	277,400	N/A
December	N/A	293,100	N/A
<b>Monthly Average</b>	<b>0</b>	<b>277,942</b>	N/A
<b>Daily Average</b>	<b>0</b>	<b>9,265</b>	N/A
<b>Avg / Customer</b>	<b>0</b>	<b>120</b>	



### Permit Violations/System Overflows/Consent Order

- The Josephine collection system had **0** reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had **0** permit violations over the past 2 years. The violations were the result of N/A.
- The system **is not** under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

### Other Maintenance Related Issues Experienced by System

- Frequent issues with pump stations maintenance

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system **is** governed by an existing sewer use ordinance. The ordinance **does** address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in **2021**. The CIP includes \$**12,075,300** of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

### Sewer Rate Structure

The following sewer rate structure was last modified on **July 1, 2022**:

Sewer w/Public Water:	\$42.00 1st 1500 gallons + \$14.00 every 1000 gallons after;
Sewer w/Well Water Flat Fee:	\$63.00

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$**TBD**. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The Wise Co. PSA has a **\$304,690** annual sewer debt service.

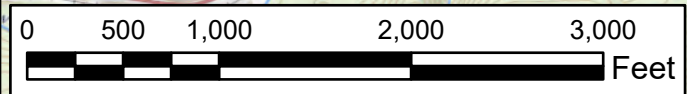
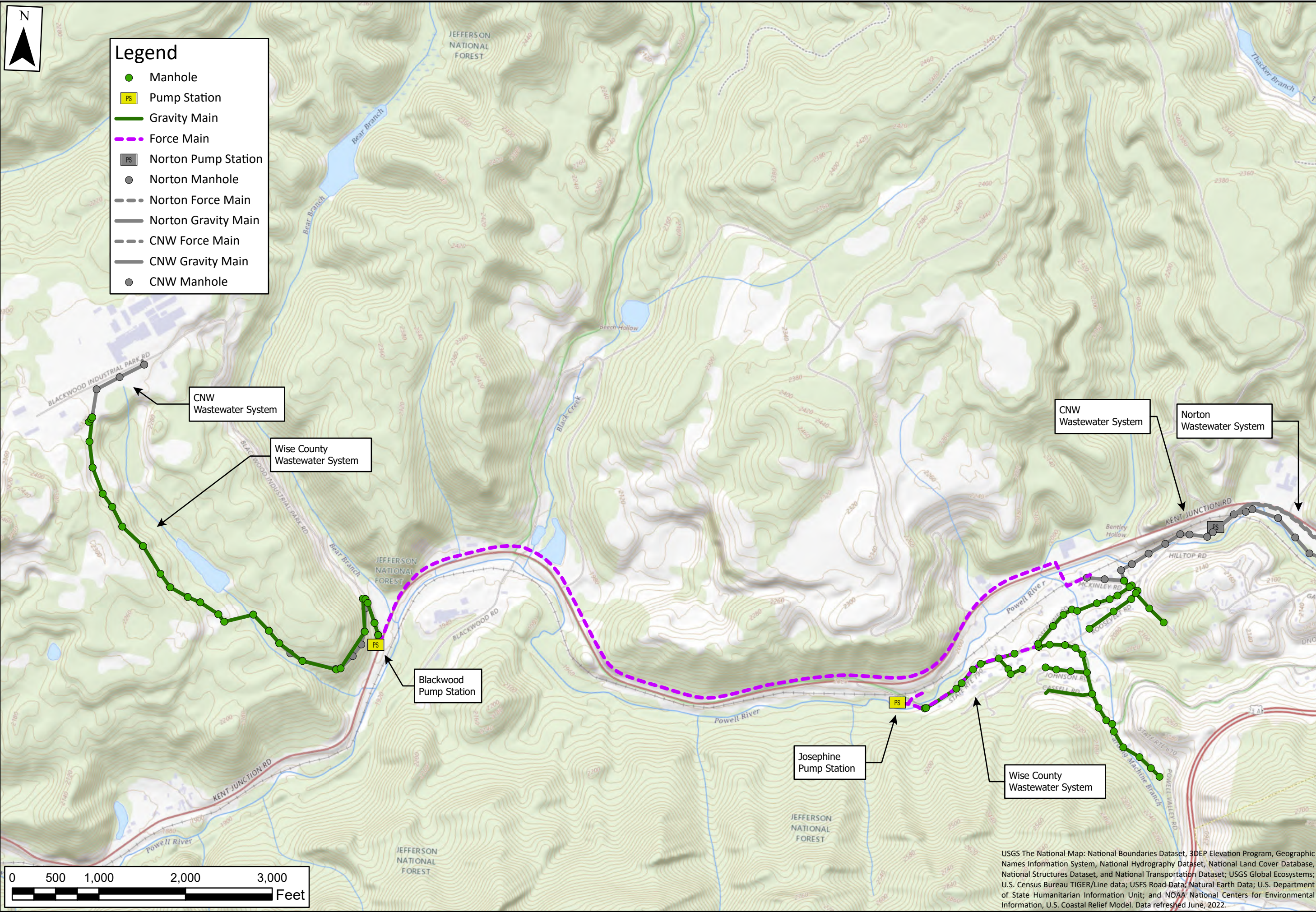
The system currently has approximately N/A in outstanding loan amount.





### Legend

- Manhole
- PS Pump Station
- Gravity Main
- Force Main
- PS Norton Pump Station
- Norton Manhole
- Norton Force Main
- Norton Gravity Main
- CNW Force Main
- CNW Gravity Main
- CNW Manhole



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**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**WISE COUNTY PSA  
WASTEWATER  
SYSTEM - JOSEPHINE**



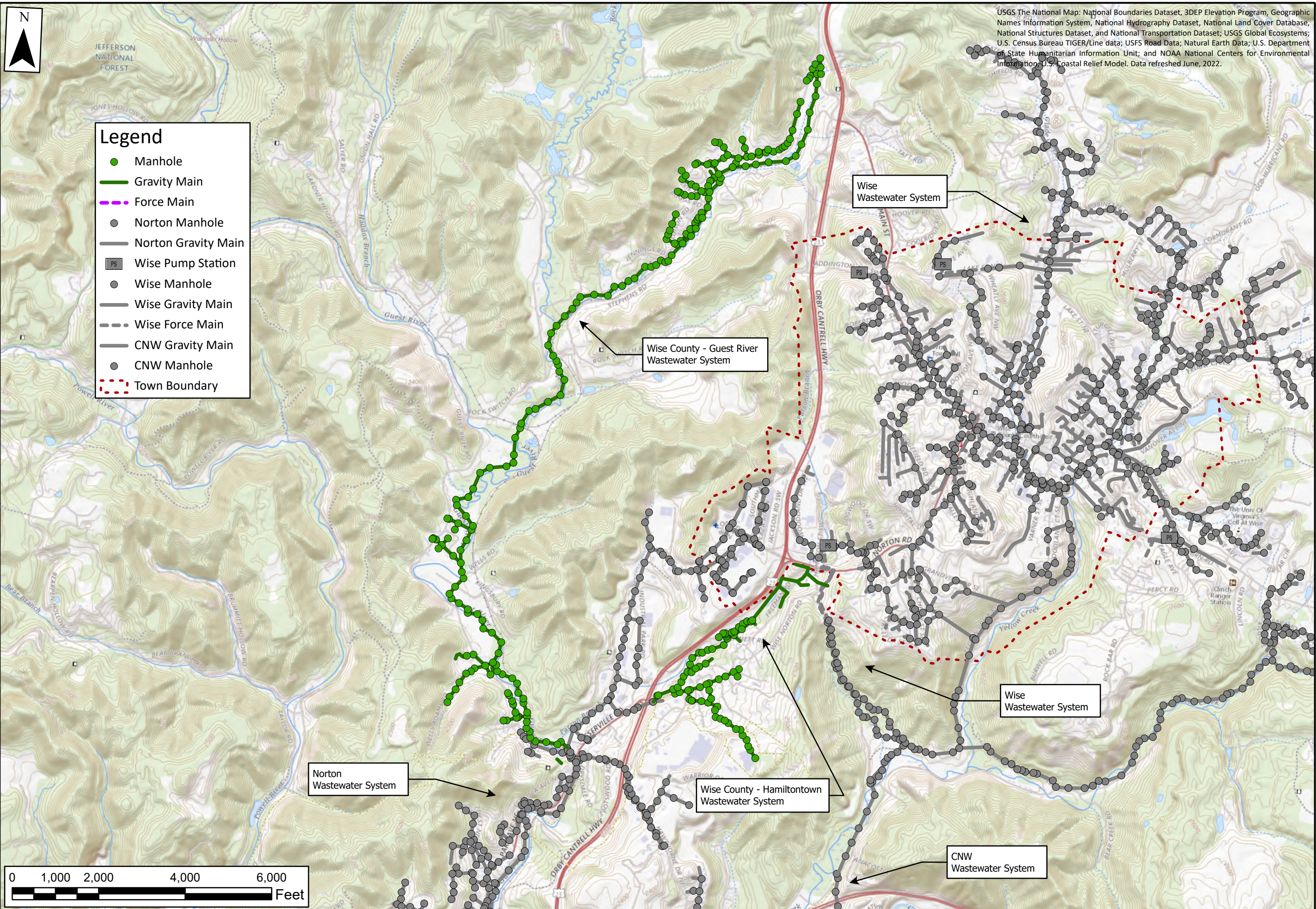
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- Legend**
- Manhole
  - Gravity Main
  - Force Main
  - Norton Manhole
  - Norton Gravity Main
  - PS Wise Pump Station
  - Wise Manhole
  - Wise Gravity Main
  - - - Wise Force Main
  - CNW Gravity Main
  - CNW Manhole
  - - - Town Boundary

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WISE COUNTY PSA  
WASTEWATER  
SYSTEM - NORTON  
AREA



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**POUND**  
**WISE COUNTY PUBLIC SERVICE AUTHORITY**  
*LENOWISCO Planning District Commission*

System Description – The Town of Pound collection system serves the Town of Pound in Wise County near the State Route 23 North of the Town of Wise. The collection system was constructed in 1970s.

The approximate number of customers served by the system was reported to be:

<u>633</u>	Residential Customers
<u>34</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>667</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 95% residential and 5% non-residential.

The collection system consists of 4” through 20” gravity lines. It is estimated that approximately 60% of the system consists of terra cotta or concrete lines and approximately 50% of the manholes are masonry brick. The newest area of the system was constructed in 1995. The oldest areas of the system are estimated to have been constructed in the 1970s.

The system includes three pump stations:

- Main Influent Pump Station – 500 GPM submersible grinder pump station. The pump station discharges through a 10” force main that empties into a 20” gravity sewer line.
- Secondary Pump Station – 150 GPM submersible grinder pump station. The pump station discharges through a 4” force main that empties into an 8” gravity sewer line.

System Flows - A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	709,000	N/A	N/A
February	798,000	N/A	N/A
March	695,000	N/A	N/A
April	661,000	N/A	N/A
May	640,000	N/A	N/A
June	1,110,000	N/A	N/A
July	2,075,000	1,735,900	84%
August	1,982,000	1,754,400	89%
September	1,747,000	1,427,800	82%
October	658,000	1,219,600	185%
November	893,000	1,180,400	132%
December	666,000	1,370,400	206%
<b>Monthly Average</b>	<b>1,052,833</b>	<b>868,850</b>	<b>83%</b>
<b>Daily Average</b>	<b>34,613</b>	<b>23,804</b>	<b>83%</b>
<b>Avg / Customer</b>	<b>51.89</b>	<b>36</b>	

Permit Violations/System Overflows/Consent Order

- The Town of Pound collection system had **many** reported sewer system overflows during calendar year 2021. **All** were due to excessive Infiltration and Inflow, **many** were due to line blockages created by root intrusion, grease, or other debris.



- The system has had 1 permit violations over the past 2 years. The violations were the result of transfer of the Town of Pound NOV to Wise County Public Service Authority during consolidation for flow exceeding permitted level at WWTP.
- The system is not under consent order with the DEQ. The consent order is dated July 1, 2022. and was issued because flow at WWTP is above permitted capacity.

Other Maintenance Related Issues Experienced by System

- I/I,
- Neglected maintenance on everything.

System Needs

- Major upgrades from consolidation,
- Interceptor, lift station, plant, and sub-basin collection repair.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

SSES

A SSES has not been performed.

Capital Improvements Plan

The system currently has a CIP adopted in 2020. The CIP includes \$30,000,000 of projects for completion in the next 5 years.

Asset Management Plan

The system has an asset management plan currently being prepared by Wise County PSA staff.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

Sewer		Sewer for Well Water	
\$42.00	First 1500 gal	\$63.00	Flat
\$14.00	Every 1,000 gal after		

System Debt and Maturity Date of Outstanding Loans

The system currently has approximately \$420,000 in outstanding loan.



**WISE COUNTY PUBLIC SERVICE AUTHORITY POUND – VPDES  
 PERMIT # VA0061913  
 WISE COUNTY PUBLIC SERVICE AUTHORITY  
 LENWISCO PLANNING DISTRICT**

Facility Description – The treatment facility is located at 11543 Old Mill Village Road (see attached general vicinity map). The facility was originally constructed in 1972. The last major upgrade/expansion was completed in 1995. The facility utilizes activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Pound collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 0.5 MGD. The average daily flow treated at the facility during calendar year 2021 was 1.053. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.719 MGD. The facility exceeded 80% capacity for 363 days during this period. Effluent from the plant is discharged to the Pound River. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by Wise County Public Service Authority. Currently, 2 full time and no part time licensed operators work at the facility. 2 Class 3. The facility is required to be staffed 10 hours/day.

Permit Violations – The facility has had many permit violations over the past 2 years. The violations were the result of exceeding permitted capacity.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- All assets of the wastewater treatment plant are in need of replacement.

Facility Needs – Identified facility (identified in CIP, PER, etc..) needs are as follows:

- The entire treatment plant needs to be replaced.

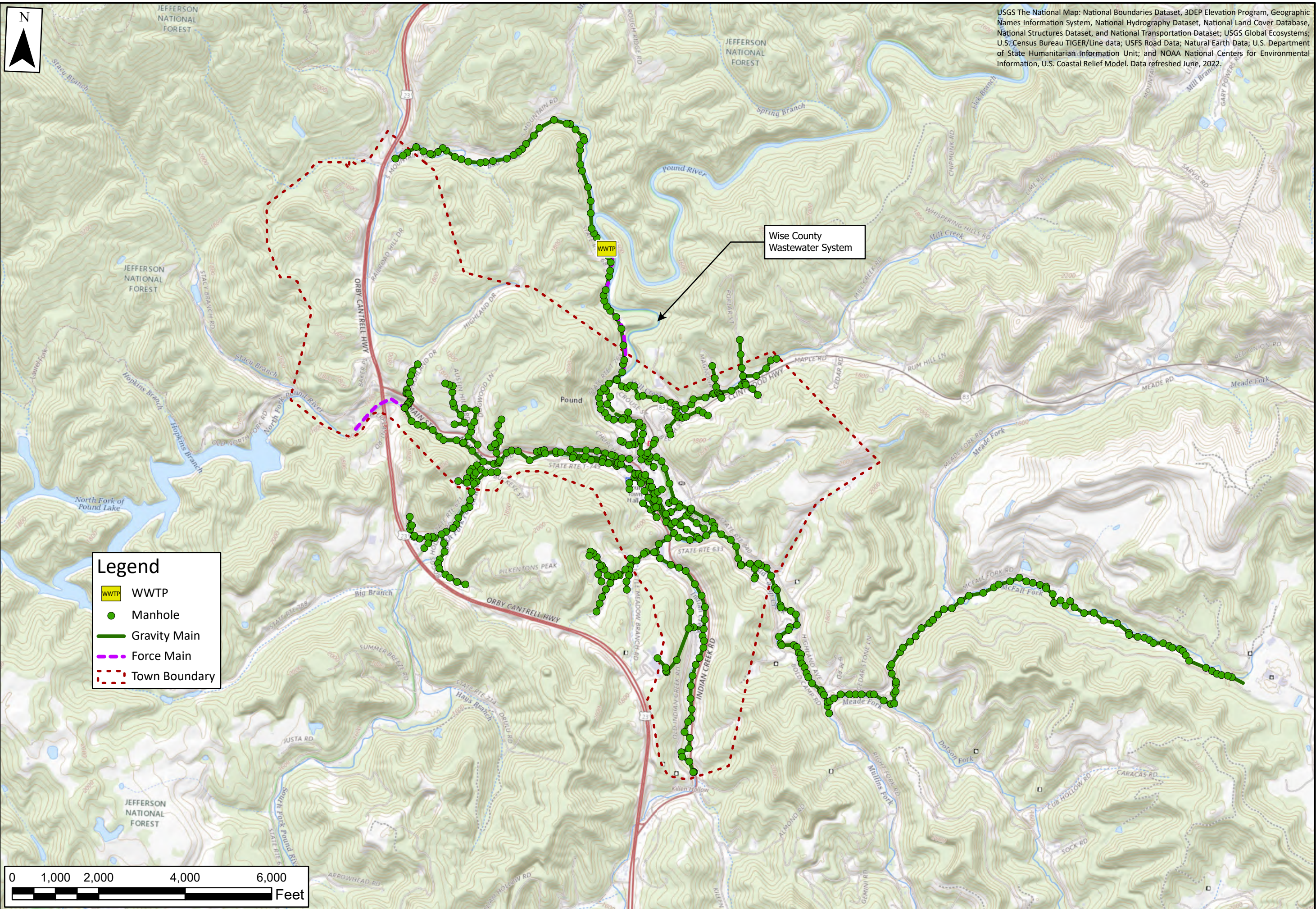
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable project cost for the identified facility improvements is \$3,689,600.

Improvement	Cost
New pumps, VFDs, generator, ATS & controls at Upper Lift Station	\$240,000
New manually cleaned bar screen	\$24,000
New mechanical screen, compactor, & controls	\$300,000
Replace three pumps & valve sets at preliminary treatment building	\$100,000
New grit classifier screw unit	\$60,000
Grit pump vault, pumps, controls & appurtenances	\$120,000
Aeration piping, diffusers, and valves for grit system	\$60,000
Blowers and controls for grit system	\$96,000
Repaint pretreatment room and piping to remain	\$25,000
Replacement doors at pretreatment building	\$6,000



Ventilation and heat replacements at pretreatment building	\$55,000
Blowers and controls for aeration basins	\$200,000
Aeration piping, diffusers and valves for aeration basins	\$150,000
Clarifier splitter box modification	\$36,000
Clarifier mechanism replacements	\$250,000
Waste sludge pumps, VFDs, valves and controls	\$45,000
Grout chlorine contact tank floor	\$15,000
Automatic refrigerated composite samplers	\$30,000
New UV system, controls, piping, & channel	\$330,000
Blowers and controls for aerobic digester	\$150,000
Digester drain line modifications	\$42,000
New digester pump, piping & controls	\$50,000
Install sludge press into building with assoc. piping & valves	\$25,000
New flow meters & transmitters	\$81,000
Demolish sludge storage building	\$55,000
Miscellaneous demolition	\$40,000
New pre-engineered metal sludge building	\$314,600
Replace electrical gear	\$110,000
Replace plant emergency generator and ATS	\$150,000
Electrical conduit/fittings repair or replacement	\$30,000
New SCADA system	\$200,000
New yard piping and repairs	\$30,000
New sidewalks and pad at dewatering building	\$30,000
Bypass pumping	\$240,000
Total	\$3,689,600





USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WISE COUNTY PSA  
WASTEWATER  
SYSTEM - POUND



DATE:	12/14/2022
SHEET:	
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# RODA/OSAKA/STONEGA/DERBY COLLECTION SYSTEM

## WISE COUNTY PUBLIC SERVICE AUTHORITY

LENOWISCO Planning District Commission

System Description – The Roda/Osaka/Stonega/Derby collection system serves these unincorporated areas located in western Wise County along SR 600, 685 and 686 approximately 3.5 miles northwest of the community of Appalachia. The oldest portions of the collection system were constructed in 2004.

The approximate number of customers served by the system was reported to be:

<u>212</u>	Residential Customers
<u>0</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>212</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately **100%** residential and **0%** non-residential.

The collection system consists of **6"** through **8"** gravity lines. It is estimated that approximately **0%** of the system consists of terra cotta or concrete lines and approximately **0%** of the manholes are masonry brick. The newest area of the system was constructed in **2004**. The oldest areas of the system are estimated to have been constructed in **2018**.

**No** area of the system experiences problems with capacity due to inadequately sized lines.

The system includes two pump stations:

- Derby Pump Station – 105 GPM submersible pump station that receives flow from the Derby side of the collection system along SR 686. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line. The receiving sewer system is part of the Wise County PSA's Sewer System.
- Roda Pump Station – 130 GPM submersible pump station that receives flow from the Roda side of the collection system along SR 685. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line. The receiving sewer system is part of the Wise County PSA's Sewer System.

The system also collects flow from the **N/A** system(s).

Flow collected by the system is conveyed to the **Appalachia** system. Treatment is ultimately provided at the **Big Stone Gap WWTP (VPDES Permit #VA0020940)**.

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	342,900	N/A
February	N/A	358,200	N/A
March	N/A	345,700	N/A
April	N/A	410,300	N/A
May	N/A	397,800	N/A
June	N/A	494,900	N/A
July	N/A	423,400	N/A
August	N/A	484,400	N/A
September	N/A	480,100	N/A
October	N/A	363,000	N/A
November	N/A	365,700	N/A
December	N/A	371,400	N/A
<b>Monthly Average</b>	<b>0</b>	<b>403,150</b>	N/A
<b>Daily Average</b>	<b>0</b>	<b>13,438</b>	N/A
<b>Avg / Customer</b>	<b>0</b>	<b>63</b>	



### Permit Violations/System Overflows/Consent Order

- The Rhoda/Osaka/Stonega/Derby collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is not under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

### Other Maintenance Related Issues Experienced by System

- Frequent issues with pump stations maintenance

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in 2021. The CIP includes \$12,075,300 of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022:

Sewer w/Public Water:	\$42.00 1st 1500 gallons + \$14.00 every 1000 gallons after;
Sewer w/Well Water Flat Fee:	\$63.00

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$TBD. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The Wise Co. PSA has a \$304,690 annual sewer debt service.

The system currently has approximately N/A in outstanding loan amount.

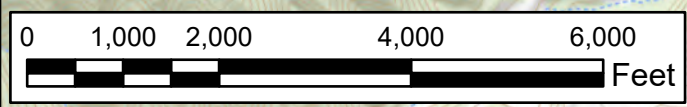
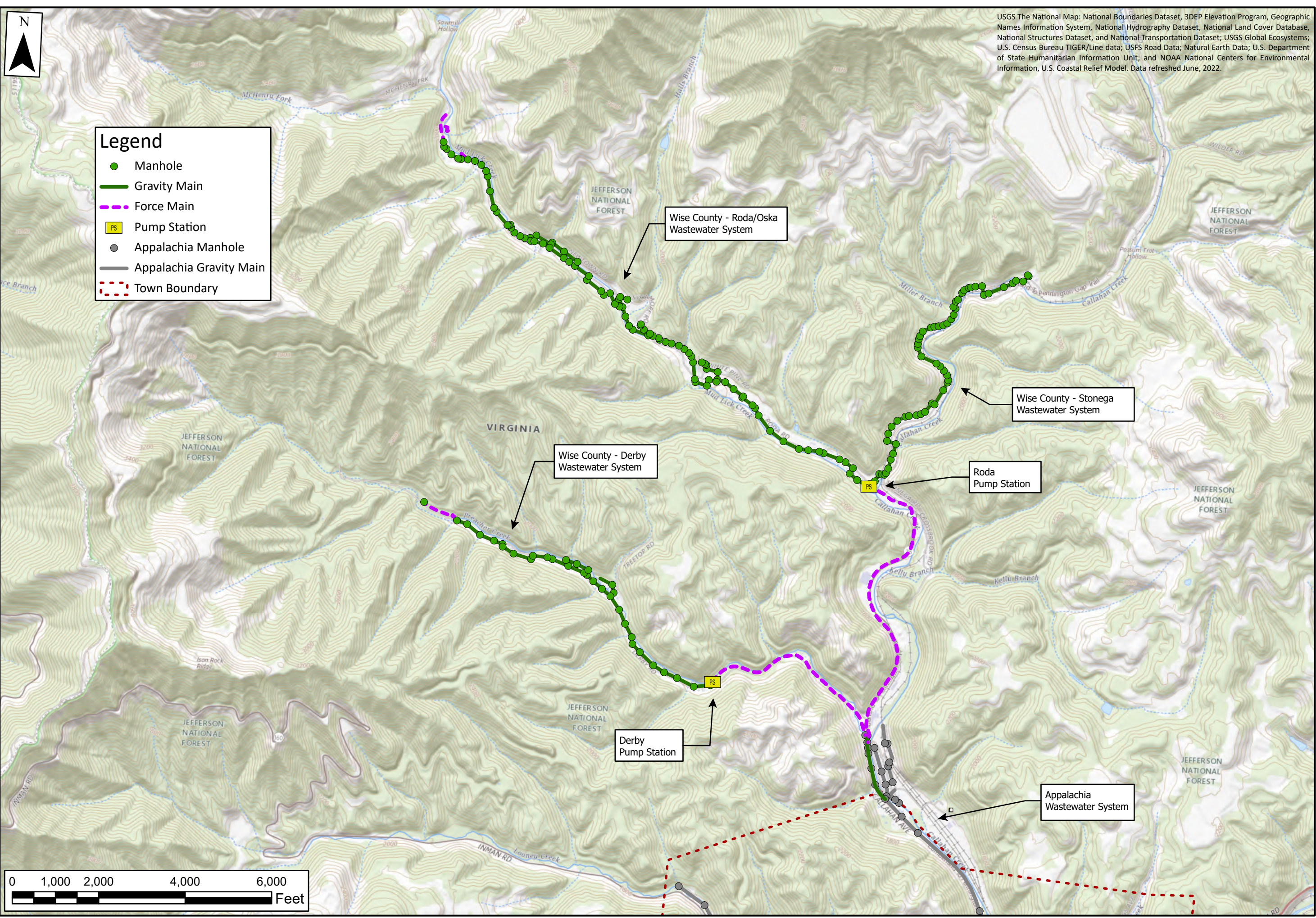




USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.

**Legend**

- Manhole
- Gravity Main
- - - Force Main
- PS Pump Station
- Appalachia Manhole
- Appalachia Gravity Main
- - - Town Boundary



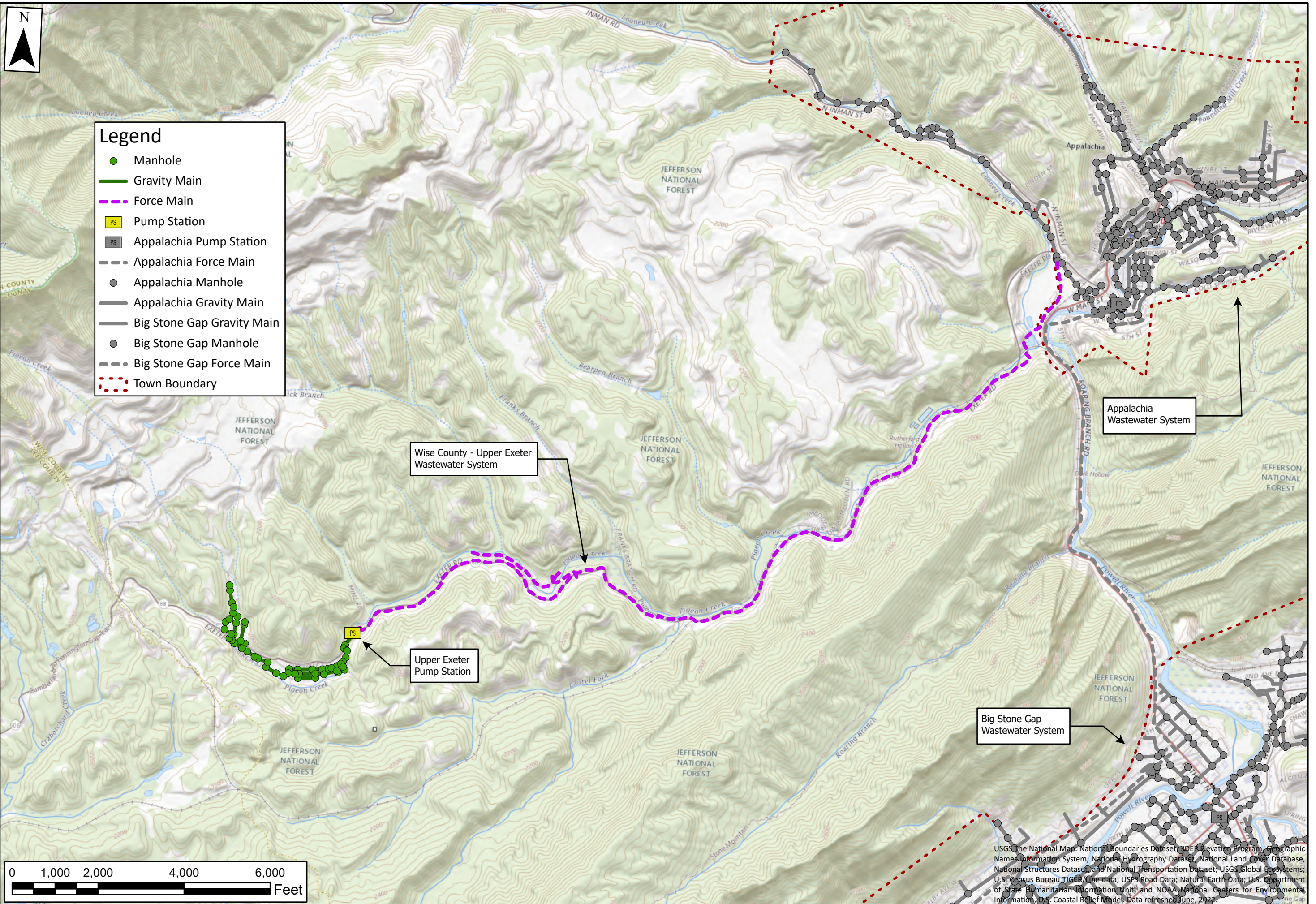
**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**WISE COUNTY PSA  
WASTEWATER  
SYSTEM - NORTH  
APPALACHIA**



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- Legend**
- Manhole
  - Gravity Main
  - - - Force Main
  - PS Pump Station
  - Appalachia Pump Station
  - - - Appalachia Force Main
  - Appalachia Manhole
  - Appalachia Gravity Main
  - Big Stone Gap Gravity Main
  - Big Stone Gap Manhole
  - - - Big Stone Gap Force Main
  - - - Town Boundary

Wise County - Upper Exeter Wastewater System

Upper Exeter Pump Station

Appalachia Wastewater System

Big Stone Gap Wastewater System



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WISE COUNTY PSA  
WASTEWATER  
SYSTEM - WEST  
APPALACHIA



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**TACOMA/RIVERVIEW COLLECTION SYSTEM**  
**WISE COUNTY PUBLIC SERVICE AUTHORITY**

*LENOWISCO Planning District Commission*

System Description – The Tacoma/Riverview collection system serves the unincorporated areas of Tacoma and Riverview located in southeastern Wise County along SR 699. The oldest portions of the collection system were constructed in 1990.

The approximate number of customers served by the system was reported to be:

<u>316</u>	Residential Customers
<u>3</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>319</b>	<b>Total Number of Customers</b>

The system’s customer billing flows for 2021 were estimated to be approximately **98%** residential and **2%** non-residential.

The collection system consists of **6”** through **8”** gravity lines. It is estimated that approximately **0%** of the system consists of terra cotta or concrete lines and approximately **0%** of the manholes are masonry brick. The newest area of the system was constructed in **2020**. The oldest areas of the system are estimated to have been constructed in **1990**.

**No** area of the system experiences problems with capacity due to inadequately sized lines.

There are **no** pump stations within this system.

The system also collects flow from the **N/A** system(s).

Flow collected by the system is conveyed to the **C-N-W** collection system. Treatment is ultimately provided at the **C-N-W Regional WWTP (VPDES Permit #VA0077828)**.

System Flows - Flows for the collection system are estimated based upon pump run times for the pump station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	700,900	N/A
February	N/A	633,600	N/A
March	N/A	533,400	N/A
April	N/A	658,000	N/A
May	N/A	631,000	N/A
June	N/A	628,100	N/A
July	N/A	669,200	N/A
August	N/A	633,600	N/A
September	N/A	687,800	N/A
October	N/A	628,800	N/A
November	N/A	502,800	N/A
December	N/A	697,500	N/A
<b>Monthly Average</b>	<b>0</b>	<b>633,725</b>	N/A
<b>Daily Average</b>	<b>0</b>	<b>21,124</b>	N/A
<b>Avg / Customer</b>	<b>0</b>	<b>293</b>	



### Permit Violations/System Overflows/Consent Order

- The Tacoma/Riverview collection system had 0 reported sewer system overflows during calendar year 2021. N/A were due to excessive Infiltration and Inflow, N/A were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years. The violations were the result of N/A.
- The system is not under consent order with the DEQ. The consent order is dated N/A and was issued because N/A.

### Other Maintenance Related Issues Experienced by System

- I/I in Riverview area

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system **is** governed by an existing sewer use ordinance. The ordinance **does** address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

SSES was performed on the N/A are of the system in N/A by N/A. The SSES identified \$ N/A of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in **2021**. The CIP includes \$**12,075,300** of projects for completion in the next 5 years.

### Asset Management Plan

The system has an asset management plan prepared by N/A in N/A.

### Sewer Rate Structure

The following sewer rate structure was last modified on **July 1, 2022**:

Sewer w/Public Water:	\$42.00 1st 1500 gallons + \$14.00 every 1000 gallons after;
Sewer w/Well Water Flat Fee:	\$63.00

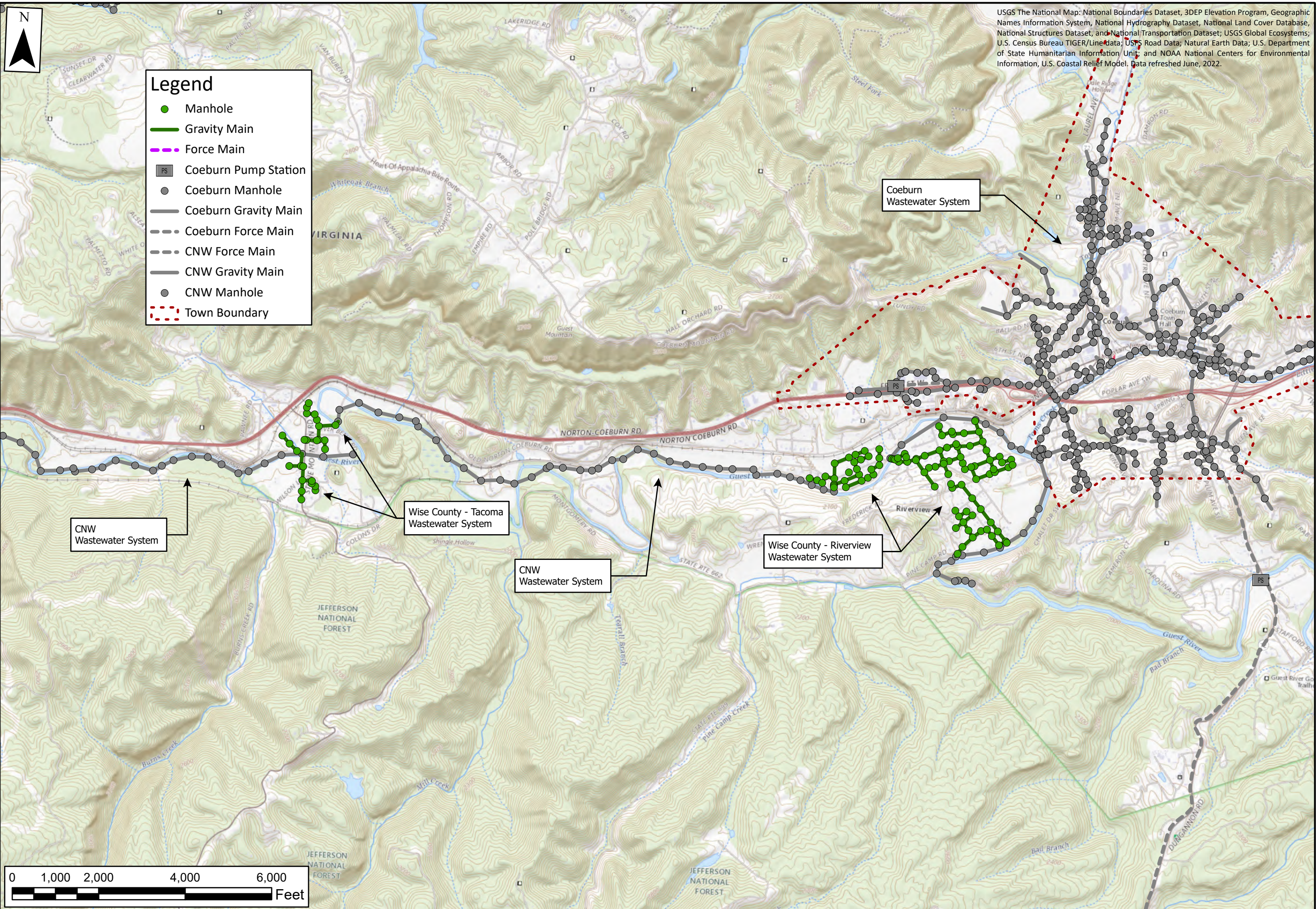
Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$**TBD**. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The Wise Co. PSA has a **\$304,690** annual sewer debt service.

The system currently has approximately N/A in outstanding loan amount.





USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USPS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.

- Legend**
- Manhole
  - Gravity Main
  - Force Main
  - PS Coeburn Pump Station
  - Coeburn Manhole
  - Coeburn Gravity Main
  - - - Coeburn Force Main
  - - - CNW Force Main
  - CNW Gravity Main
  - CNW Manhole
  - - - Town Boundary

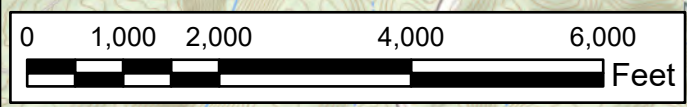
Coeburn Wastewater System

CNW Wastewater System

Wise County - Tacoma Wastewater System

CNW Wastewater System

Wise County - Riverview Wastewater System



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WISE COUNTY PSA  
WASTEWATER  
SYSTEM - COEBURN  
AREA



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# TOWN OF WISE

## LENOWISCO Planning District Commission

System Description – The Town of Wise collection system serves the Town of Wise in Wise County near the State Route 23 North of the city of Norton. The collection system was constructed in the 1930s.

The approximate number of customers served by the system was reported to be:

<u>2,001</u>	Residential Customers
<u>124</u>	Commercial Customers
<u>54</u>	Industrial Customers
<u>0</u>	Other Municipal Systems
<b>2,179</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately **71%** residential and **29%** non-residential.

The collection system consists of 4" through 24" gravity lines. It is estimated that approximately 30% of the system consists of terra cotta or concrete lines and approximately 10% of the manholes are masonry brick. The newest area of the system was constructed in 2022. The oldest areas of the system are estimated to have been constructed in the 1930s.

The County Manor and Noble Peak area of the system experiences problems with capacity due to inadequately sized lines.

The system includes three pump stations:

- Hamilton Town Pump Station – 200 GPM located at 130 Hamilton Town. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line.
- Addington Avenue Pump Station – 140 GPM located at 121 Addington Street. The pump station discharges through a 6" force main that empties into an 8" gravity sewer line.
- Sky Avenue Pump Station – 180 GPM located at 111 Lake Street. The pump station discharges through a 2" force main and empties to an 8" gravity line.

Flow collected by the system is conveyed to the Coeburn Norton Wise Regional Collection system. Treatment is ultimately provided at the Coeburn Norton Wise Regional (VPDES# VA0077828) Treatment Plant.

System Flows - A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	N/A	8,072,100	N/A
February	N/A	8,454,400	N/A
March	N/A	8,046,800	N/A
April	N/A	8,855,300	N/A
May	N/A	10,071,801	N/A
June	N/A	10,277,900	N/A
July	N/A	9,032,000	N/A
August	N/A	9,295,600	N/A
September	N/A	10,316,400	N/A
October	N/A	10,437,700	N/A
November	N/A	9,784,900	N/A
December	N/A	9,747,500	N/A
<b>Monthly Average</b>	<b>N/A</b>	<b>9,366,033</b>	



<b>Daily Average</b>	<b>N/A</b>	<b>307,924</b>	<b>N/A</b>
<b>Avg / Customer</b>	<b>N/A</b>	<b>141</b>	<b>N/A</b>

Permit Violations/System Overflows/Consent Order

- The Town of Wise collection system had 0 reported sewer system overflows during calendar year 2021.
- The system has had 0 permit violations over the past 2 years
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Root,
- Blockages,
- Grease.

System Needs

- Line rehabilitation,
- Pump station rehabilitation,
- Manhole rehabilitation,
- Infiltration & Inflow remediation,
- Increased system capacity.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES has not been performed.

Capital Improvements Plan

The town has a five-year capital improvement plan.

Asset Management Plan

The Town does not currently have an asset management plan.

Sewer Rate Structure

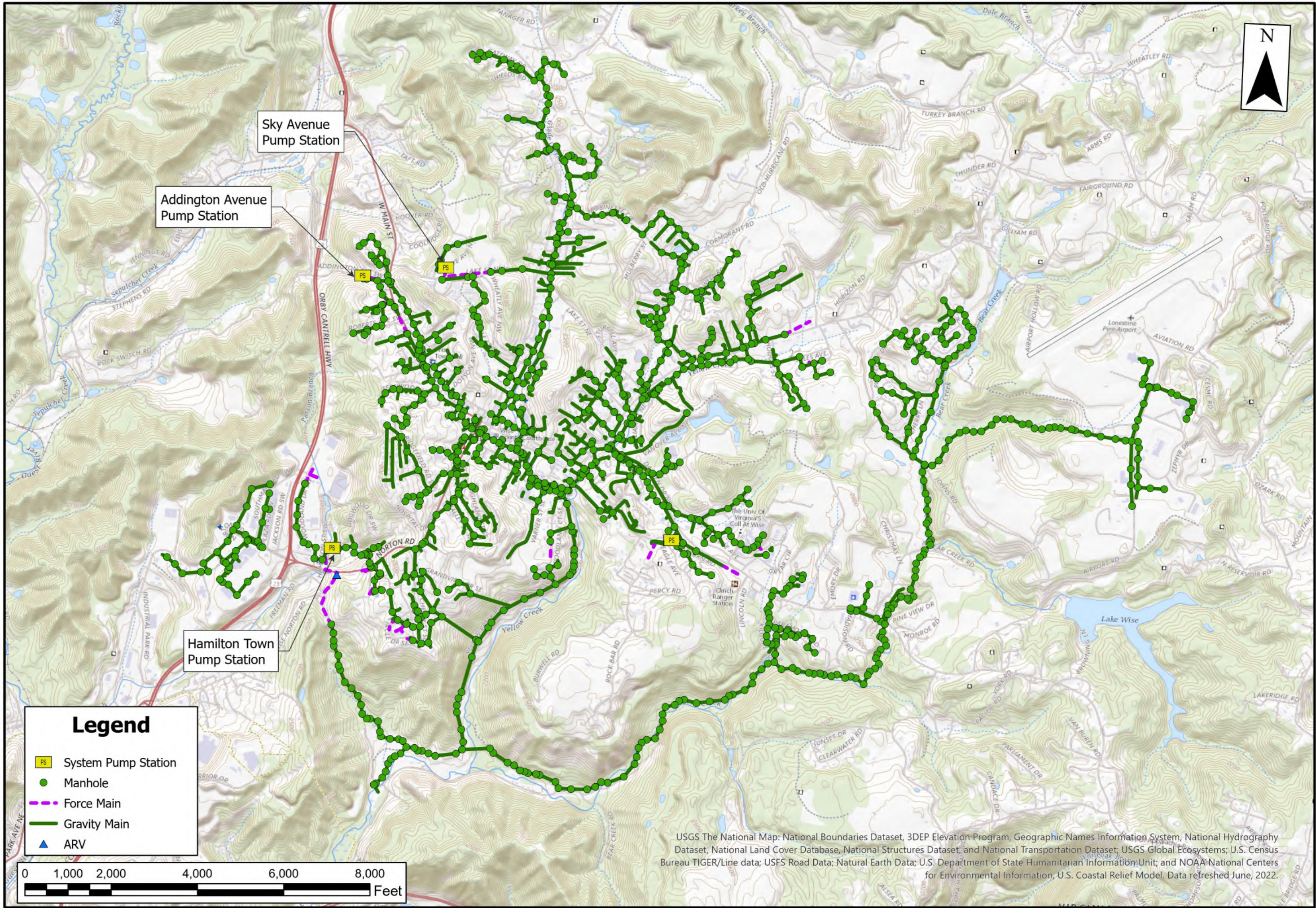
The following sewer rate structure was last modified July 2022.

In Town		Out of Town	
\$17.92	First 1000 gal	\$26.06	First 1000 gal
\$7.17	Per 1000 gal after	\$10.43	Per 1000 gal after

System Debt and Maturity Date of Outstanding Loans

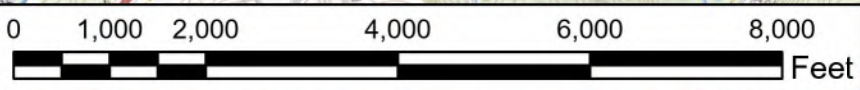
The system currently has no outstanding loan.





**Legend**

- PS System Pump Station
- Manhole
- - - Force Main
- Gravity Main
- ▲ ARV

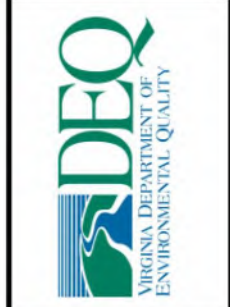


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF WISE



DATE:	xx/xx/xxxx
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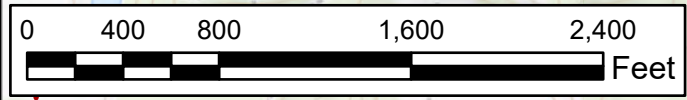
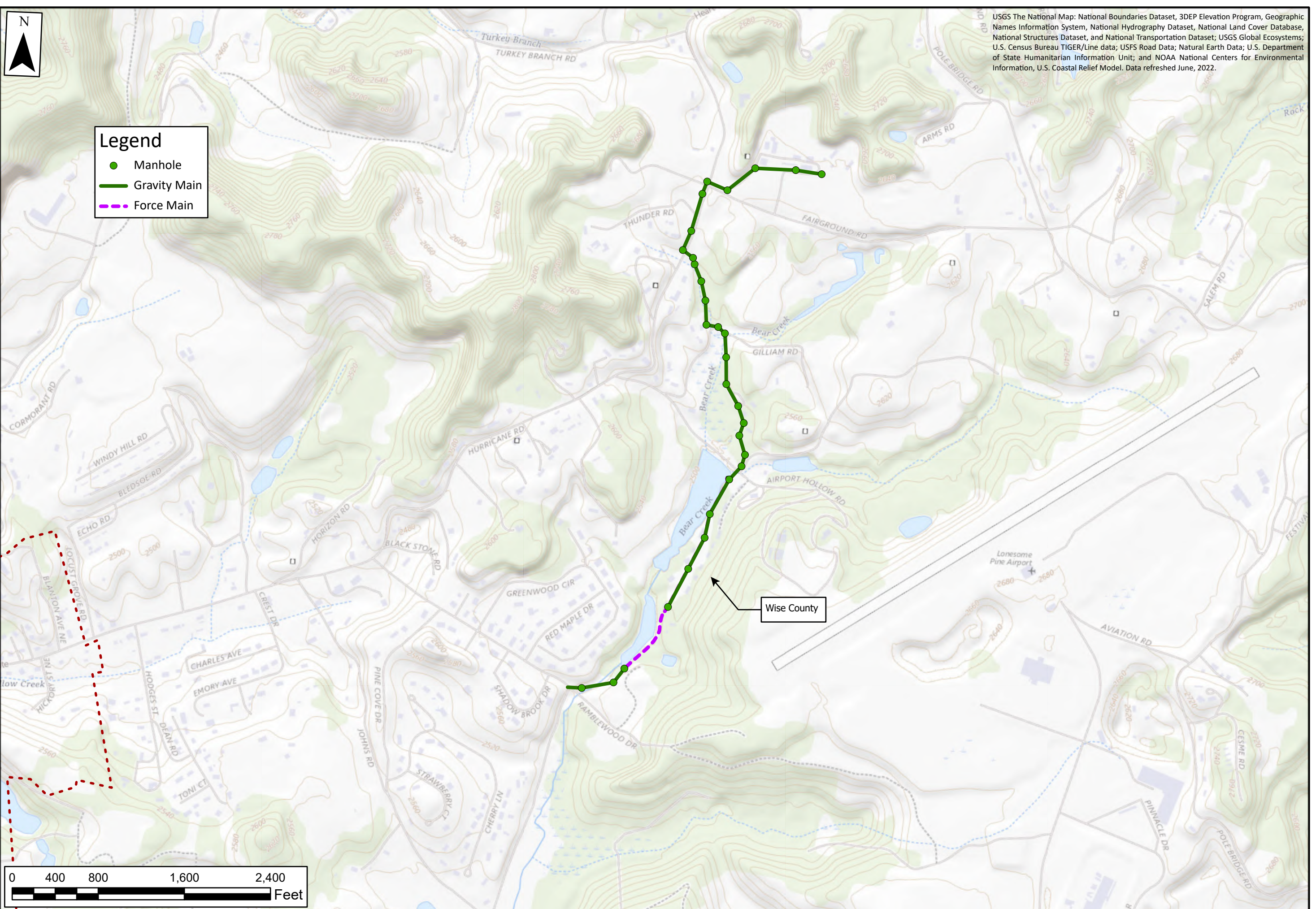




**Legend**

- Manhole
- Gravity Main
- - - Force Main

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**WISE COUNTY PSA  
WASTEWATER  
SYSTEM - LONESOME  
PINE AIRPORT**



DATE: 12/14/2022

SHEET:

DRAWN BY: JR	CHECKED BY:
PROJECT NO. 2248	



APPENDIX A

MOUNT ROGERS PLANNING DISTRICT  
EXISTING SYSTEMS AND MAPS



# TOWN OF ABINGDON COLLECTION SYSTEM

## Town of Abingdon

Mount Rogers Planning District Commission

System Description – The Town of Abingdon collection system serves the customers of the Town of Abingdon located off Exits 14, 17, and 19 of I-81. The original collection system was constructed circa the 1950s.

The approximate number of customers served by the system was reported to be:

<u>4,420</u>	Residential Customers
<u>730</u>	Commercial Customers
<u>1</u>	Other Municipal Systems
<b>5,151</b>	<b>Total Number of Customers</b>

The system's customer billings flow amounts for 2021 were estimated to be approximately **86%** residential and **14%** non-residential.

The collection system consists of 6" through 24" gravity lines. It is estimated that approximately 40% of the system consists of terra cotta or concrete lines and approximately 45% of the manholes are masonry brick. The newest area of the system was constructed in 2018. The oldest areas of the system are estimated to have been constructed in the 1950s.

The system includes six (6) pump stations:

- Wilson Subdivision Pump Station (*18255 Woodland Hills Road*), Installed in 1984
  - F.E. Myers Company Manufacturer
  - Myers WG30H Grinder Pumps, 60 Amps, 200 Volts, Generator 30 KW, Manual Start, Omni-Site #20816, 3450 RPM, 3.5 HP, Rated 48 GPM, 77 TDH
  - Engineer: Draper Aden Associates, Blacksburg, Virginia,
  - Contractor: (*Unknown*)
  - Force Main 2175.38' L.F. 4" Schedule 40 PVC Pipe
- Southview Pump Station (*989 Empire Drive*), Installed in 1989
  - Yeoman's Chicago Corporation Manufacturer
  - Yeoman's 9100, 400 Amps, 480 Volts, Generator 125 KW, Auto-Start, Omni-site #11476, w/Arc Flash, 60 HP, 1750 RPM, Rated 347 GPM, 182 TDH
  - S.O. #: 266076
  - Engineer: Thompson & Litton, Inc., Wise, Virginia
  - Contractor: Mendon Pipeline Company
  - Force Main 5186.73 L.F. 6" DI Pipe
- Westwood Pump Station (*18326 Stonemill Road*), Installed in 1992
  - Yeoman's Chicago Corporation Manufacturer
  - Yeoman's 9000, 200 Amps, 460 Volts, Generator 30 KW, Manual Start, Omni-Site #21206, w/Arc Flash, 1750 RPM, 3HP, #2 Pump Rated 201 GPM, #1 Pump Rated 204 GPM, Total Rating 152 GPM & 29 TDH
  - Engineer: Draper Aden Associates, Blacksburg, Virginia
  - Contractor: Highland Construction Company (Abingdon, VA) & Nicar Construction (Bristol, TN)
  - Force Main 79 L.F., 6" DI Pipe
- Watauga Road Pump Station (*17366 Watauga Road*), Installed in 1994, Standby Pump – 06/13/2012
  - Davis EMU Manufacturer
  - Davis EMU Model FA 10.65E, 200 Amps, 240 Volts, Generator 80 KW, Auto-Start, Omni-Site #21171, 25 HP, 1740 RPM, 240 Volts, Three Phase, Rated 260 GPM, 161 TDH
  - Engineer: Anderson & Associates, Blacksburg, VA
  - Contractor: Little "B" Enterprises, Castlewood, VA
  - Force Main 8,796.26 L.F., 6" C900 PVC Pipe, & 5,957 L.F., 8" C900 PVC Pipe



- Meade Meadows Pump Station (24030 Berry Creek Drive), Installed in 1999
  - General Signal Pump Group Manufacturer
  - Pumps Hydromatic S4LRC 62 HX, 230 Volts, 225 Amps, 4 Wire Delta Generator 60 KW, Auto-Start, Rated 100 GPM, 107 TDH, 25 HP, 3450 RPM, Omni-Site #21172
  - Engineer: R.D. Designs, Abingdon, VA
  - Contractor: Little “B” Enterprises, Castlewood, VA
  - Force Main 830.77 L.F., 4” PVC Pipe
- JMH Cancer Center Pump Station (26180 Lee Hwy), Installed in 2007
  - F.E. Myers Company Manufacturer
  - Myers 4VCX, 15 HP, 1750 RPM, 208 Volts, Rated 250 GPM, 44 TDH, Generator (Genset Model DSHA, DSHAB, DSHAC, DSHAE, and DSHAF) 125 KW, Auto-Start, Omni-Site #21162
  - Engineer: Unknown
  - Contractor: Rentenbach Constructors, Inc. & Baker’s Construction and Excavation
  - Force Main 2,125.27 L.F., 6” PVC Pipe

The system also collects flow from a portion of the Washington County Service Authority sewer system at approximately (*information not provided*) GPD.

Treatment is ultimately provided at the Wolf Creek Water Reclamation Facility (VPDES Permit #VA0026531).

System Flows - A summary of the system’s collected and billed flows for the calendar year 2021 is provided as follows:

<u>Month (2021)</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January	87,040,000	15,570,000	18%
February	98,880,000	34,194,000	16%
March	130,890,000	23,284,000	26%
April	90,870,000	25,079,000	26%
May	61,470,000	28,078,000	41%
June	61,790,000	26,772,996	45%
July	62,240,000	25,115,998	43%
August	60,870,000	29,786,999	41%
September	48,600,000	29,120,000	61%
October	55,090,000	27,429,988	53%
November	49,300,000	29,235,000	56%
December	50,030,000	29,492,000	59%
<b>Monthly Average</b>	<b>71,422,500</b>	<b>26,929,832</b>	
<b>Daily Average</b>	<b>2,543,815</b>	<b>959,145</b>	
<b>Avg/Customer</b>	<b>493.8487805</b>	<b>186</b>	

Permit Violations/System Overflows/Consent Order

- The Town of Abingdon collection system had **16** reported sewer system overflows during the calendar year 2021 due to excessive Infiltration and Inflow line blockages created by root intrusion, grease, or other debris, and lines at less than minimal slopes.
- The system has had no permit violations over the past 2 years.
- The system is not under a consent order with the DEQ.

Other Maintenance-Related Issues Experienced by System

- I/I related overflows
- Capacity issues related to I/I
- Frequent issues with pump stations maintenance



## System Needs

- Infiltration and inflow identification and remediation.
- Line rehabilitation
- Pump station rehabilitation
- Manhole rehabilitation
- Increased system capacity

## Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

## Sewer System Evaluation Survey (SSES)

One SSES was performed on the system in 2021 CHA, and further assessed by The Lane Group, Inc. CHA is currently working on a second SSES. The 2021 SSES identified a total of \$9.5 million of recommended system rehabilitation projects.

## Capital Improvements Plan

The system currently has a CIP adopted in 2022. The CIP includes \$8,603,000 of projects for completion in the next 5 years.

## Asset Management Plan

The Town has an Asset Management Plan for a portion of the system that was completed in 2021 as part of the SSES completed by CHA

## Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$9,502,000.

## System Dept and Maturity Date of Outstanding Loans

### **Debt Service Sewer Fund**

Schedule	Maturity Dates
Profile as Of	11/15/2022
Frequency	Annual
First Period End	11/30/2023
End Date	11/30/2040

	Total Sewer Fund		
Date	Principal	Interest	Total
11/30/2023	743,142.25	1,500.67	744,642.92
11/30/2024	711,611.32	513.22	712,124.54
11/30/2025	692,949.12		692,949.12
11/30/2026	692,949.12		692,949.12
11/30/2027	394,184.31		394,184.31
11/30/2028	95,419.60		95,419.60
11/30/2029	95,419.60		95,419.60
11/30/2030	95,419.60		95,419.60
11/30/2031	95,419.60		95,419.60
11/30/2032	95,419.60		95,419.60
11/30/2033	4,971.29		4,971.29
<b>Total</b>	<b>3,716,905.41</b>	<b>2,013.89</b>	<b>3,718,919.30</b>



**Table 4.1 – Phase I Opinion of Probable Cost**

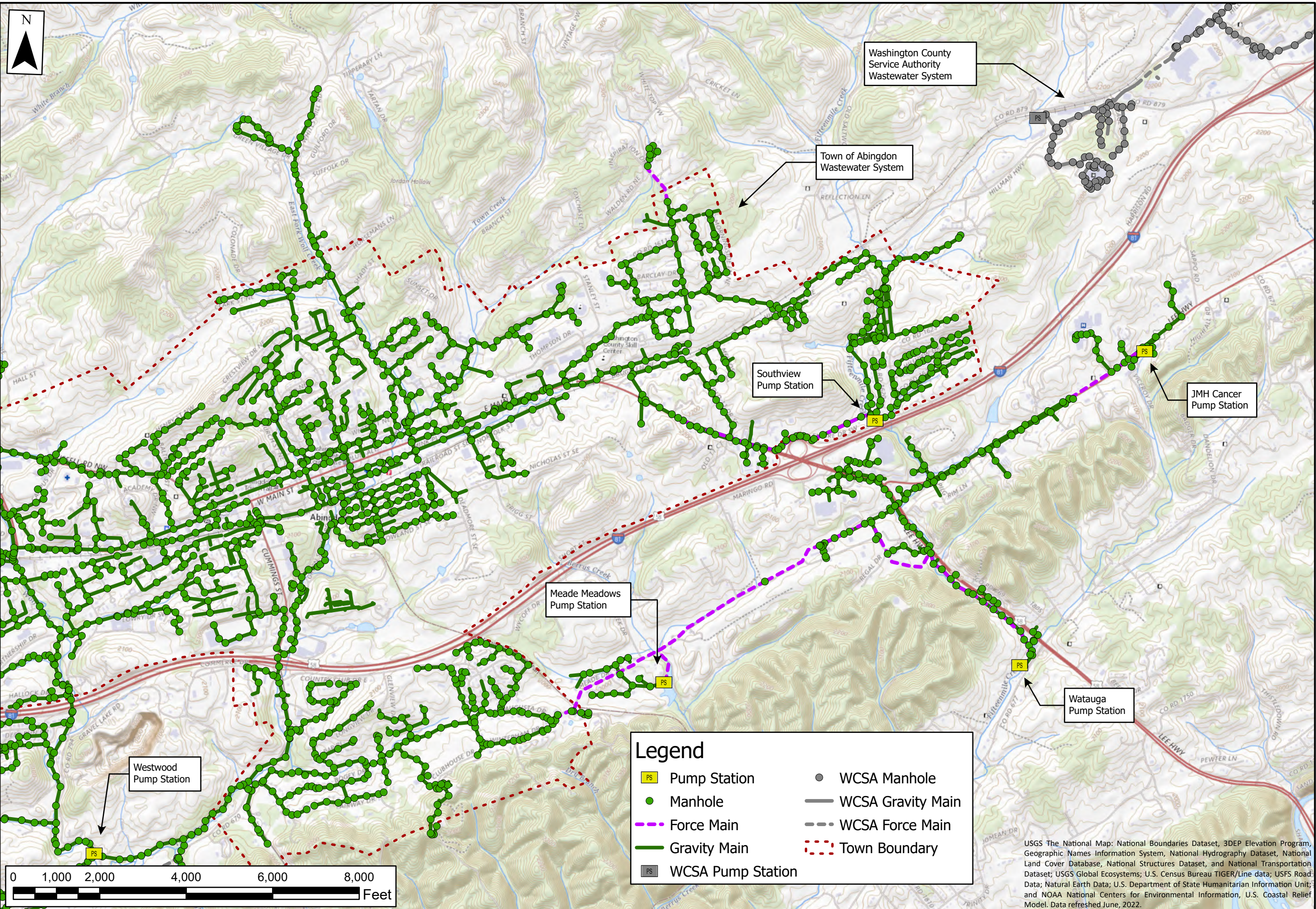
#	Work Description	Quantity	Units	Unit \$	Cost
1	Bonds, Mobilization, and Insurance	% of Constr.	3%	\$ 65,600	\$ 65,600
2	Watertight Frame & Cover	58	EA	\$ 1,000	\$ 58,000
3	Reseal Existing Frame	27	EA	\$ 750	\$ 20,300
4	Raise to Grade <12" Total Height	2	EA	\$ 900	\$ 1,800
5	Cementitious Lining of Manhole	350	VLF	\$ 200	\$ 70,100
6	Seal Chimney with Cementitious Liner	21	EA	\$ 200	\$ 4,200
7	Repair Cracks and Holes	1	EA	\$ 400	\$ 400
8	Seal Joints	1	EA	\$ 250	\$ 300
9	Install Bench	14	EA	\$ 2,700	\$ 40,500
10	Repair Existing Bench	13	EA	\$ 1,500	\$ 19,500
11	Seal Pipe Connections	144	EA	\$ 100	\$ 14,400
12	4-Foot Diameter Manhole Base	1	EA	\$ 10,000	\$ 10,000
13	4 Foot Diameter Manhole Section	7	VLF	\$ 1,250	\$ 8,800
14	Preliminary Cleaning and CCTV	11,957	LF	\$ 4	\$ 47,900
15	8" Lining	4,259	LF	\$ 45	\$ 191,700
16	8" Bursting (includes 6" to 8" bursting)	6,952	LF	\$ 150	\$ 1,042,800
17	10" Lining	746	LF	\$ 50	\$ 37,300
18	Internal Point Repair	1	EA	\$ 3,000	\$ 3,000
19	External Point Repair (Pavement)	15	EA	\$ 7,500	\$ 114,000
20	External Point Repair (Yard)	4	EA	\$ 5,500	\$ 20,900
21	Trim Intruding Lateral	4	EA	\$ 230	\$ 1,000
22	Reconnect PVC Lateral (Pavement)	16		\$ 2,250	\$ 36,000
23	Reconnect PVC lateral (Yard)	4	EA	\$ 1,750	\$ 7,000
24	Replace Lateral to Sewer Line (Up to 20 feet) (Pavement)	76		\$ 5,000	\$ 380,000
25	Replace Lateral to Sewer Line (Up to 20 feet) (Yard)	19	EA	\$ 3,000	\$ 57,000
	<b>Total Construction Cost</b>				<b>\$ 2,250,000</b>
	Engineering - Basic	% of Constr.	10%	-	\$ 225,000
	Engineering - GIS Updates	1	LS	\$ 15,000	\$ 15,000
	Additional iTracker Study	91,500	LF	\$ 1	\$ 55,900
	Smoke Testing	1	LS	\$ 18,000	\$ 18,000
	Additional CCTV Inspection	49,100	LF	\$ 4	\$ 196,400
	Additional CCTV Review	49,100	LF	\$ 1	\$ 24,600
	Inspection Services	1	LS	\$ 250,000	\$ 250,000
	Contingency	% of Constr.	10%	-	\$ 225,000
	Survey - as Required	1	LS	\$ 50,000	\$ 50,000
	<b>Total Opinion of Probable Cost</b>				<b>\$ 3,314,000</b>



**Table 4.2 – Phase II Opinion of Probable Cost**

#	Work Description	Quantity	Units	Unit \$	Cost
1	Bonds, Mobilization, and Insurance	% of Constr.	3%	\$ 138,800	\$ 138,800
2	Watertight Frame & Cover	25	EA	\$ 1,000	\$ 25,000
3	Reseal Existing Frame	16	EA	\$ 750	\$ 12,000
4	Raise to Grade <12" Total Height	1	EA	\$ 900	\$ 900
5	Cementitious Lining of Manhole	230	VLF	\$ 200	\$ 46,000
6	Seal Chimney with Cementitious Liner	22	EA	\$ 200	\$ 4,400
7	Repair Cracks and Holes	1	EA	\$ 400	\$ 400
8	Install Bench	15	EA	\$ 2,700	\$ 40,500
9	Repair Existing Bench	11	EA	\$ 1,500	\$ 16,500
10	Seal Pipe Connections	56	EA	\$ 100	\$ 5,600
11	4-Foot Diameter Manhole Base	3	EA	\$ 10,000	\$ 30,000
12	4-Foot Diameter Manhole Section	14	VLF	\$ 1,250	\$ 17,500
13	Preliminary Cleaning and CCTV	26,389	LF	\$ 4	\$ 105,600
14	8" Lining	10,651	LF	\$ 45	\$ 479,300
15	8" Bursting (includes 6" to 8" bursting)	14,796	LF	\$ 150	\$ 2,219,400
16	10" Bursting	215	LF	\$ 175	\$ 37,700
17	12" Bursting	197	LF	\$ 200	\$ 39,400
18	10" Lining	333	LF	\$ 50	\$ 16,700
19	12" Lining	197	LF	\$ 55	\$ 10,900
20	Internal Point Repair	4	EA	\$ 3,000	\$ 12,000
21	External Point Repair (Pavement)	17	EA	\$ 7,500	\$ 126,000
22	External Point Repair (Yard)	4	EA	\$ 5,500	\$ 23,100
23	Trim Intruding Lateral	46	EA	\$ 230	\$ 10,600
24	Reconnect PVC Lateral (Pavement)	125	EA	\$ 2,250	\$ 281,300
25	Reconnect PVC lateral (Yard)	14	EA	\$ 1,750	\$ 24,400
26	Replace Lateral to Sewer Line (Up to 20 feet) (Pavement)	209	EA	\$ 5,000	\$ 1,044,000
27	Replace Lateral to Sewer Line (Up to 20 feet) (Yard)	23	EA	\$ 3,000	\$ 69,600
	<b>Total Construction Cost</b>				<b>\$ 4,763,000</b>
	Engineering - Basic	% of Constr.	10%	-	\$ 476,300
	Engineering - GIS Updates	1	LS	\$ 15,000	\$ 15,000
	Inspection Services	4,000	HRS	\$ 100	\$ 400,000
	Contingency	% of Constr.	10%	-	\$ 476,300
	Survey - as Required	1	LS	\$ 50,000	\$ 50,000
	<b>Total Opinion of Probable Cost</b>				<b>\$ 6,188,000</b>





### Legend

<span style="background-color: yellow; border: 1px solid black; padding: 2px;">PS</span> Pump Station	● WCSA Manhole
● Manhole	— WCSA Gravity Main
— Force Main	- - - WCSA Force Main
— Gravity Main	- · - · - Town Boundary
<span style="background-color: gray; border: 1px solid black; padding: 2px;">PS</span> WCSA Pump Station	

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



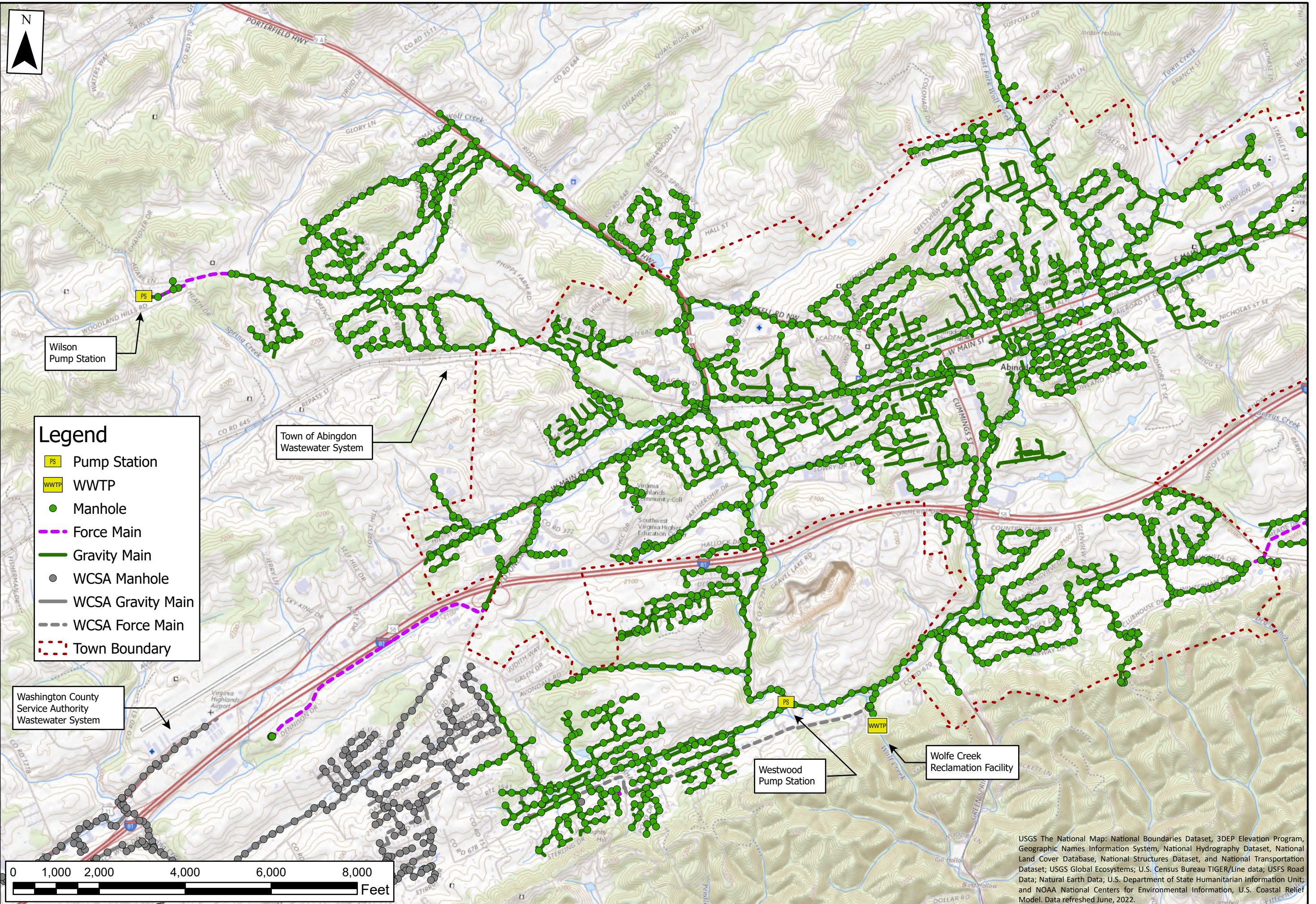
**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF ABINGDON  
WASTEWATER  
SYSTEM  
- EAST AREA**



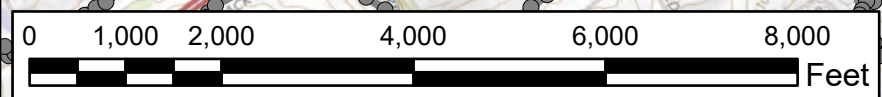
DATE:	11/10/2022
SHEET:	
DRAWN BY:	JJR
CHECKED BY:	
PROJECT NO.:	2248
THE LANE GROUP INC. © 2022	





**Legend**

- PS Pump Station
- WWTP WWTP
- Manhole
- Force Main
- Gravity Main
- WCSA Manhole
- WCSA Gravity Main
- WCSA Force Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF ABINGDON  
WASTEWATER  
SYSTEM  
- WEST AREA**



DATE: 11/10/2022	
SHEET:	
DRAWN BY: JR	CHECKED BY:
PROJECT NO. 2248	
THE LANE GROUP INC. © 2022	



**WOLF CREEK WATER RECLAMATION FACILITY**  
**VPDES PERMIT #VA0026531**  
**TOWN OF ABINGDON**  
*Mount Rogers PDC*

Facility Description – The treatment facility is located along Wolf Creek in the Town of Abingdon, Virginia, just off State Route 75 (see attached general vicinity map). The facility was originally constructed in 1978. The last major upgrade/expansion to the WWTP was made in 2011. The facility utilizes aerobic digestion as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Abingdon and a small portion of Washington County collection systems. The facility receives and treats approximately 60,000 gallons of septage per month. The permitted capacity of the facility is 4.95 MGD. The average daily flow treated at the facility during the calendar year 2021 was 2,543,815 GPD. The average daily flow treated at the facility for the highest three consecutive month period during the calendar year 2021 was 3,602,697. The facility exceeded 80% capacity for 23 days during this period. Effluent from the plant is discharged to Wolf Creek, a tributary to the South Holston Reservoir. Sludge from the facility is disposed of at a local landfill.

Facility Operation – The facility is operated and maintained by the Town of Abingdon. Currently, 15 full-time at the facility. The facility is required to be staffed 10 hours/day, Monday through Friday, and 8 hours/day on Saturday and Sunday.

Permit Violations – The facility has had zero (0) permit violations over the past 2 years.

Maintenance-Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- #2 Grit collector has an issue with the collection buckets; a trash pump is needed to pump down the area.
- The aeration dissolved oxygen controllers are sun damaged. All but two (2) of the controllers cannot be read if calibrated. The two (2) that currently work are used for controlling the blowers through a setpoint to maintain the dissolved oxygen levels necessary for properly treating the wastewater.
- One of the aeration blowers causes the main breaker to trip out.
- The centrifuges used to dewater the sludge have two polymer pumps, but only one (1) works on each unit.
- Both of the centrifuges go down frequently. Electricians have been in the plant to evaluate and troubleshoot the issues. There is old wiring, outdated electrical panels and monitors, and bypass wiring to override certain operational issues. Additionally, there are many mechanical issues with the centrifuges, particularly the motor and bearings.
- Continuous problems with the ultraviolet light disinfection system. The technician has been to the plant to evaluate the issues and helped with some repairs. His verbal assessment of the system is that it has exceeded its life expectancy, and some components are now obsolete.
- The VFD at the EQ basin is inoperable.
- The digester feed pump gearbox is out of service. It does not pump properly.
- Several pumps and motors throughout the plant are worn out or inoperable.
- Generators at Westwood and Wilson pump stations need to be replaced. Both generators are inoperable.



- The primary sludge tank leaks and needs repair or replacement.

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- See above. A PER is currently being drafted by The Lane Group, Inc.

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is currently being assessed in a PER by The Lane Group, Inc.



# BVU AUTHORITY COLLECTION SYSTEM

## BVU Authority

Mount Rogers Planning District Commission

System Description – The BVU Authority collection system serves the customers of the City of Bristol, Virginia. located off Exits 1, 3, 5, and 7 of I-81. The original collection system was constructed circa the 1950s.

The approximate number of customers served by the system was reported to be:

6,840	Residential Customers
1,060	Commercial Customers
0	Other Municipal Systems
<b>7,900</b>	<b>Total Number of Customers</b>

The system’s customer billings flow amounts for 2021 were estimated to be approximately **48%** residential and **52%** non-residential.

The collection system consists of 6” through 36” gravity lines. It is estimated that approximately 40% of the system consists of terra cotta or concrete lines and approximately 45% of the manholes are masonry brick. The newest area of the system was constructed in 2018. The oldest areas of the system are estimated to have been constructed in the 1950s.

There are two (2) pump stations in the BVU Authority’s system:

- *Information not provided by BVU Authority*

The system also collects flow from a portion of the Washington County Service Authority sewer system. BVU Authority did not provide the flow amount.

Treatment is ultimately provided at the City of Bristol, Tennessee WWTP (NPDES Permit #TN0023531).

System Flows - A summary of the system’s collected and billed flows for the calendar year 2021 is provided as follows:

<u>Month (2021)</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January	* N/A	60,030,500	
February		60,085,700	
March		57,443,200	
April		60,498,100	
May		58,031,300	
June		59,302,700	
July		57,730,100	
August		56,757,000	
September		77,906,600	
October		62,085,300	
November		63,626,200	
December		66,379,000	
<b>Monthly Average</b>		<b>61,656,308</b>	
<b>Daily Average</b>		<b>2,195,978</b>	
<b>Avg/Customer</b>		<b>278</b>	

\* - BVU Authority did not provide the 2021 gallons of wastewater treated.



### Permit Violations/System Overflows/Consent Order

- The BVU Authority collection system had **3** reported sewer system overflows during the calendar year 2021 due to excessive Infiltration and Inflow line blockages created by root intrusion, grease, or other debris, and lines at less than minimal slopes.
- The system has had no permit violations over the past 2 years.
- The system is under a consent order with the DEQ, effective February 8, 2019.

### Other Maintenance-Related Issues Experienced by System

- I/I related overflows
- Capacity issues related to I/I
- Frequent issues with pump stations maintenance
- Grease deposits

### System Needs

- Infiltration and inflow identification and remediation.
- Line rehabilitation
- Pump station rehabilitation
- Manhole rehabilitation
- Increased system capacity

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

### Sewer System Evaluation Survey (SSES)

There have been three (3) SSESs performed on the system; one (1) by Mattern & Craig prior to 2018, and two (2) by The Lane Group, Inc. (one in 2020 and one in 2022). The Lane Group, Inc. is currently working on a fourth SSES for a portion of the Beaver Creek Sewer Shed. The 2020 and 2022 SSESs identified a total of \$14.79 million of recommended system rehabilitation projects.

### Capital Improvements Plan

The system currently has a CIP adopted in 2021. The CIP includes \$46,950,000 of projects for completion in the next 6 years.

BVU Authority - Capital Improvement Plan							
Project Name	Water/Sewer	Year	No. of New Conn.	Est. L.F.	Pressure Zone/Sewer Shed Benefited	Reason for Project	Estimated Total Cost
Little Creek Sewer System Improvements	Sewer	2022	0	4,500	Little Creek Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 3,800,000
Beaver Creek Interceptor EQ Basin	Sewer	2024	0	1,800	Beaver Creek Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 7,300,000
BC-782 Phase 1 Interceptor Improvements	Sewer	2023	0	18,800	Beaver Creek Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 9,500,000
Sinking Creek Sewer System Improvements	Sewer	2023	0	25,650	Sinking Creek Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 2,550,000
Gate City Highway Sewer System Improvements	Sewer	2024	0	15,000	Gate City Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 1,500,000
BC-1568 Subbasin Sewer Improvements	Sewer	2025	0	15,000	Beaver Creek Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 5,300,000
BC-1301 SSES & Sewer System Improvements	Sewer	2026	0	8,000	Beaver Creek Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 2,000,000
Beaver Creek Interceptor - Phase 2 Improvements	Sewer	2028	0	3,600	Beaver Creek Sewer Shed	Aged Lines, SSOs, & Capacity	\$ 15,000,000

### Asset Management Plan

The BVU Authority has an Asset Management Plan for the BC-1568 sub-basin of the Beaver Creek Sewer Shed that was completed in 2022 as part of the SSES completed by The Lane Group, Inc.



Sewer Rate Structure

The following monthly sewer rate structure was last modified on July 1, 2022.

Residential – Inside City

\$17.14 Customer Charge, Min. Bill

\$3.86 per 1,000 Gallons Usage

Residential – Outside City

\$25.71 Customer Charge, Min. Bill

\$5.78 per 1,000 Gallons Usage

Non-Residential – Inside City

\$38.61 Customer Charge, Min. Bill

\$3.40 per 1,000 Gallons Usage

Non-Residential – Outside City

\$57.92 Customer Charge, Min. Bill

\$5.09 per 1,000 Gallons Usage

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is approximately \$14,790,000.

System Debt and Maturity Date of Outstanding Loans

*Information not provided by BVU Authority.*



BC-782 Improvements

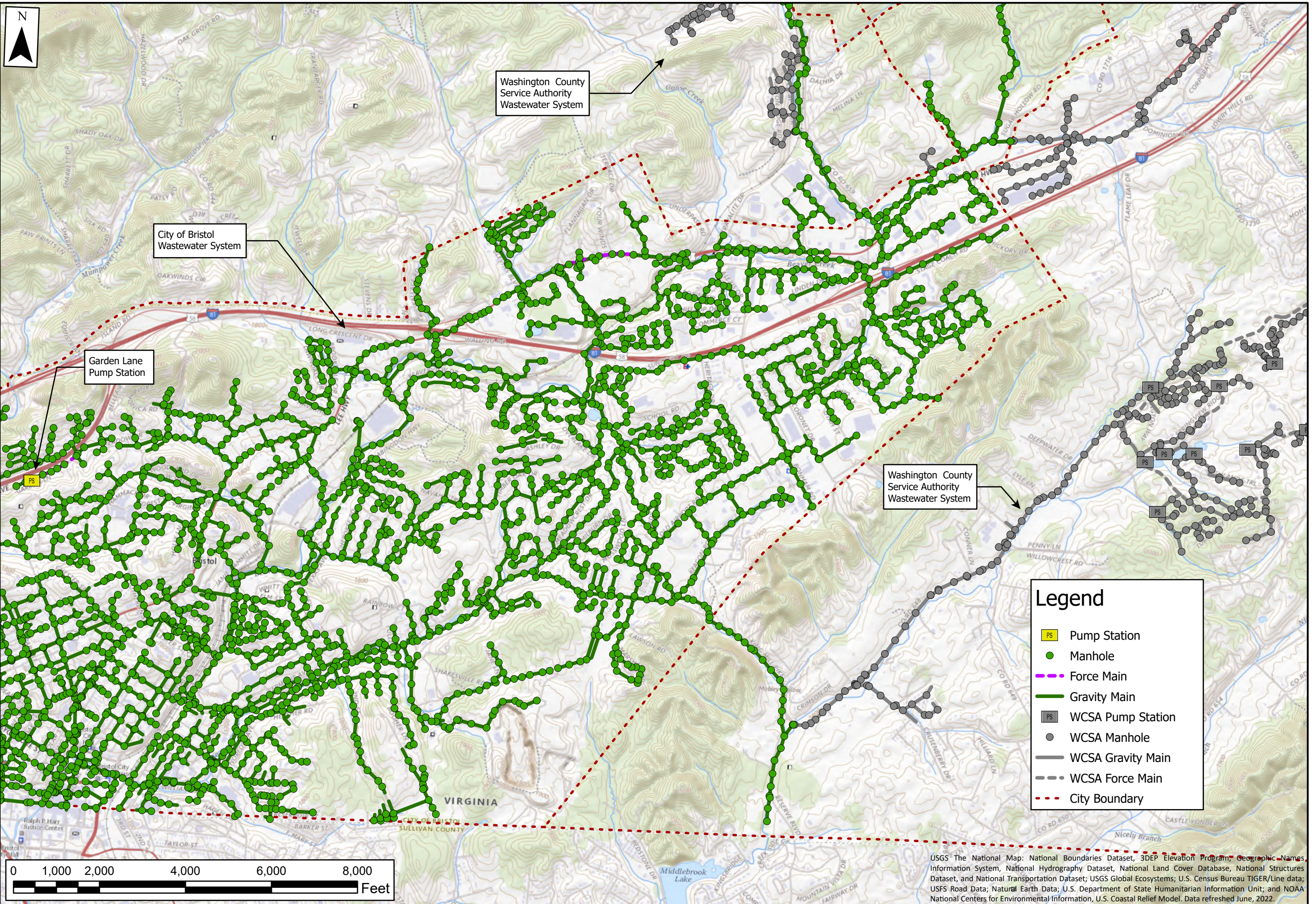
TABLE 4.1: OPINION OF PROBABLE COST PHASE I				
Description	Quantity	Units	Unit Cost	Overall Costs
<b>Option 1 - Full Interceptor Rehabilitation</b>				
Water-Tight Frame & Cover	78	EA	\$ 750	\$ 58,500
Cementitious Lining in Manholes (GeoKrete)	1,460	VF	\$ 275	\$ 401,500
10"-18" Joint Repair - Grout	1,400	EA	\$ 250	\$ 350,000
24" DIP Joint Repair - Grout	275	EA	\$ 275	\$ 75,625
30" RCP Joint Repair - Grout	1,750	EA	\$ 400	\$ 700,000
36" RCP Joint Repair - Grout	350	EA	\$ 500	\$ 175,000
UV CIPP Lining (12" CP)	3,500	LF	\$ 75	\$ 262,500
UV CIPP Lining (18" CP)	2,999	LF	\$ 125	\$ 374,875
UV CIPP Lining (24" CP)	1,480	LF	\$ 170	\$ 251,600
UV CIPP Lining (30" CP)	12,790	LF	\$ 225	\$ 2,877,750
UV CIPP Lining (36" CP)	3,400	LF	\$ 300	\$ 1,020,000
Liner End Seal	200	EA	\$ 750	\$ 150,000
Service Lateral Reconnections	60	EA	\$ 3,000	\$ 180,000
Service Lateral 4" Line Replacement	2,000	LF	\$ 65	\$ 130,000
I/I Boal Insert	100	EA	\$ 175	\$ 17,500
Bypass Pumping	1	LS	\$ 250,000	\$ 250,000
Bonds, Mobilization, & Insurance (@ 5.00%)	1	LS	\$ 373,800	\$ 373,800
<b>Full Interceptor Rehabilitation Construction Cost</b>				<b>\$ 7,648,650</b>
Contingency	10%	% of Const.	-	\$ 764,900
Basic Engineering	7.0%	% of Const.	-	\$ 535,406
Additional Engineering Services (Surveying & GIS Updates)	1%	% of Const.	-	\$ 89,894
CCTV Line Assessment	21,000	LF	\$ 7	\$ 150,000
Inspection	3,510	hours	\$ 65	\$ 228,150
Lane & Right-of-way	1	Each	\$ 25,000	\$ 25,000
Legal, Fiscal, & Administrative	1%	% of Const.	-	\$ 90,000
<b>Total Non-Construction Cost</b>				<b>\$ 1,883,350</b>
<b>Total Phase I Opinion of Probable Project Cost</b>				<b>\$ 9,532,000</b>



BC-1568 Improvements

<b>TABLE 4.1 - OPINION OF PROBABLE COST: PROPOSED IMPROVEMENTS</b>				
Description	Quantity	Units	Unit Cost	Overall Costs
12" Pipe Bursting (includes 8" to 12" bursting with materials)	4,385	LF	\$ 175	\$767,375
8" CIPP (UV Cure)	3,825	LF	\$ 65	\$248,625
12" CIPP (UV Cure)	591	LF	\$ 85	\$50,235
15" CIPP (UV Cure)	360	LF	\$ 115	\$41,400
18" CIPP (UV Cure)	1,174	LF	\$ 150	\$176,100
Liner End Seals	88	EA	\$ 750	\$66,000
8-inch DSR-35 Gravity Sewer (located in road), in-place/complete	4,350	LF	\$ 275	\$1,196,250
Manhole Rehabilitation (GeoPolymer Coating)	923	VF	\$ 425	\$392,275
Manhole replacement with water-tight frame and cover, in-place /complete	14	EA	\$ 14,000	\$196,000
Reconnect to existing 8" sewer to new manhole	88	EA	\$ 1,800	\$158,400
Lateral Replacement	1,500	LF	\$ 85	\$127,500
Lateral Reconnection	100	EA	\$ 3,000	\$300,000
Stream Crossing with concrete encasement	150	LF	\$ 400	\$60,000
Replace Frame and Cover	10	EA	\$ 1,000	\$10,000
I/I Bowl Insert	44	EA	\$ 200	\$8,800
Bypass Pumping	1	LS	\$ 100,000	\$100,000
Bonds, Mobilization, & Insurance (@5.00%)	1	LS	\$ 194,948	\$194,948
<b>Total Construction Cost</b>				<b>\$4,093,908</b>
Contingency	10%			\$409,391
Basic Engineering	10.0%			\$409,391
Additional Services	2%			\$90,976
Inspection	2400	hours	\$70	\$168,000
Legal, Fiscal, & Administrative	2%			\$81,878
<b>Subtotal Related Cost</b>				<b>\$1,159,635</b>
<b>Total Opinion of Probable Project Cost</b>				<b>\$5,253,543</b>





### Legend

- PS Pump Station
- Manhole
- Force Main
- Gravity Main
- PS WCSA Pump Station
- WCSA Manhole
- WCSA Gravity Main
- - - WCSA Force Main
- - - City Boundary

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
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SEWER STUDY 2022**

**BRISTOL VIRGINIA  
UTILITY AUTHORITY  
WASTEWATER SYSTEM  
- EAST AREA**



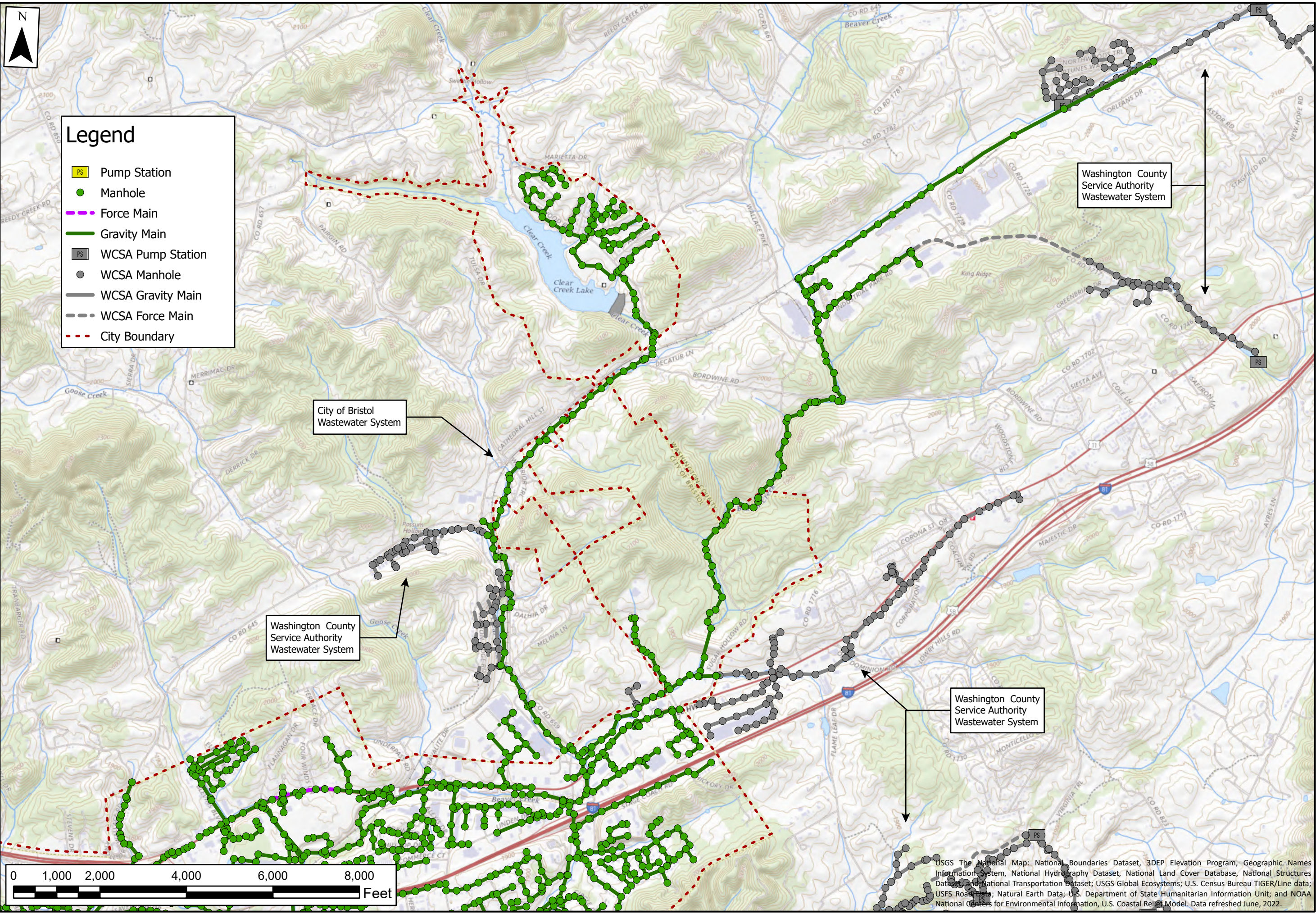
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**Legend**

- Pump Station
- Manhole
- Force Main
- Gravity Main
- WCSA Pump Station
- WCSA Manhole
- WCSA Gravity Main
- WCSA Force Main
- City Boundary

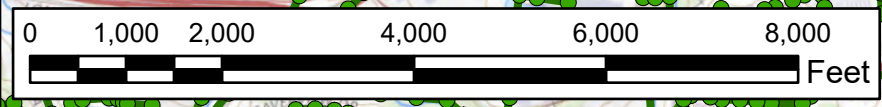


City of Bristol  
Wastewater System

Washington County  
Service Authority  
Wastewater System

Washington County  
Service Authority  
Wastewater System

Washington County  
Service Authority  
Wastewater System



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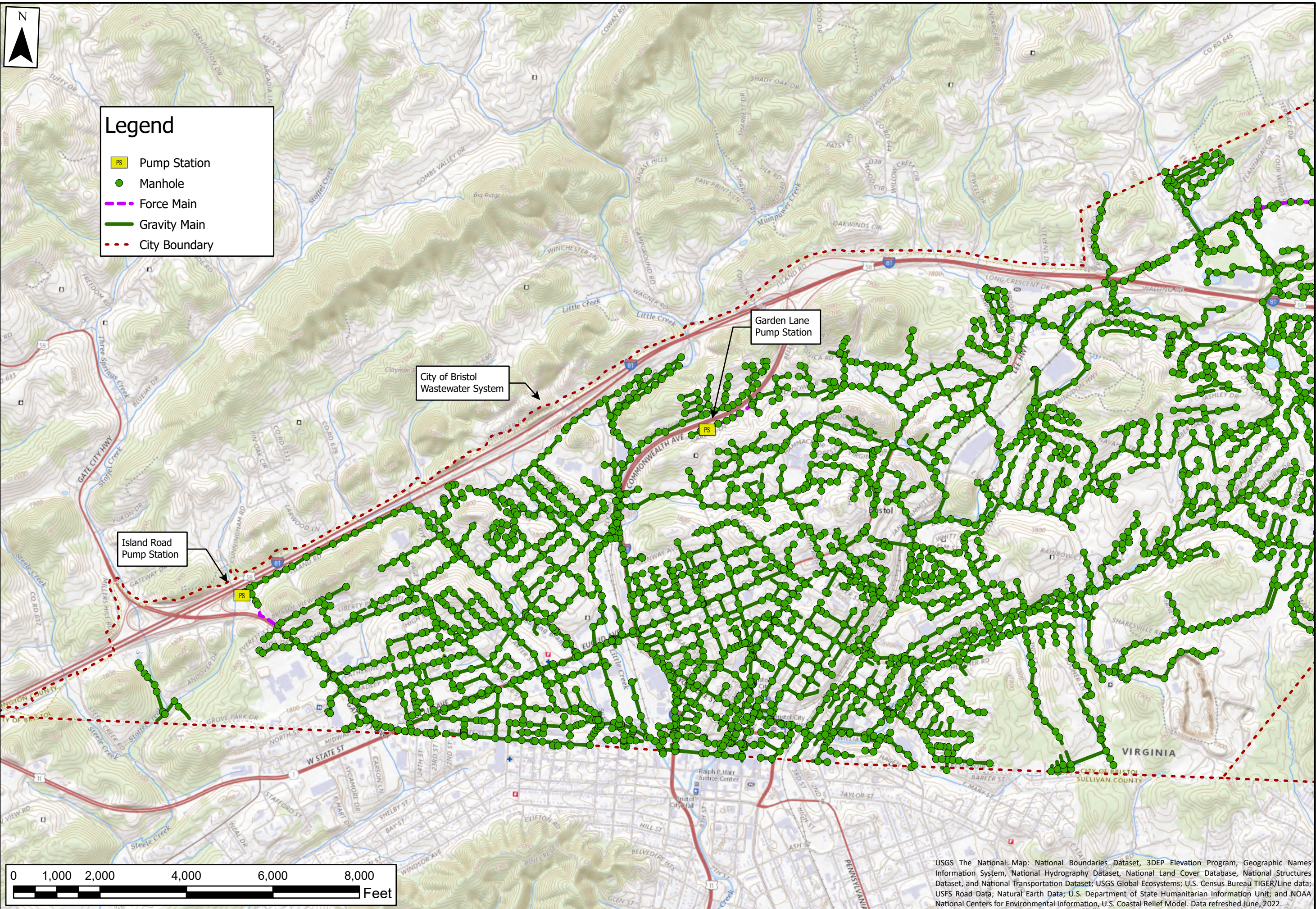
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SEWER STUDY 2022**

**BRISTOL VIRGINIA  
UTILITY AUTHORITY  
WASTEWATER SYSTEM  
- NORTH AREA**



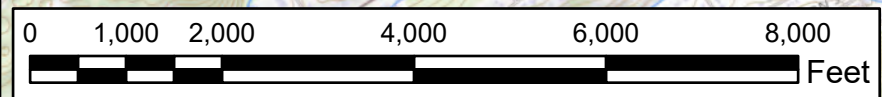
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**Legend**

- Pump Station
- Manhole
- Force Main
- Gravity Main
- City Boundary



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**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**BRISTOL VIRGINIA  
UTILITY AUTHORITY  
WASTEWATER SYSTEM  
- WEST AREA**



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**FANCY GAP COLLECTION SYSTEM**  
**CARROLL COUNTY PUBLIC SERVICE AUTHORITY**

*Mount Rogers Planning District Commission*

System Description – The Fancy Gap collection system serves the unincorporated community of Fancy Gap located near the I-77 Exit 8 interchange and the Route 52/ Blue Ridge Parkway interchange. The collection system was constructed in 2013.

The approximate number of customers served by the system was reported to be:

<u>29</u>	Residential Customers
<u>47</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>76</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **10%** residential and **90%** non-residential.

The collection system consists entirely of 8” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The entire system was constructed in 2013.

None of the system experiences problems with capacity due to inadequately sized lines.

The system includes three pump stations:

- Route 52 Pump Station – 23 GPM submersible grinder pump station serving the south side of Route 52/ Blue Ridge Parkway intersection. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line north of the Parkway.
- Frog Spur Pump Station – 40 GPM submersible grinder pump station serving the north side of the Route 52/ Blue Ridge Parkway intersection. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line along Route 52.
- Reedside Pump Station – 200 GPM suction lift sewage pump station that receives all flow from this collection system. The pump station discharges through a 6” force main that empties into an 8” gravity sewer line located near the Carroll County Industrial Park at I-77 Exit 14. The receiving sewer system is part of the Carroll County PSA’s Gladeville/ Cranberry Sewer System.

The system does not collect flow from any other system(s).

Flow collected by the system is conveyed to the CCPSA’s Gladeville/Cranberry system. Treatment is ultimately provided at the City of Galax WWTP (VPDES Permit #VA0078484).

System Flows - Flows for the collection system are estimated based upon pump run times for the Reedside pump station. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	186,480	176,500	94.6%
February	294,360	267,000	90.7%
March	292,680	220,500	75.3%
April	250,920	311,000	123.9%
May	288,900	334,000	115.6%
June	437,200	365,600	83.6%
July	283,600	340,700	120.1%
August	310,800	407,000	131.0%
September	317,760	324,200	102.0%



October	259,800	304,500	117.2%
November	288,960	255,600	88.5%
December	208,200	185,900	89.3%
<b>Monthly Average</b>	<b>284,972</b>	<b>291,042</b>	<b>102.1%</b>
<b>Daily Average</b>	<b>9,369</b>	<b>9,568</b>	<b>102.1%</b>
<b>Avg / Customer</b>	<b>123</b>	<b>126</b>	

Permit Violations/System Overflows/Consent Order

- The Fancy Gap collection system had 0 reported sewer system overflows during calendar year 2021.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Frequent issues with pump stations maintenance

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

An SSES Report has not been completed for the system.

Capital Improvements Plan

The system currently does not have an adopted CIP.

Asset Management Plan

The system does not have an asset management plan.

Sewer Rate Structure

The following monthly sewer rate structure was last modified on July 15, 2021:

Residential Sewer

First 1,000 Gallons @ \$24.20 Minimum

All Over 1,000 Gallons @ \$11.00 per 1,000 Gallons

Commercial Sewer

First 2,000 Gallons @ \$67.21 Minimum

All Over 2,000 Gallons @ \$9.50 per 1,000 Gallons

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ N/A. (Include table breakdown is possible).

System Debt and Maturity Date of Outstanding Loans

The system currently has approximately \$1,726,654 in outstanding loan.

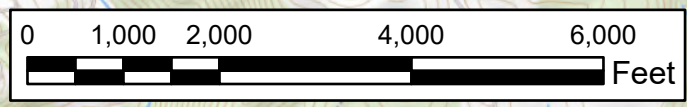
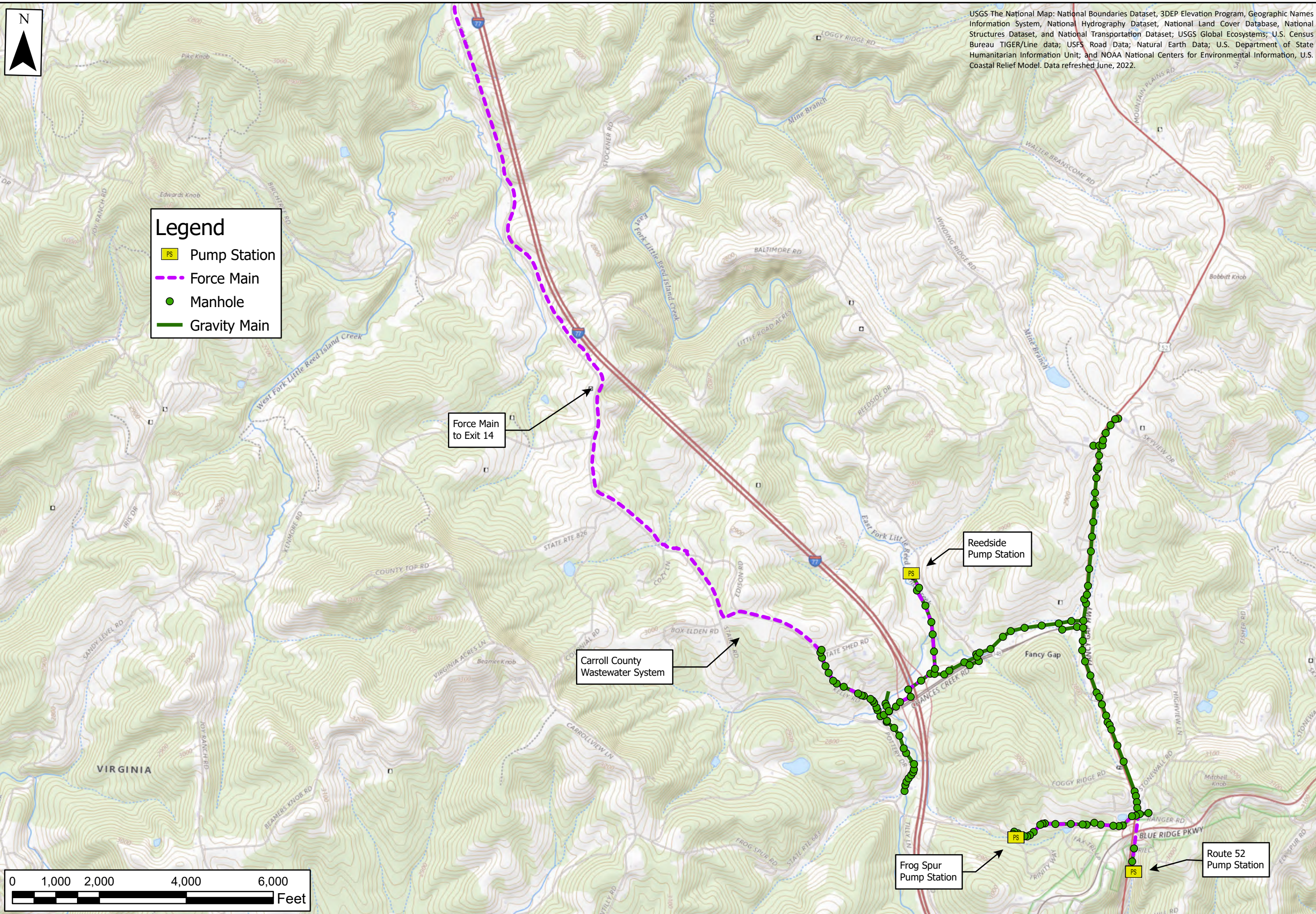




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**Legend**

- PS Pump Station
- Force Main
- Manhole
- Gravity Main



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**CARROLL COUNTY  
WASTEWATER  
SYSTEM - FANCY GAP  
AREA**



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# GLADEVILLE/ CRANBERRY COLLECTION SYSTEM

## CARROLL COUNTY PUBLIC SERVICE AUTHORITY

*Mount Rogers Planning District Commission*

System Description – The Gladeville/Cranberry collection system serves the unincorporated communities of Gladeville and Woodlawn along the greater Route 58 corridor from the Galax city limits east to the I-77 Exit 14 interchange. The collection system was constructed in 1997.

The approximate number of customers served by the system was reported to be:

<u>889</u>	Residential Customers
<u>69</u>	Commercial Customers
<u>4</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>962</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately **92%** residential and **8%** non-residential.

The collection system consists of 8" through 15" gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 2020. The oldest areas of the system are estimated to have been constructed in 1985.

None of the system experiences problems with capacity due to inadequately sized lines.

The system includes seven pump stations:

- I-77 Exit 14 Pump Station – 200 GPM suction lift pump station serving the Exit 14 interchange area. The pump station discharges through a 6" force main that empties into an 8" gravity sewer line flowing toward Woodlawn. This pump station also has a backup force main connection to the Hillsville system.
- Industrial Park Pump Station – 75 GPM suction lift pump station serving a portion of the Carroll County Industrial Park. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line flowing to the I-77 Exit 14 pump station.
- DLB Pump Station – 22 GPM grinder pump station serving a portion of Expansion Drive. The pump station discharges through a 2" force main that empties into the Industrial Park pump station.
- Airport Road Pump Station – 340 GPM suction lift sewage pump station serving Wildwood Corporate Park and the I-77 Exit 19 interchange. The pump station discharges through a 6" force main that empties into a 10" gravity sewer line that flows to Woodlawn.
- Woodlawn Pump Station – 440 GPM suction lift sewage pump station serving the Woodlawn community and receives pumped flow from the Airport Road and Exit 14 pumpstations. The pump station discharges through an 8" force main that empties into a 10" gravity sewer line flowing to the Crooked Creek pump station. The Woodlawn pump station has a 100,000 flow equalization tank system.
- Crooked Creek Pump Station – 510 GPM suction lift sewage pump station serving the Route 58 corridor near Crooked Creek. The pump station discharges through an 8" force main that empties into a 12" gravity sewer line that flows to the Hills Pump Station.
- Hills Pump Station – 620 GPM suction lift sewage pump station serving the Glendale Road area. The pump station discharges through an 8" force main that empties into a 12" gravity sewer line flowing to the Gladeville Pump Station.
- Gladeville Pump Station – 730 GPM suction lift sewage pump station serving the Gladeville community and Cranberry Road area. The pump station discharges through an 8" force main that empties into the City of Galax's sewer system.

The system also collects flow from the Fancy Gap system.



Flow collected by the system is conveyed to the City of Galax system. Treatment is ultimately provided at the City of Galax WWTP (VPDES Permit #VA0078484).

System Flows - Flows for the collection system are estimated based upon meter readings at the Gladeville pump station. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	21,298,756	13,240,749	62.2%
February	16,145,566	14,142,131	87.6%
March	23,187,302	16,142,558	69.6%
April	19,450,290	18,845,290	96.9%
May	20,117,710	17,308,570	86.0%
June	23,281,245	21,282,867	91.4%
July	18,629,974	24,280,328	130.3%
August	17,169,376	16,826,000	98.0%
September	20,445,596	16,562,140	81.0%
October	17,790,041	14,395,035	80.9%
November	18,459,600	15,287,869	82.8%
December	17,490,200	13,285,814	76.0%
<b>Monthly Average</b>	<b>19,455,471</b>	<b>16,799,946</b>	<b>86.4%</b>
<b>Daily Average</b>	<b>639,632</b>	<b>552,327</b>	<b>86.4%</b>
<b>Avg / Customer</b>	<b>665</b>	<b>574</b>	

Permit Violations/System Overflows/Consent Order

- The Gladeville/Cranberry collection system had 2 reported sewer system overflows during calendar year 2021. Both were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Frequent issues with pump stations maintenance

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

An I/I study for this system is currently being completed by TLG.

Capital Improvements Plan

The system currently does not have an adopted CIP.

Asset Management Plan

The system does not have an asset management plan.

Sewer Rate Structure

The following monthly sewer rate structure was last modified on July 15, 2021:



Residential Sewer

First 1,000 Gallons @ \$24.20 Minimum  
All Over 1,000 Gallons @ \$11.00 per 1,000 Gallons

Commercial Sewer

First 2,000 Gallons @ \$67.21 Minimum  
All Over 2,000 Gallons @ \$9.50 per 1,000 Gallons

Industrial Sewer

First 2,000 Gallons @ \$67.25 Minimum  
All Over 2,000 Gallons @ \$8.25 per 1,000 Gallons

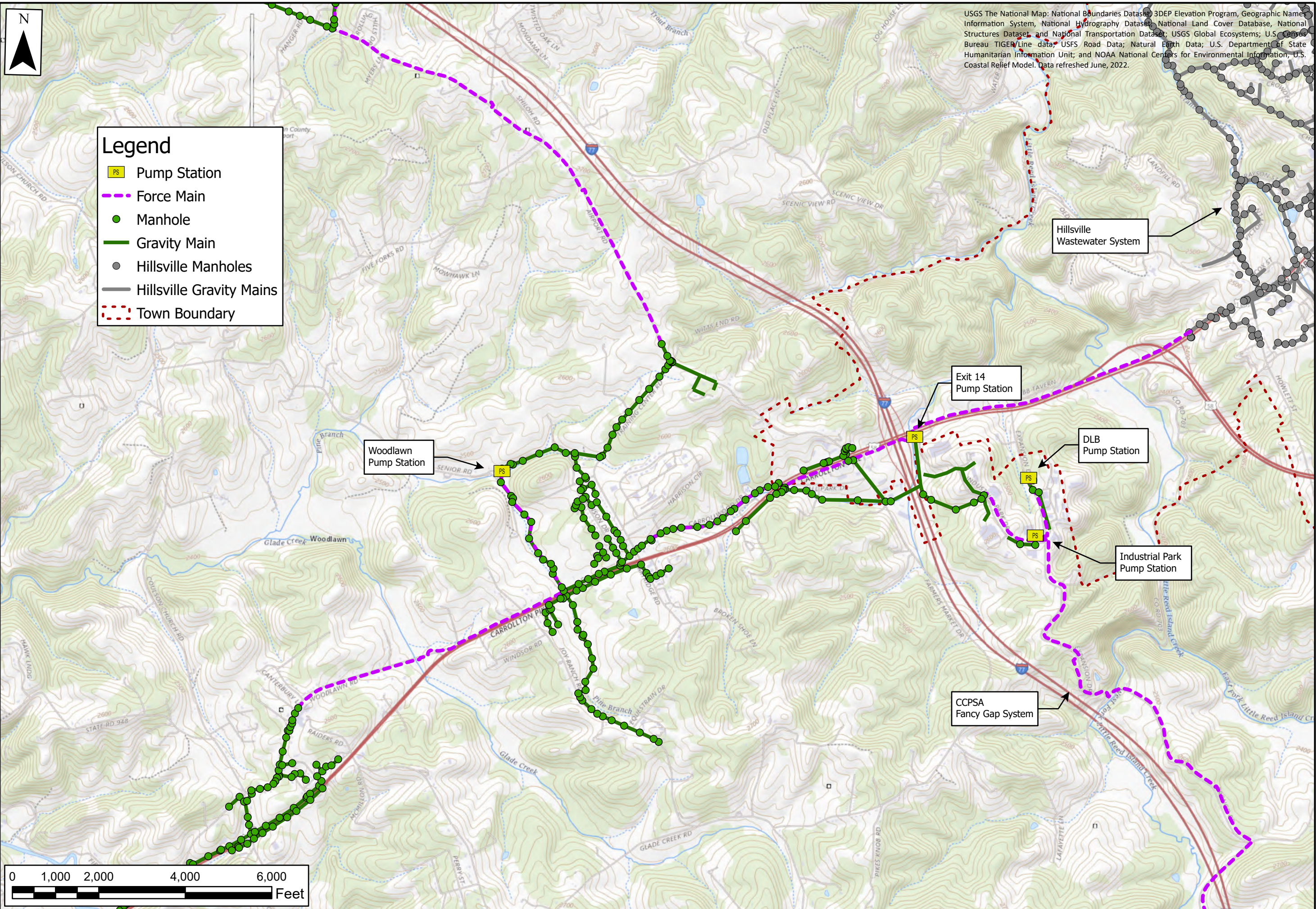
Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$\_\_\_\_\_N/A\_\_\_\_\_. (Include table breakdown is possible).

System Debt and Maturity Date of Outstanding Loans

The system currently has approximately \$ 5,186,011 in outstanding loans:

<u>Loan Balance</u>	<u>Payoff Date</u>
\$ 243,967	2039
623,587	2040
2,820,590	2048
1,497,867	2052

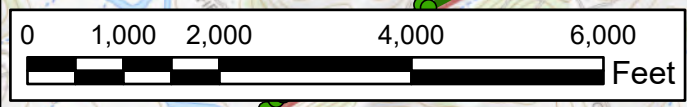




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**Legend**

- Pump Station
- Force Main
- Manhole
- Gravity Main
- Hillsville Manholes
- Hillsville Gravity Mains
- Town Boundary



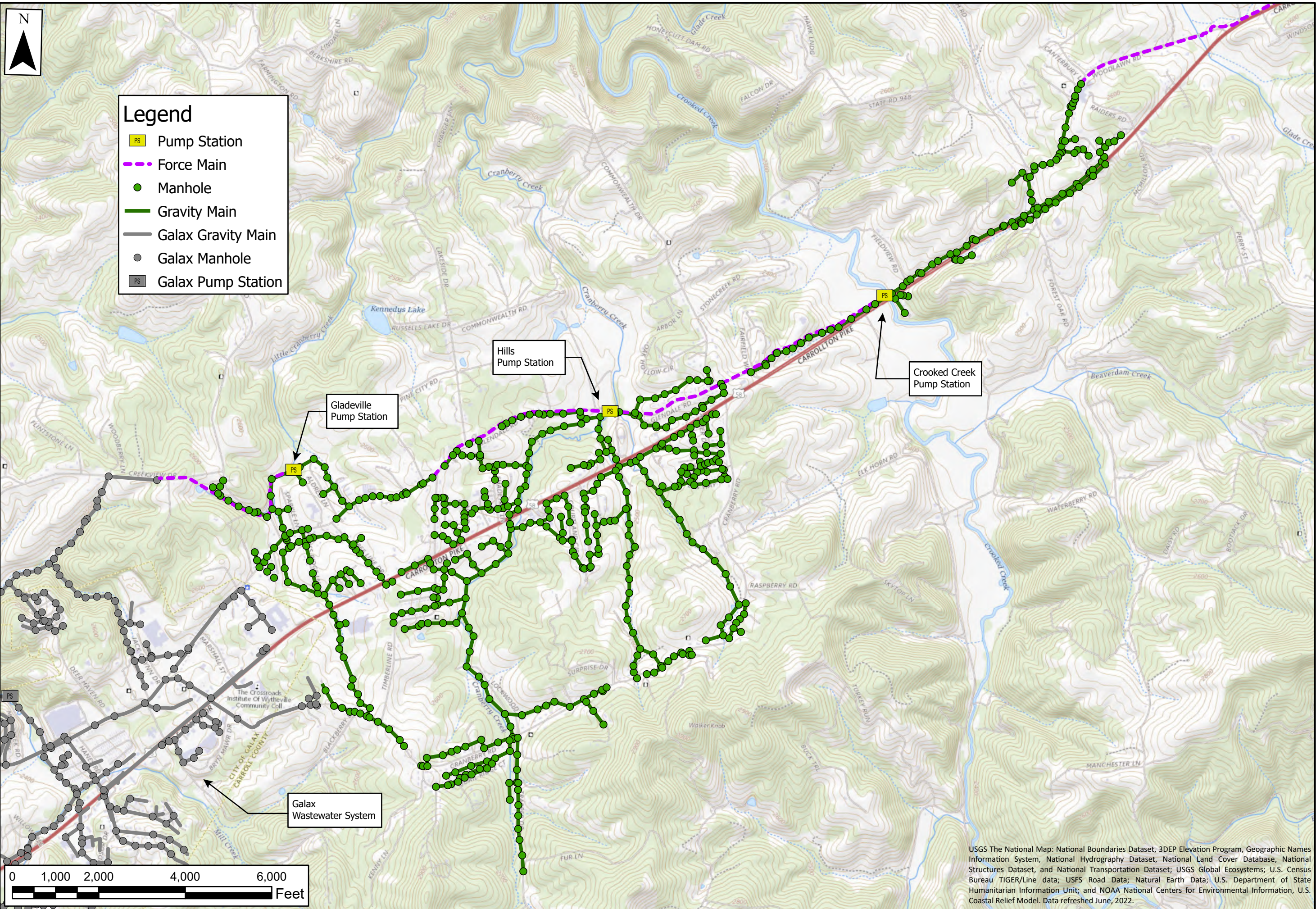
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SEWER STUDY 2022**

**CARROLL COUNTY  
WASTEWATER SYSTEM  
- GLADEVILLE/  
CRANBERRY**



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# I-77 EXIT 1 COLLECTION SYSTEM

## CARROLL COUNTY PUBLIC SERVICE AUTHORITY

Mount Rogers Planning District Commission

System Description – The I-77 Exit 1 collection system serves a portion of the I-77 Exit 1 interchange, including the Loves Truck Stop. The collection system was constructed in 2010.

The approximate number of customers served by the system was reported to be:

<u>0</u>	Residential Customers
<u>3</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>0</u>	<u>Other Municipal Systems</u>
<b>3</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 0% residential and 100% non-residential.

The collection system consists entirely of 8” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The entire system was constructed in 2010.

None of the system experiences problems with capacity due to inadequately sized lines.

The system includes one pump station:

- Exit 1 Pump Station – 64 GPM submersible grinder pump station serving the entire collection system. The pump station discharges through a 3” force main that empties into the WWTP.

The system does not collect flow from no other system(s).

Flow collected by the system is conveyed to the CCPSA’s I-77 Exit 1 WWTP (VPDES Permit #VA0092312).

System Flows - Flows for the collection system are estimated based upon the WWTP’s monthly DMR reports and customer billing records. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

	<b>Gallons</b>	<b>Gallons</b>	<b>Percent</b>
<b><u>Month</u></b>	<b><u>Treated</u></b>	<b><u>Billed</u></b>	<b><u>Accountable</u></b>
January 2021	248,000	377,600	152.3%
February	196,000	275,200	140.4%
March	248,000	433,200	174.7%
April	270,000	374,700	138.8%
May	300,000	413,400	137.8%
June	360,000	408,300	113.4%
July	341,000	444,900	130.5%
August	341,000	399,400	117.1%
September	240,000	392,300	163.5%
October	186,000	367,300	197.5%
November	210,000	357,500	170.2%
December	248,000	392,300	158.2%
<b>Monthly Average</b>	<b>265,667</b>	<b>386,342</b>	<b>145.4%</b>
<b>Daily Average</b>	<b>8,734</b>	<b>12,702</b>	<b>145.4%</b>
<b>Avg / Customer</b>	<b>2,911</b>	<b>4,234</b>	



### Permit Violations/System Overflows/Consent Order

- The I-77 Exit 1 collection system had **0** reported sewer system overflows during calendar year 2021.
- The system has had over 40 VPDES permit violations during the time period January-August 2022.
- The system entered into a Consent Order with DEQ in August 2021. The PSA initially complied with all provisions of the Consent Order, but the system has received subsequent NOV's from DEQ. The PSA is continuing to work with DEQ to address the VPDES Permit violations.

### Other Maintenance Related Issues Experienced by System

- Frequent issues with pump station clogging, equipment failure at the WWTP, and violation of VPDES Permit effluent limits.

### System Needs

- Upgrade of collection system pump station to include screening. Upgrade of WWTP or connection to the City of Mount Airy wastewater system for treatment.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

An SSES Report has not been completed for the system.

### Capital Improvements Plan

The system currently does not have an adopted CIP.

### Asset Management Plan

The system does not have an asset management plan.

### Sewer Rate Structure

The following monthly sewer rate structure was last modified on July 15, 2021:

#### Commercial Sewer

First 2,000 Gallons @ \$67.21 Minimum

All Over 2,000 Gallons @ \$9.50 per 1,000 Gallons

All Over 200,000 Gallons @ \$30.00 per 1,000 Gallons

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$\_\_\_\_\_. (Include table breakdown is possible).

### System Debt and Maturity Date of Outstanding Loans

The system currently has approximately \$\_\_\_\_\_ in outstanding loan.

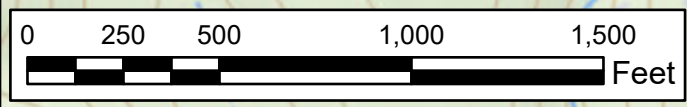
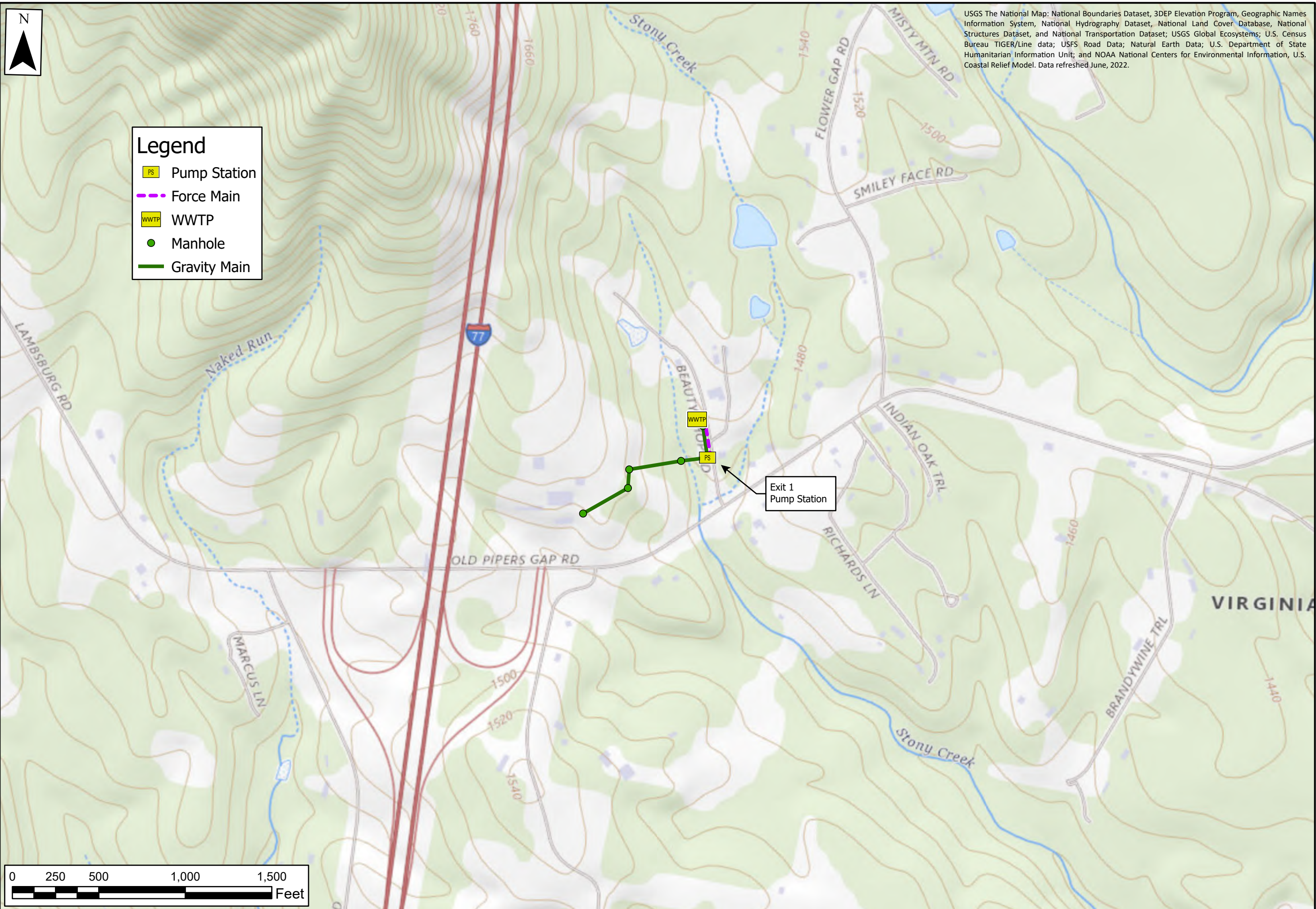




**Legend**

- PS Pump Station
- Force Main
- WWTP
- Manhole
- Gravity Main

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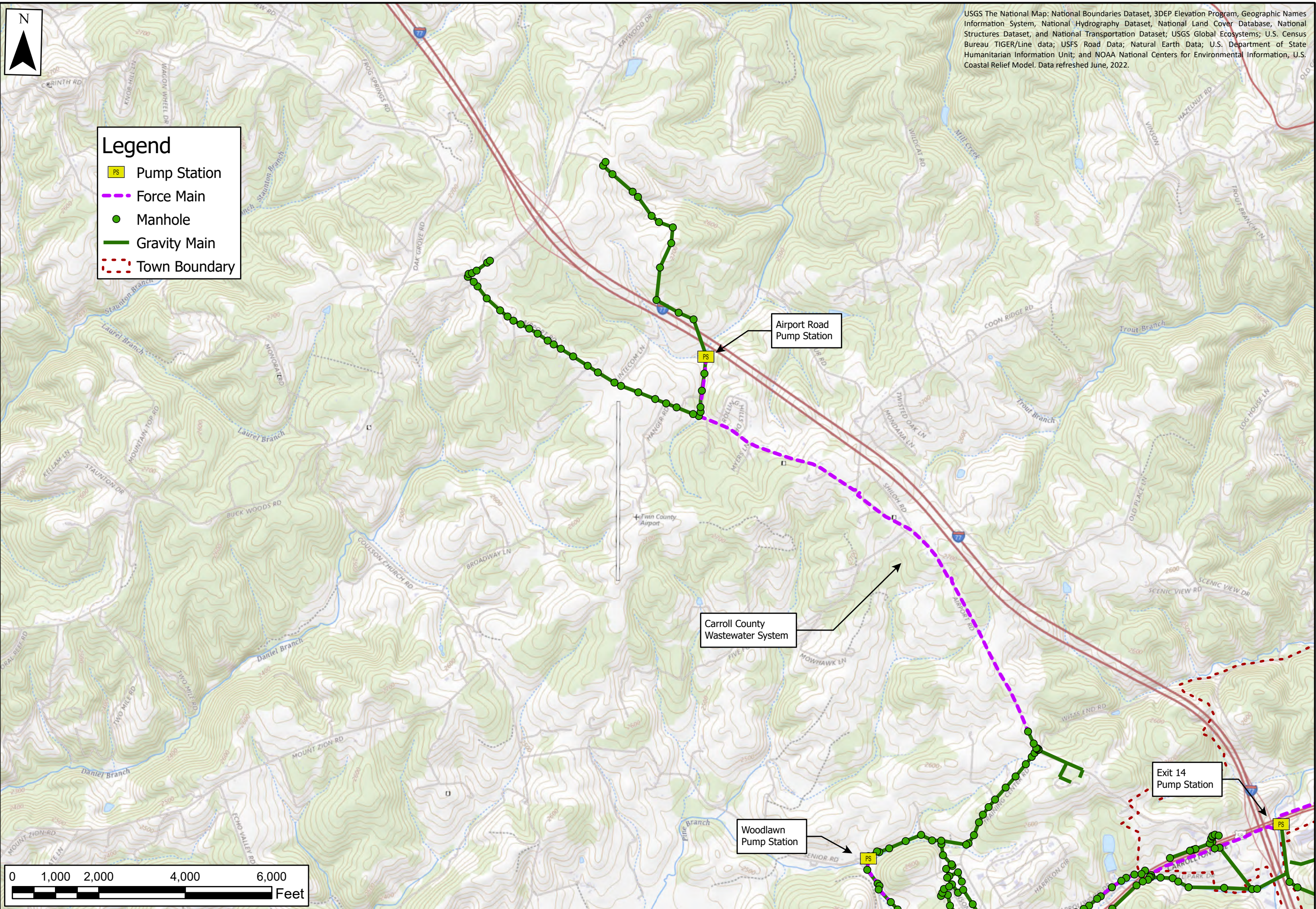
SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

CARROLL COUNTY  
WASTEWATER  
SYSTEM - I-77 EXIT 1



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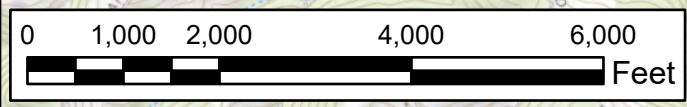




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**Legend**

- Pump Station
- Force Main
- Manhole
- Gravity Main
- Town Boundary



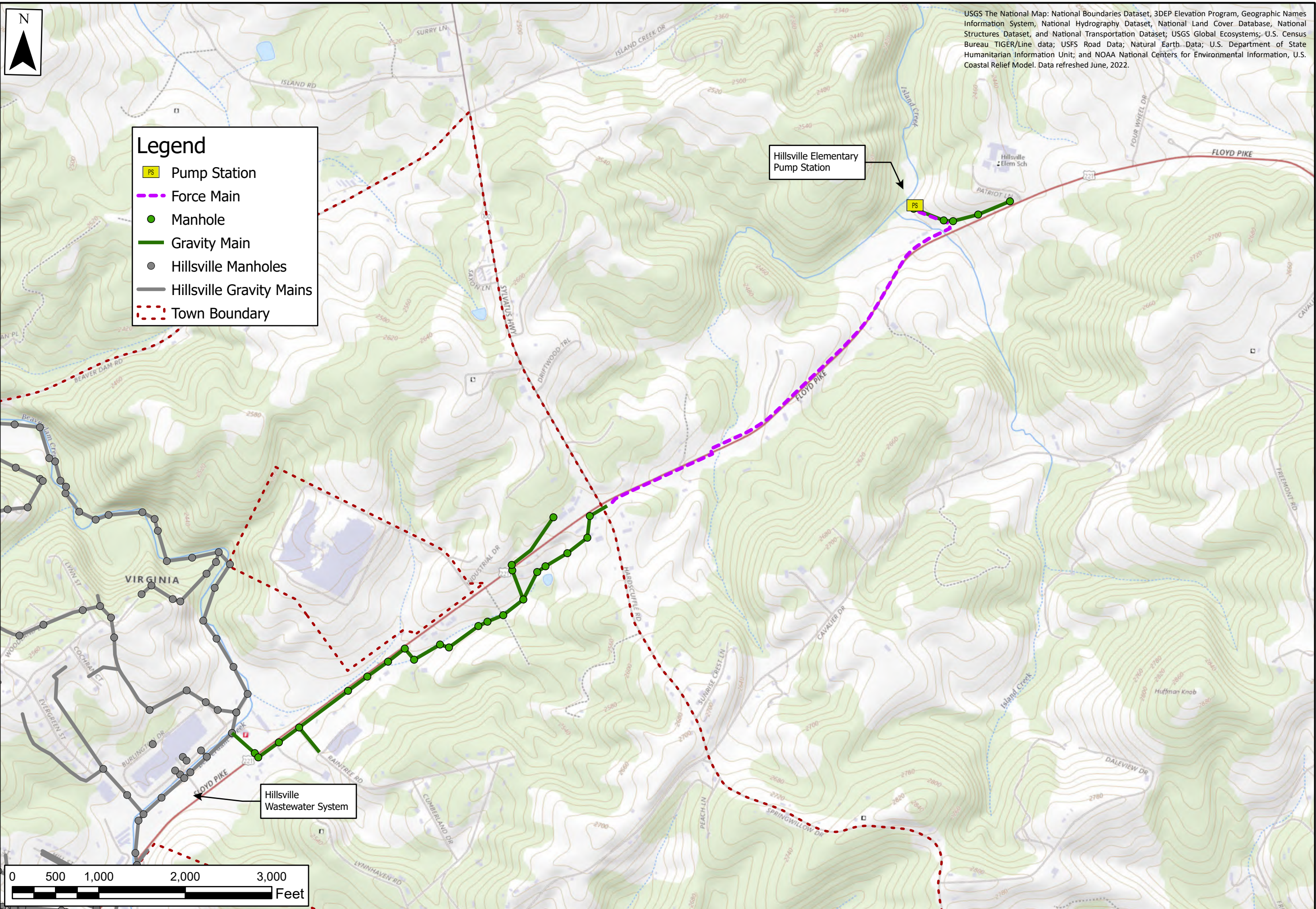
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**CARROLL COUNTY  
WASTEWATER  
SYSTEM - AIRPORT  
AREA**



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SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

CARROLL COUNTY  
WASTEWATER  
SYSTEM - ROUTE 221  
AREA



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# TOWN OF CHILHOWIE COLLECTION SYSTEM

## Town of Chilhowie

Mount Rogers Planning District Commission

System Description – The Town of Chilhowie collection system serves the customers of the Town of Chilhowie located off I-81 Exit 35. The original collection system was constructed circa the 1960s.

The approximate number of customers served by the system was reported to be:

<u>1,039</u>	Residential Customers
<u>130</u>	Commercial Customers
<u>5</u>	Industrial Customers
<u>1</u>	Other Municipal Systems
<b>1,175</b>	<b>Total Number of Customers</b>

The system's customer billings flow amounts for 2021 were estimated to be approximately **86%** residential and **14%** non-residential.

The collection system consists of 6" through 24" gravity lines. It is estimated that approximately 85% of the system consists of terra cotta or concrete lines and approximately 55% of the manholes are masonry brick. The newest area of the system was constructed in 2015. The oldest areas of the system are estimated to have been constructed in the 1960s.

The system includes one (1) pump station:

- Kennametal Pump Station – 250 GPM submersible grinder pump station serving the western portion of the Town's sewer system and was constructed in 1980

The system also collects flow from a portion of the Smyth County sewer system at approximately 4,500 GPD.

Treatment is ultimately provided at the Chilhowie Regional WWTP (VPDES Permit #VA0026379).

System Flows - A summary of the system's collected and billed flows for the calendar year 2021 is provided as follows:

<u>Month (2021)</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January	9,744,000	Unknown	
February	1,367,000	8,954,640	655%
March	14,929,000	16,563,383	111%
April	10,458,000	5,593,557	53%
May	5,313,000	5,440,829	102%
June	5,486,000	4,874,771	89%
July	6,440,000	5,349,049	83%
August	6,973,000	6,476,666	93%
September	5,682,000	17,083,214	301%
October	6,612,000	5,532,779	84%
November	5,043,000	16,209,005	321%
December	5,782,000	7,372,976	128%
<b>Monthly Average</b>	<b>6,985,750</b>	<b>9,040,988</b>	
<b>Daily Average</b>	<b>248,808</b>	<b>297,238</b>	
<b>Avg/Customer</b>	<b>212</b>	<b>253</b>	



### Permit Violations/System Overflows/Consent Order

- The Town of Chilhowie collection system had **3** reported sewer system overflows during the calendar year 2021. Two (2) were due to excessive Infiltration and Inflow, and zero (0) were due to line blockages created by root intrusion, grease, or other debris.
- The system has had no permit violations over the past 2 years.
- The system is not under a consent order with the DEQ.

### Other Maintenance-Related Issues Experienced by System

- I/I related overflows
- Capacity issues related to I/I
- Frequent issues with pump stations maintenance

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

### Sewer System Evaluation Survey (SSES)

Two SSESs were performed on the system in 2021 and 2022 by Hurt & Proffitt. The SSESs identified a total of \$3.2 million of recommended system rehabilitation projects.

### Capital Improvements Plan

The Town of Chilhowie does not currently have Capital Improvements Projects (CIP) budgeted.

### Asset Management Plan

The Town does not have an Asset Management Plan.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 2022.

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is (*information not provided*). (Include table breakdown if possible).

### System Dept and Maturity Date of Outstanding Loans

The Town currently has a total of \$2,599,482 in outstanding loans:

- \$270,649 - Matures October 2027
- \$525,255 - Matures March 2029
- \$788,923 - October 2033
- \$1,014,655 - January 2042



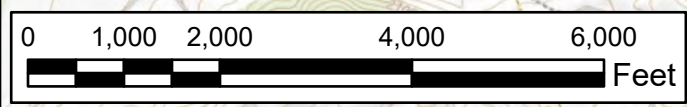
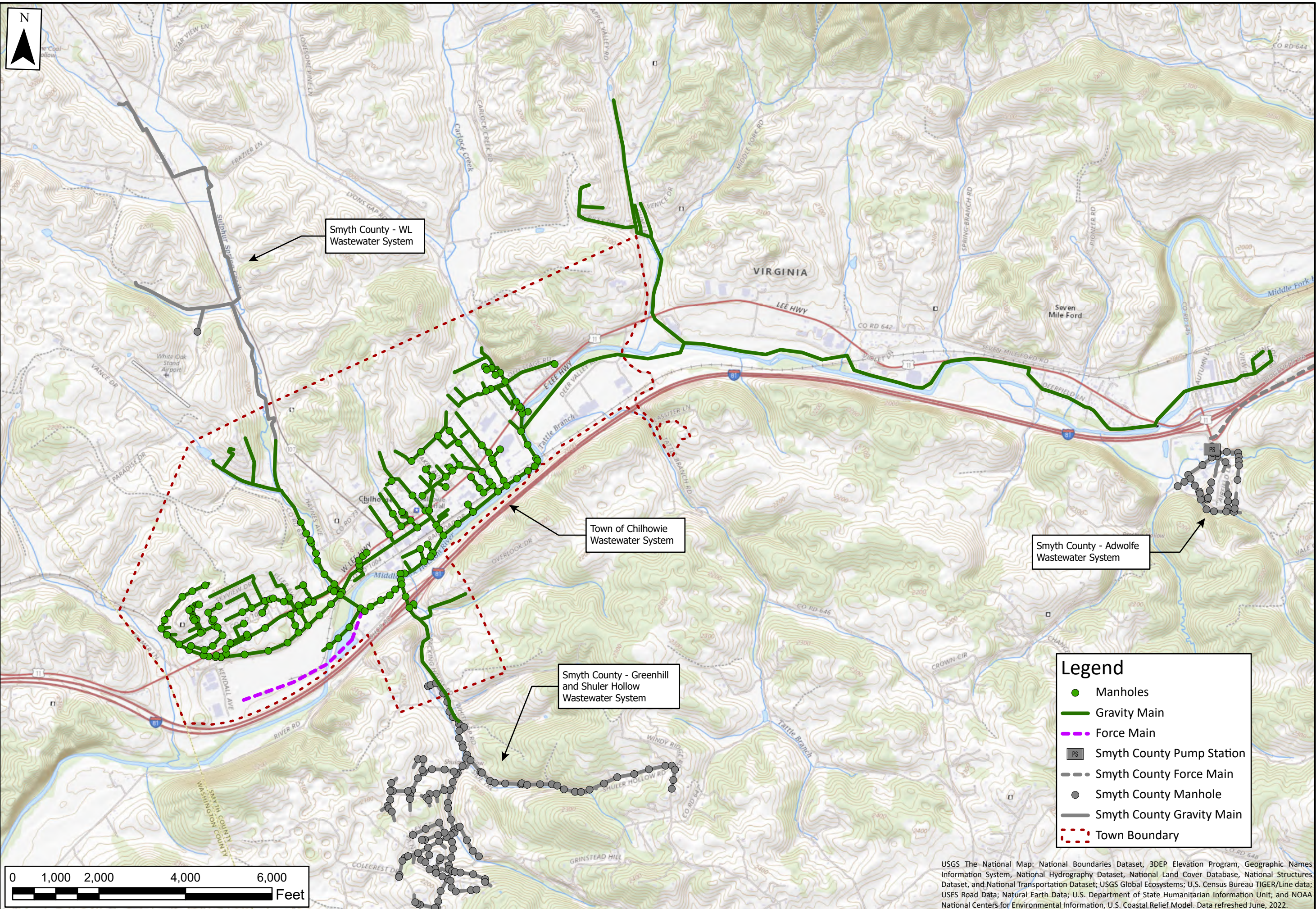
**Town of Chilhowie  
Rate Schedule  
WATER**

		<b>2022-2023</b>		<u>Current</u>	<u>Increase</u>
		<b>Effective July 1, 2022</b>		<u>2021-2022</u>	<u>2022-2023</u>
<b>Residential</b>					
<b>In Town</b>					
First	2,000 gallons @	\$ 22.34	Min.	\$ 21.28	5.00%
All over	2,000 gallons @	\$ 5.58	per 1,000 gal	\$ 5.31	5.00%
<b>Out of Town</b>					
First	2,000 gallons @	\$ 41.12	Min.	\$ 40.12	2.50%
All over	2,000 gallons @	\$ 10.31	per 1,000 gal	\$ 10.06	2.50%
<b>Commercial/Industrial</b>					
<b>In Town</b>					
First	5,000 gallons @	\$ 40.47	Min.	\$ 38.54	5.00%
Next	495,000 gallons @	\$ 6.92	per 1,000 gal	\$ 6.59	5.00%
All over	500,000 gallons @	\$ 5.57	per 1,000 gal	\$ 5.30	5.00%
<b>Out of Town</b>					
First	5,000 gallons @	\$ 53.00	Min.	\$ 51.71	2.50%
Next	495,000 gallons @	\$ 6.33	per 1,000 gal	\$ 6.18	2.50%
All over	500,000 gallons @	\$ 5.08	per 1,000 gal	\$ 4.96	2.50%
<b>SEWER</b>					
<b>Residential</b>					
<b>In Town</b>					
First	2,000 gallons @	\$ 22.77	Min.	\$ 21.48	6.00%
All over	2,000 gallons @	\$ 5.69	per 1,000 gal	\$ 5.37	6.00%
<b>Out of Town</b>					
First	2,000 gallons @	\$ 45.08	Min.	\$ 45.08	0.00%
All over	2,000 gallons @	\$ 11.30	per 1,000 gal	\$ 11.30	0.00%
<b>Commercial/Industrial</b>					
First	5,000 gallons @	\$ 55.21	Min.	\$ 52.58	5.00%
Next	495,000 gallons @	\$ 9.35	per 1,000 gal	\$ 8.90	5.00%
All over	500,000 gallons @	\$ 5.30	per 1,000 gal	\$ 5.05	5.00%
<b>MUNICIPAL</b>					
First	1,000 gallons @	\$ 4.51	Min 5000 gal per 1,000 gal ( next 495,000) per 1,000 gal. (all over 500,000)	\$ 4.40	2.50%
Next	495,000 gallons @	\$ 4.51		\$ 4.40	2.50%
All over	500,000 gallons @	\$ 4.51		\$ 4.40	2.50%
Per Agreement rate effective July 1, 2017					

**MUNICIPAL SEWER - Rate Set by Smyth County**

First	1,000 gallons @	\$ 21.43	Min.	\$ 21.43	0%
Next	5,000 gallons @	\$ 9.29	per 1,000 gal	\$ 9.29	0%
All over	6,000 gallons @	\$ 11.43	per 1,000 gal	\$ 11.43	0%





- Legend**
- Manholes
  - Gravity Main
  - Force Main
  - PS Smyth County Pump Station
  - Smyth County Force Main
  - Smyth County Manhole
  - Smyth County Gravity Main
  - - - Town Boundary

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF  
CHILHOWIE  
WASTEWATER  
SYSTEM



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## TOWN OF FRIES COLLECTION SYSTEM

### Town of Fries

*Mount Rogers Planning District Commission*

System Description – The Town of Fries collection system serves customers within the Town’s corporate limits. The original collection system was constructed circa the mid 1900s.

The approximate number of customers served by the system was reported to be:

<u>286</u>	Residential Customers
<u>10</u>	Commercial/Industrial Customers
<u>296</u>	<b>Total Number of Customers</b>

The system’s customer billings flow amounts for 2021 were estimated to be approximately 92 % residential and 8 % non-residential.

The collection system consists of 6-inch through 12-inch gravity lines. It is estimated that approximately Not Known% of the system consists of terra cotta or concrete lines and approximately Not Known% of the manholes are masonry brick. The newest area of the system was constructed in 1988. The oldest areas of the system are estimated to have been constructed in the mid 1900s.

The system includes two (2) pump stations:

- Blairtown Pump Station - Also called Fenders Curve Pump Station, is located near the New River Trail and a residence, just off of East Main Street on the east side of town. Currently serves 2 or 3 residences and the fire department. A 1,200 gallon underground emergency storage tank is located adjacent to the wetwell. Equipped with two (2) grinder pumps: Hydromatic Model# HPGH500 M3-2; 5 HP, 480-V, 3-phase, 60-Hz, 3450 rpm, 6.75” impeller.
- Fries Mill Pump Station - Located at the old Washington Mills site on the west end of town, adjacent to the New River. Currently serves 1 or 2 residences and 1 bathroom at the mill site. Equipped with two (2) grinder pumps: Hydromatic Model# HPGH500 M3-2; 5 HP, 480-V, 3-phase, 60-Hz, 3450 rpm, 6.75” impeller

Treatment is ultimately provided at the Town of Fries WWTP (VPDES Permit #VA0067881).



System Flows - A summary of the system's collected and billed flows for the calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	3,385,000	580,860	17.2%
February	3,708,000	541,510	14.6%
March	3,527,000	412,190	11.7%
April	2,586,000	694,620	26.9%
May	2,013,000	627,830	31.2%
June	2,341,000	756,064	32.3%
July	2,293,000	642,816	28.0%
August	2,881,000	749,454	26.0%
September	2,248,000	701,847	31.2%
October	2,302,000	656,403	28.5%
November	1,919,000	815,320	42.5%
December	<u>1,574,000</u>	511,322	32.5%
<b>Monthly Average</b>	<b>2,564,750</b>	<b>640,853</b>	<b>25.0%</b>
<b>Daily Average</b>	<b>84,321</b>	<b>21,069</b>	<b>25.0%</b>
<b>Avg / Customer</b>	<b>272</b>	<b>68</b>	

Permit Violations/System Overflows/Consent Order

- The Town of Fries collection system had **zero (0)** reported sewer system overflows during the calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under a consent order with the DEQ.

Other Maintenance-Related Issues Experienced by System

- I/I related flow increases
- WWTP needs
- Frequent issues with pump stations maintenance

System Needs

- Inflow/Infiltration Reduction
- Line replacement.
- Manhole rehabilitation.

Sewer Use Ordinance



The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

#### SSES

An SSES Report has not been completed for the system.

#### Capital Improvements Plan

The system currently does not have an adopted CIP.

#### Asset Management Plan

The system does not have an asset management plan.

#### Sewer Rate Structure

The following sewer rate structure was last modified in 2017.

First 2,000 Gallons/Month @ \$20.25 Minimum

All Over 2,000 Gallons/Month @ \$5.75 per 1,000 Gallons

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ Not Provided. (Include table breakdown is possible).

#### System Dept and Maturity Date of Outstanding Loans

The Town of Fries currently has one (1) outstanding loans associated with the sanitary sewer system. The sewer loan for \$336,000 originated in 1988, has a 6.375% interest rate, debt service amount of \$23,268/year, and will expire in November 2026.



## **TOWN OF FRIES WWTP - VPDES VA0067881**

*Mount Rogers Planning District Commission*

Facility Description – The treatment facility is located along the New River, off of East Main Street in Grayson County, Virginia. The facility was originally constructed in 1987 and there have been no major improvements since that time. The facility utilizes activated sludge (extended aeration) as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Fries collection system. The facility does not receive and treat septage. The permitted capacity of the facility is 0.220 MGD. The average daily flow treated at the facility during the calendar year 2021 was 83,000 GPD; increasing to 200,000 GPD or more during rain events. The average daily flow treated at the facility for the highest three consecutive month period during the calendar year 2021 was 118,000 GPD. The facility exceeded N/A % capacity for N/A days during this period. Effluent from the plant is discharged to the New River. Sludge from the facility is discarded at the landfill.

Facility Operation – The facility is operated and maintained by the Town of Fries. The facility is required to be staffed 8 hours/day Monday – Friday, and 4 hours/day on Saturday and Sunday.

Permit Violations – The facility has had zero (0) permit violations over the past 2 years.

Maintenance-Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Multiple units of equipment at end of useful life or out of service

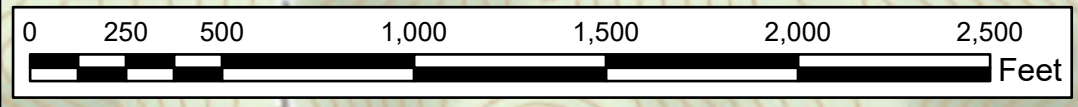
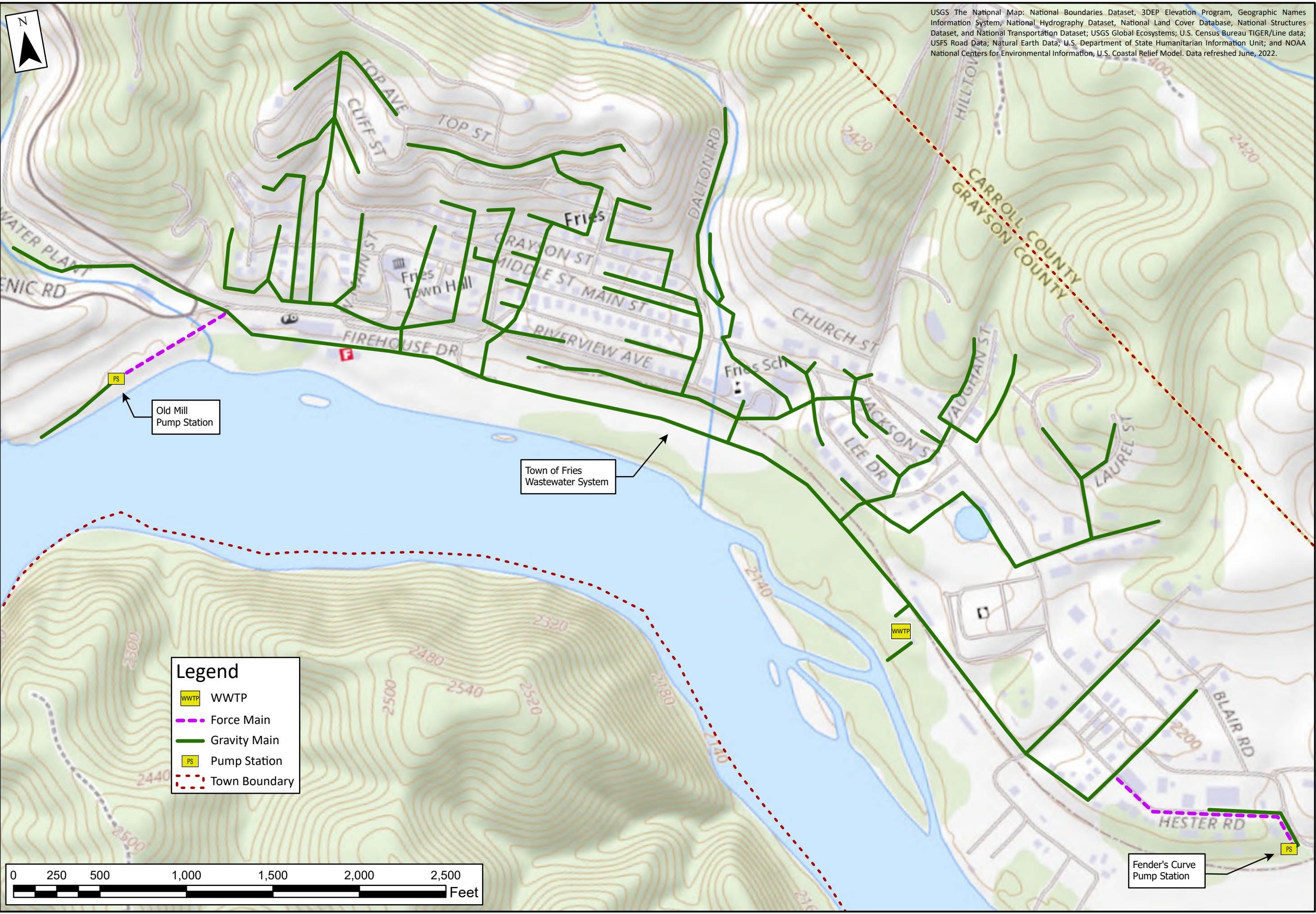
Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Repair to Influent Pump Station
- Replace Orbal Aerator disk drive bearings
- Replace Clarifier #2 drive gear
- Paint Clarifier equipment
- Repair Sludge Pump Return
- Repair broken valves
- Replace automatic transfer switch at generator
- Repair building roof at lab






Opinion of Probable Cost for Necessary Facility Improvements – A funding application was submitted to DEQ in July 2022 for \$1,471,000 of repairs and renovations at the WWTP.



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**Legend**

-  WWTP
-  Force Main
-  Gravity Main
-  Pump Station
-  Town Boundary



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF FRIES  
WASTEWATER  
SYSTEM



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# CITY OF GALAX WASTEWATER COLLECTION SYSTEM

Mount Rogers Planning District Commission

System Description – The City of Galax Wastewater collection system serves the incorporated City of Galax and a portion of the Carroll County Public Service Authority’s Gladeville/Cranberry. The collection system was constructed 60 to 70 years ago with newer sections constructed 11 years ago.

The approximate number of customers served by the system was reported to be:

<u>2,400</u>	Residential Customers
<u>40</u>	Commercial Customers
<u>460</u>	Industrial Customers
<u>1</u>	Other Municipal Systems
<b>2,901</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **83%** residential and **17%** non-residential.

The collection system consists of 8” through 24” gravity lines. It is estimated that approximately 54% of the system consists of terra cotta pipe and approximately 25% of the manholes are masonry brick. The newest area of the system was constructed approximately 11 years ago. The oldest areas of the system are estimated to have been constructed 60-70 years ago.

The system does experience problems with capacity due to inflow/infiltration.

The system includes three pump stations:

- BC Vaughan Pump Station – 1,200 GPM submersible pump station serving the eastern portions of the City. The pump station discharges through a 12” force main that empties at the WWTP. The pump station was last upgraded in 2019. The drainage basin for this pump station includes a flow equalization facility. This station has two 750 GPM low-flow pumps and two 1,200 GPM high-flow pumps.
- Ballards Branch Pump Station – 780 GPM submersible pump station serving the western portions of the City. The pump station discharges through an 8” force main that empties into an 8” gravity sewer line that flows to the WWTP. The pump station was last upgraded in 2001.
- Fries Road Pump Station – 203 GPM submersible sewage pump station serving the Fries Road area of the City. The pump station discharges through a 6” force main that empties into an 8” gravity sewer line that flows to the WWTP. The pump station was last upgraded in 2019.

The system also receives flow from the Carroll County Public Service Authority’s Gladeville/Cranberry system.

Flow collected by the system is conveyed to the City of Galax WWTP (VPDES Permit #VA0078484) for treatment.

System Flows - Flows for the collection system are based upon metered flows at the WWTP. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:



<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	60,826,000	42,586,000	70.0%
February	62,620,000	0	0.0%
March	62,738,000	52,027,000	82.9%
April	53,915,000	0	0.0%
May	48,200,000	39,788,000	82.5%
June	46,664,000	0	0.0%
July	47,819,000	46,679,000	97.6%
August	49,787,000	0	0.0%
September	45,923,000	44,874,000	97.7%
October	48,610,000	0	0.0%
November	42,618,000	48,757,000	114.4%
December	41,327,000	0	0.0%
<b>Monthly Average</b>	<b>50,920,583</b>	<b>22,892,583</b>	<b>45.0%</b>
<b>Daily Average</b>	<b>1,674,101</b>	<b>752,633</b>	<b>45.0%</b>
<b>Avg / Customer</b>	<b>577</b>	<b>260</b>	

#### Permit Violations/System Overflows/Consent Order

- The City of Galax Wastewater Treatment Facility collection system had **11** reported sewer system overflows during calendar year 2021. There were 6 overflows due to excessive infiltration/inflow and there were 2 overflows due to line blockages created by root intrusion, grease or other debris.
- The system has had **0** permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

#### Other Maintenance Related Issues Experienced by System

- Terra Cotta pipe joints allow root intrusion causing blockages and are a source of infiltration/inflow issues.

#### System Needs

- Replacement of old sewer mains, manhole rehabilitation, and infiltration/inflow remediation.

#### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

#### SSES

An SSES Report has not been completed for the system.

#### Capital Improvements Plan

The system currently does not have an adopted CIP.

#### Asset Management Plan

The system does not have an adopted an asset management plan.

#### Sewer Rate Structure

The following sewer rate structure was last modified in 2019.

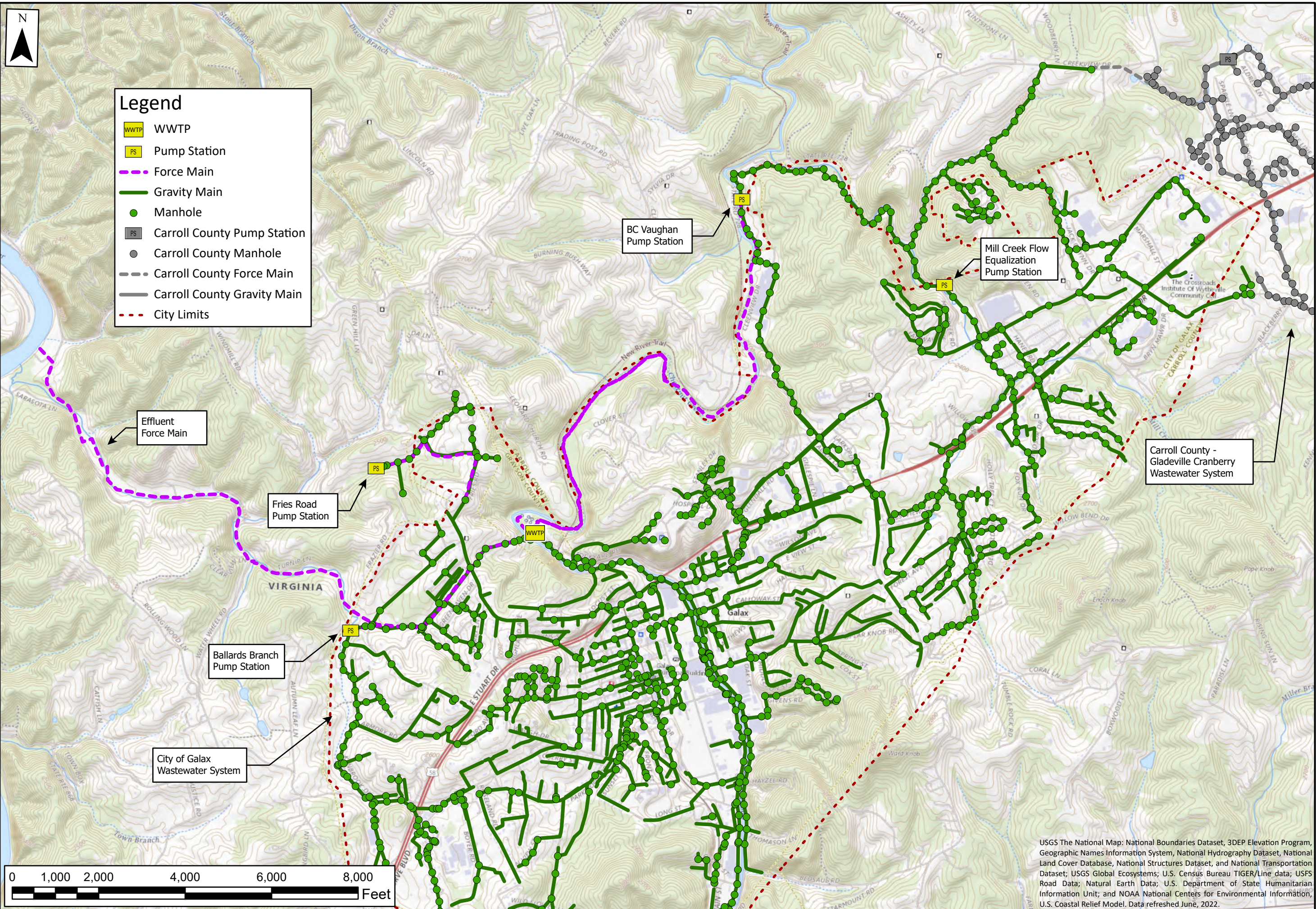
- Bi-Monthly – First 6,000 Gallons @ \$32.00 Min. Bill
- All Over 6,000 Gallons/Month @ \$4.50 per 1,000 Gallons

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ Not Provided. (Include table breakdown is possible).

#### System Debt and Maturity Date of Outstanding Loans

The system currently has approximately \$ Not Provided in outstanding loan.





**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
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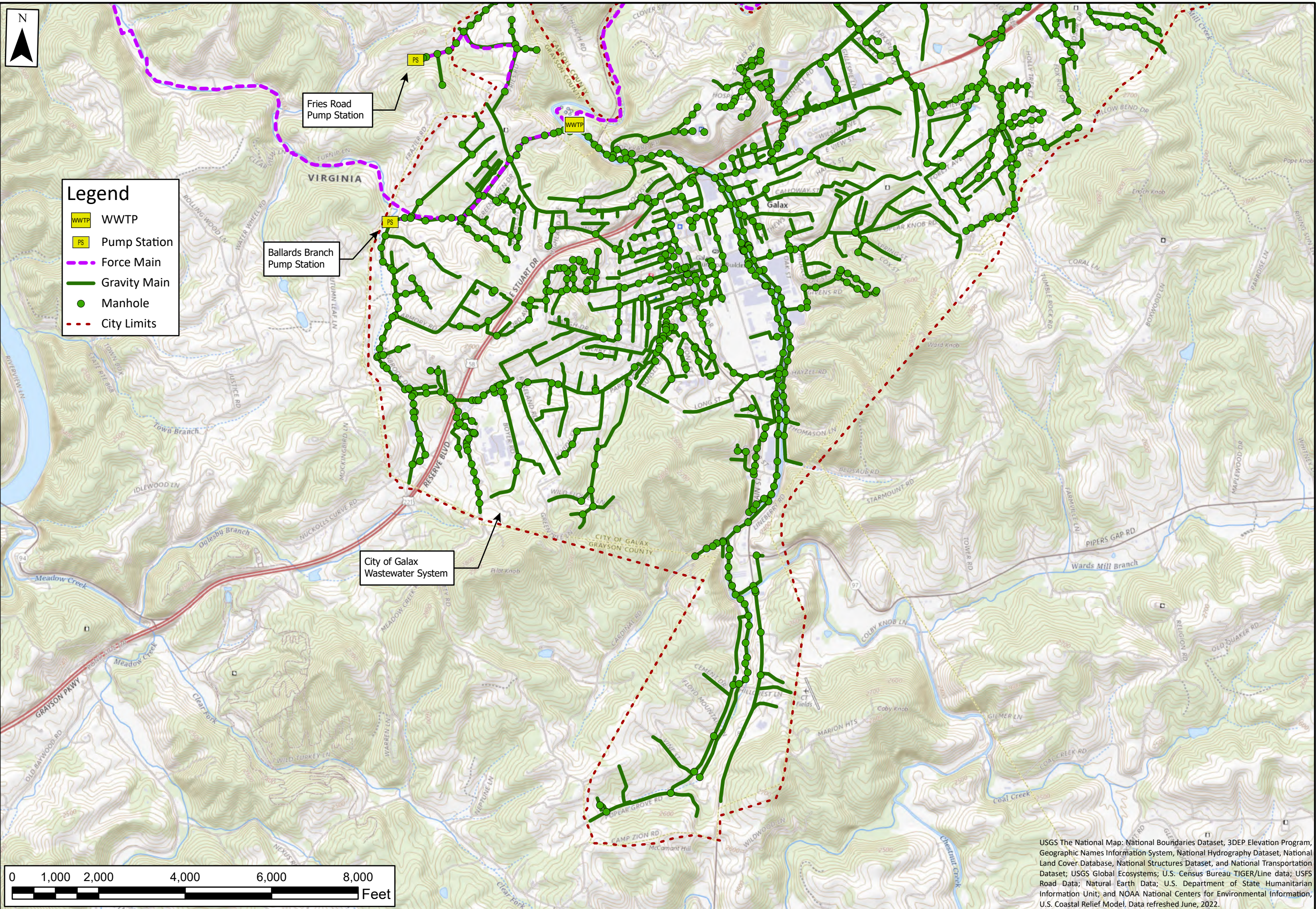
**CITY OF GALAX  
WASTEWATER  
SYSTEM - NORTH  
AREA**



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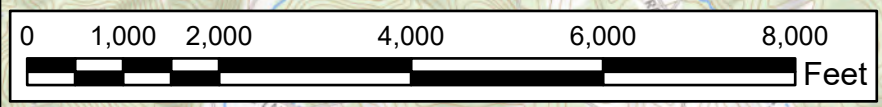
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**Legend**

- WWTP
- PS
- Force Main
- Gravity Main
- Manhole
- City Limits



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**CITY OF GALAX  
WASTEWATER  
SYSTEM - SOUTH  
AREA**



DATE:	11/15/2022
SHEET:	
DRAWN BY:	CHECKED BY:
PROJECT NO.:	2248
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USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



# TOWN OF HILLSVILLE WASTEWATER TREATMENT SYSTEM (VA0089443)

Mount Rogers Planning District Commission

System Description – The Town of Hillsville Wastewater Treatment System serves the Town of Hillsville located in Carroll County near the I-77 Exit 14 interchange and Route 58. The collection system was constructed in the 1980s.

The approximate number of customers served by the system was reported to be:

<u>1,050</u>	Residential Customers
<u>180</u>	Commercial Customers
<u>4</u>	Industrial Customers
<u>1</u>	<u>Other Municipal Systems</u>
<b>1,235</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 60% residential and 40% non-residential.

The collection system consists of 4 inch through 15- inch gravity lines. It is estimated that approximately 56% of the system consists of terra cotta or concrete lines and approximately 84% of the manholes are masonry brick. The newest area of the system was constructed in 2009. The oldest areas of the system are estimated to have been constructed in the 1980s.

The system includes three pump stations:

- Weddle Street #1 Pump Station – 46.5 GPM submersible grinder pump station serving the south side of Weddle Street. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line North East of Weddle Street #2 pump station.
- Weddle Street #2 Pump Station – 46.5 GPM submersible grinder pump station serving the south side of Weddle Street. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line North East of Weddle Street #2 pump station.
- 58 West Pump Station – 98 GPM submersible grinder pump station serving the west section of Route 58. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line located near the intersection of Howlett Street and West Stuart Drive.

The system also collects flow from the Carroll County system.

System Flows -A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	10,845,000	9,517,608	88%
February	12,142,000	4,742,010	39%
March	12,929,000	11,114,446	86%
April	12,882,000	4,073,840	32%
May	11,351,000	12,457,273	110%
June	10,305,000	4,789,820	46%
July	10,703,000	10,387,656	97%
August	13,435,000	5,025,060	37%
September	10,951,000	13,511,313	123%
October	12,741,000	4,440,470	35%
November	10,042,000	11,362,305	113%
December	7,914,000	3,850,400	49%



<b>Monthly Average</b>	<b>11,353,333</b>	<b>7,939,350</b>	<b>70%</b>
<b>Daily Average</b>	<b>373,260</b>	<b>261,020</b>	<b>70%</b>
<b>Avg / Customer</b>	<b>129</b>	<b>91</b>	

#### Permit Violations/System Overflows/Consent Order

- The Fancy Gap collection system had **13** reported sewer system overflows during calendar year 2021. **0** were due to excessive Infiltration and Inflow, **13** were due to line blockages created by root intrusion, grease or other debris.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

#### Other Maintenance Related Issues Experienced by System

- Pump and motor failures at treatment plant,
- Clogged pumps at the treatment plant,
- Sealing concrete basins and repairing the basins,
- Replacement of flow equalization basin aerators,
- Replacement of the sludge press,
- Replacement of the oxidation ditch mammoth rotor,
- Replacing aging equipment in the collection system and treatment plant,
- Roof replacement at treatment plant.

#### System Needs

- Infiltration and inflow identification and remediation.

#### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

#### SSES

A SSES was performed on the system in November 2021 by Thompson & Litton. The SSES identified \$3,398,000 of recommended system rehabilitation projects.

#### Capital Improvements Plan

The system currently has a CIP adopted in 2019. The CIP includes \$2,874,617 of projects for completion in the next 5 years.

#### Asset Management Plan

The system has an asset management plan prepared by Thompson & Litton in 2021.



Sewer Rate Structure

The following sewer rate structure was last modified in July 2022:

Residential (In Town)	
\$53.20	First 4,000 Gallons
\$7.96	Every 1,000 Gallons over 4,000 Gallons till 200,000
\$9.60	Every 1,000 Gallons Over 200,000
Commercial (In Town)	
\$84.44	First 4,000 Gallons
\$7.96	Every 1,000 Gallons over 4,000 Gallons till 200,000
\$9.60	Every 1,000 Gallons Over 200,000
Industrial (In Town)	
\$163.04	First 4,000 Gallons
\$7.96	Every 1,000 Gallons over 4,000 Gallons till 200,000
\$9.60	Every 1,000 Gallons Over 200,000

Residential (Out of Town)	
\$84.46	First 4,000 Gallons
\$10.10	Every 1,000 Gallons over 4,000 Gallons
Commercial (Out of Town)	
\$143.16	First 4,000 Gallons
\$10.10	Every 1,000 gallons over 4,000 Gallons
Industrial (Out of Town)	
\$286.52	First 4,000 Gallons
\$10.10	Every 1,000 gallons over 4,000 Gallons

Residential (Unmetered In Town)	Residential (Unmetered out of Town)
\$72.48	\$103.58
Commercial (Unmetered In Town)	Commercial (Unmetered out of Town)
\$145.12	\$143.16

System Debt and Maturity Date of Outstanding Loans

Carter Bank Loan: Collection System: June 30<sup>th</sup>, 2022: \$3,043,212.55

VRA Loan: UV System 2014: June 30<sup>th</sup>, 2022: \$101,617.00

Skyline National Bank: Sewer System Upgrade 2000, June 30<sup>th</sup>, 2022: \$789,315.00

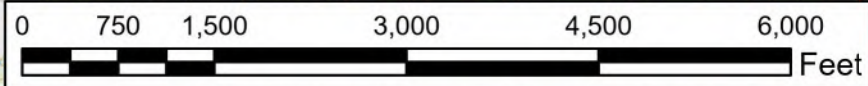
Opinion of Probable Cost for Necessary Facility Improvements –

The following improvements were identified in a 2019 PER for the Town of Hillsville:

- Sewer line replacement on Route 58,
- Sewer line replacement near the VFW,
- Sewer line replacement on Valley Street,
- Sewer line replacement on East Grayson Street,
- Sewer line replacement on Dogwood.

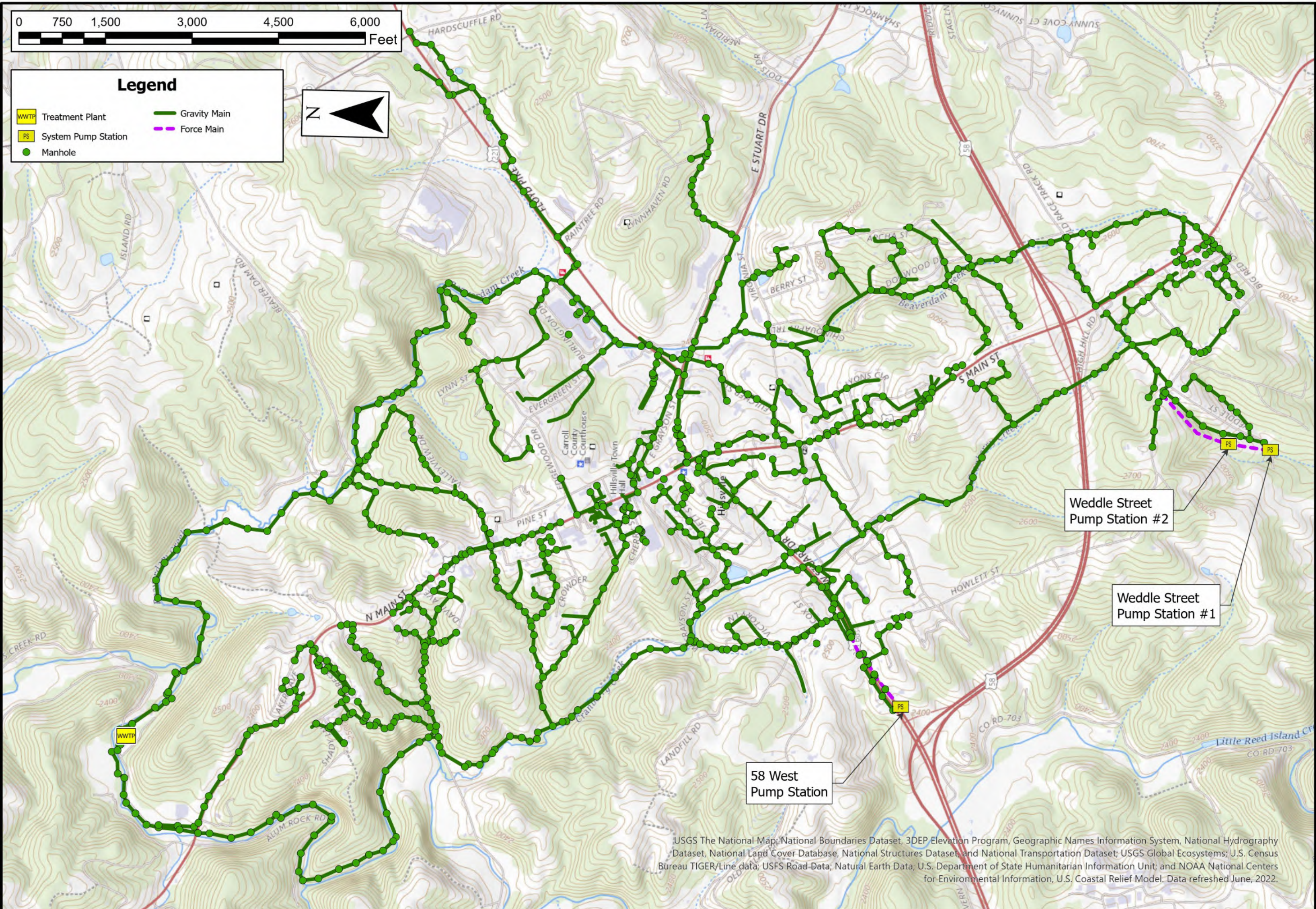
The above improvements had probable project costs estimated to be \$2,440,000.





**Legend**

- Treatment Plant
- System Pump Station
- Gravity Main
- Force Main
- Manhole



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



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SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

TOWN OF HILLSVILLE



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DRAWN BY: DRW	CHECKED BY: CHK
PROJECT NO: xxxxx	
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# TOWN OF INDEPENDENCE COLLECTION SYSTEM

## Town of Independence

Mount Rogers Planning District Commission

System Description – The Town of Independence collection system serves the customers of the Town of Independence located off I-81 Exit 35. The original collection system was constructed circa the 1960s.

The approximate number of customers served by the system was reported to be:

<u>394</u>	Residential Customers
<u>105</u>	Commercial/Industrial Customers
<u>499</u>	<b>Total Number of Customers</b>

The system's customer billings flow amounts for 2021 were estimated to be approximately **32%** residential and **68%** non-residential.

The collection system consists of 8-inch through 10-inch gravity lines. It is estimated that approximately 75% of the system consists of terra cotta or concrete lines and approximately 3% of the manholes are masonry brick. The newest area of the system was constructed in 1985. The oldest areas of the system are estimated to have been constructed in the 1960s.

The system includes two (2) pump stations:

- Peach Bottom Pump Station – Originally installed in 1986 and upgraded in 2011. The pump is a quadruplex pump station with a flow rate of 250 gpm at 180' TDH (~90,000 GPD with a Peak Flow of 225,000 GPD).
- Darco Pump Station – Submersible pump station was installed circa 1980s. 2 HP with a 2" discharge; flow rate and TDH is unknown.

Treatment is ultimately provided at the Town of Independence WWTP (VPDES Permit #VA0064424).

System Flows - A summary of the system's collected and billed flows for the calendar year 2021 is provided as follows:

<u>Month (2021)</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January	10,112,770	4,913,870	49%
February	10,172,500	4,496,163	44%
March	8,871,060	4,835,555	55%
April	8,769,212	4,204,137	48%
May	8,726,330	5,674,188	65%
June	8,405,360	4,923,031	59%
July	8,682,790	5,154,168	59%
August	8,351,270	4,835,389	58%
September	7,504,020	5,300,603	71%
October	8,808,460	5,326,170	60%
November	7,925,380	4,784,588	60%
December	8,566,050	4,890,178	57%
<b>Monthly Average</b>	<b>8,741,267</b>	<b>4,944,837</b>	
<b>Daily Average</b>	<b>311,333</b>	<b>176,117</b>	
<b>Avg/Customer</b>	<b>624</b>	<b>353</b>	



### Permit Violations/System Overflows/Consent Order

- The Town of Independence collection system had **zero (0)** reported sewer system overflows during the calendar year 2021.
- The system has had no permit violations over the past 2 years.
- The system is not under a consent order with the DEQ.

### Other Maintenance-Related Issues Experienced by System

- I/I related overflows
- Capacity issues related to I/I
- Frequent issues with pump stations maintenance

### System Needs

- Line replacement.
- Manhole rehabilitation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

### Sewer System Evaluation Survey (SSES)

A SSES was performed on the Town's entire system in 2021 by The Lane Group, Inc. The SSES identified \$1,010,840 of recommended system rehabilitation projects.

### Capital Improvements Plan

The Town of Independence Capital Improvement Projects (CIP) consists of a Sub-Basin I-179 Gravity Line and System-Wide Manhole Improvements Project.

### Asset Management Plan

The system has an asset management plan prepared by The Lane Group, Inc. in 2021.

### Sewer Rate Structure

The following monthly sewer rate structure is currently in effect.

#### Residential Customers

\$23.63 for first 1,000 Gallons, Minimum

All Over @ \$7.13 per 1,000 Gallons

#### Commercial & Industrial Customers

\$29.54 for First 1,000 Gallons, Minimum

All Over @ \$8.91 per 1,000 Gallons

Opinion of Probable Cost for Necessary System Improvements – The opinion of the probable cost for the identified system improvements is \$1,010,840.

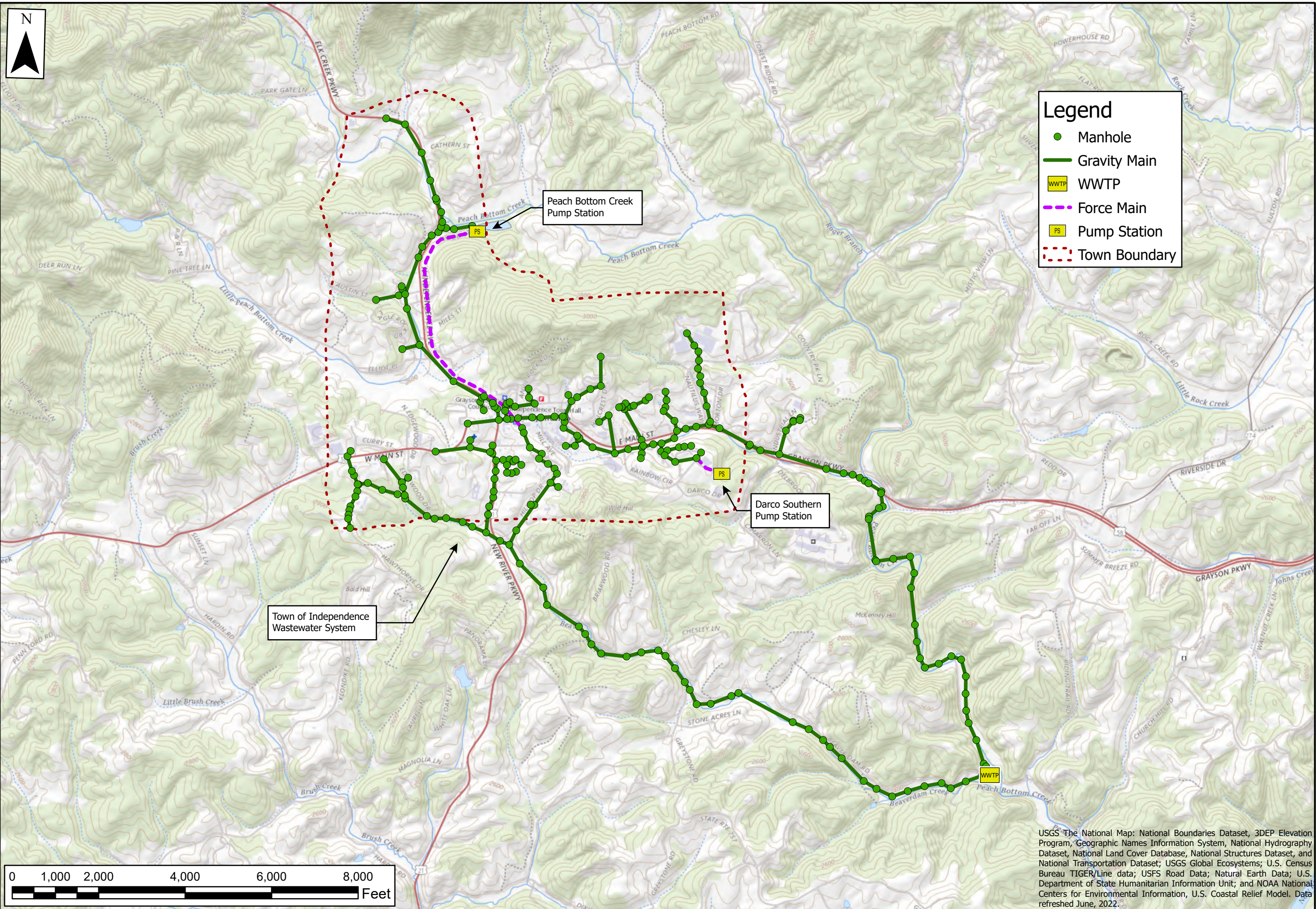
### System Debt and Maturity Date of Outstanding Loans

The Town of Independence currently has no outstanding loans associated with the sanitary sewer system.



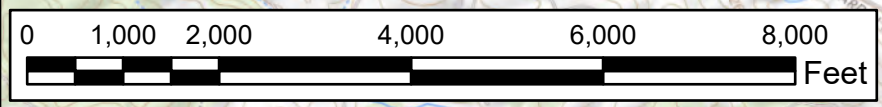
<b>TABLE 4.1 - OPINION OF PROBABLE COST: PROPOSED IMPROVEMENTS</b>				
<b>Description</b>	<b>Quantity</b>	<b>Units</b>	<b>Unit Cost</b>	<b>Overall Costs</b>
10-inch Gravity Sewer CIPP Lining, inclusive of cleaning & bypass pumping	4,638	LF	\$ 125	\$579,750
8-inch Gravity Sewer Trenchless Interior Lining, inclusive of cleaning	900	LF	\$ 100	\$90,000
Manhole Rehab (Calcium Aluminate Cement)	127	VF	\$ 225	\$28,575
Manhole Rehab (Cementious & Epoxy Lining)	31	VF	\$ 350	\$10,850
Water-Tight Frame and Cover	13	EA	\$ 1,000	\$13,000
I/I Manhole Insert	13	EA	\$ 250	\$3,250
Seal Joints	4	EA	\$ 400	\$1,600
Replace Frame and Cover	1	EA	\$ 600	\$600
Reseal Existing Frame	1	EA	\$ 750	\$750
Mobilization (@ 5.00%)	1	LS	\$ 36,418.75	\$36,419
<b>Total Construction Cost</b>				<b>\$764,794</b>
Contingency	10%			\$76,479
Basic Engineering	12.0%			\$91,775
Additional Services	2%			\$16,995
Inspection	700	hours	\$65	\$45,500
Legal, Fiscal, & Administrative	2%			\$15,296
<b>Subtotal Related Cost</b>				<b>\$246,046</b>
<b>Total Opinion of Probable Project Cost</b>				<b>\$1,010,840</b>





**Legend**

- Manhole
- Gravity Main
- WWTP
- - - Force Main
- PS Pump Station
- - - Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**TOWN OF  
INDEPENDENCE  
WASTEWATER  
SYSTEM**



DATE:	11/15/2022
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PROJECT NO.:	2248
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# TOWN OF MARION COLLECTION SYSTEM

## TOWN OF MARION

*Mount Rogers Planning District Commission*

System Description – The Town of Marion collection system serves the Town of Marion and Smyth County service areas identified as Atkins, Hungry Mother, Staley Creek, and Cedars (consisting of Hall Addition and Adwolfe). The Town of Marion is located near the I-81 Exit 45. The collection system was constructed in 1920's with several small upgrades completed recently and with additional work planned.

The approximate number of customers served by the system was reported to be:

<u>1830</u>	Residential Customers
<u>1126</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>4</u>	<u>Other Municipal Systems</u>
<b>2960</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately 62% residential and 38% non-residential.

The collection system consists of 2" through 36" gravity lines. It is estimated that approximately 53% of the system consists of terra cotta or concrete lines and approximately 53% of the manholes are masonry brick. The newest area of the system was constructed in 2021. The oldest areas of the system are estimated to have been constructed in the 1920's.

The        area of the system experiences problems with capacity due to inadequately sized lines.

The system includes four pump stations:

- Washington Avenue Pump Station – 90 GPM duplex suction lift pump station serving the southwest side of Marion near the South Main Street/ Washington Avenue intersection. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line east on Main Street.
- Jones Street Pump Station – 90 GPM duplex suction lift pump station serving a central part of town near Jones Street, on the north side of Main Street. The pump station discharges through a 4" force main that empties into an 8" gravity sewer just past the crest of Jones Street.
- Laurel Street Pump Station – 30 GPM simplex grinder sewage pump station serving a small section of eastern Marion near the intersection of Highland Drive and Stage Street. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line located on Stage Street.
- Influent Pump Station at WWTP – 5900 GPM Triplex submersible pump station pumping into WWTP.

The system also collects flow from the bordering areas of Smyth County in the following subsystems: (Atkins, Staley Creek, Hungry Mother, Hall Addition/Adwolfe ).

Flow collected by the system is conveyed to the Town of Marion Wastewater Treatment Plant. Treatment is ultimately provided at the Town of Marion WWTP (VPDES Permit # 0086304).



System Flows - Flows for the collection system (Town and Smyth County) are estimated based on meters at the WWTP. A summary of the system’s collected and billed flows (including flow from Smyth County subsystems) for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	51,210,000	21,128,611	41.3%
February	62,800,000	19,432,550	30.9%
March	71,790,000	17,679,515	24.6%
April	45,530,000	20,534,199	45.1%
May	35,400,000	20,134,613	56.9%
June	33,940,000	20,638,631	60.8%
July	37,810,000	25,956,097	68.6%
August	34,907,000	22,817,800	65.4%
September	33,170,000	23,713,497	71.5%
October	36,860,000	20,896,155	56.7%
November	31,300,000	22,266,168	71.1%
December	32,460,000	20,609,064	63.5%
<b>Monthly Average</b>	<b>42,264,750</b>	<b>21,317,242</b>	<b>50.4%</b>
<b>Daily Average</b>	<b>1,389,526</b>	<b>700,841</b>	<b>50.4%</b>
<b>Avg / Customer</b>	<b>469</b>	<b>237</b>	

Permit Violations/System Overflows/Consent Order

- The Town of Marion collection system had 0 reported sewer system overflows during calendar year 2021. The last overflow of record was in November 2020. The overflow occurred during heavy rains and were thought to be due to high inflow.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Equipment replacement, repairs to existing facilities, need for a generator

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the Town’s sewer system in 2022 by The Lane Group. The study region included areas of Hollow Road, Park Street, Prater Lane, Oak, Hickory, Dogwood and Fern Lanes. The SSES identified \$ 1.3 million of recommended system rehabilitation projects. The project is scheduled to be funded by VDEQ.

Capital Improvements Plan

The system currently has a CIP, summarized June 7, 2021. The CIP includes approximately \$300,000 per year of proposed work through 2026. Approximately \$ 1.8 million of projects are planned for completion in the next 5 years. A summary of the CIP is shown in the *Questions Pertaining to Potential Future Projects*.

Asset Management Plan

The system has an asset management plan prepared by The Lane Group in 2022 as part of the SSES.



## Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

### **Sewer Rates**

#### **Inside Corporate Limits - Sewer**

First 2,000 gallons - \$15.61 minimum charge.

Next 2,000 gallons - \$9.44 per 1,000 gallons.

#### **Outside Corporate Limits - Sewer**

First 2,000 gallons - \$31.19 minimum charge.

Next 2,000 gallons - \$18.82 per 1,000 gallons.

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ \$4.6 million. See summary in *Questions Pertaining to Potential Future Projects*. (Include table breakdown is possible).

### System Dept and Maturity Date of Outstanding Loans

The system currently has approximately \$3,836,870 in outstanding loans as of June 22, 2022.

<b>Loan</b>	<b>Borrower/Placement</b>	<b>Maturity Date</b>	<b>Balance as of June 30, 2022</b>
1	VRA	5/7/2047	406,658
2	VRA	4/25/2045	563,058
3	VRA	12/11/2048	423,700
4	VRA	7/15/2037	321,999
5	VRA	9/25/2036	505,175
6		12/10/2031	1,010,280
7	Rural Development	7/6/2041	606,000



**MARION WWTP – VPDES PERMIT #0086304**  
**TOWN OF MARION, WWTP FACILITY OWNER**  
*MOUNT ROGERS PDC*

Facility Description – The treatment facility is located at 1580 Daisy Lane, Marion, Virginia (see attached general vicinity map). The facility was originally constructed in 1993. The last major upgrade/expansion was completed in 2014 and involved \_\_\_\_\_ . The facility utilizes Secondary treatment as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Marion and residents/businesses of Smyth County collection system(s). The facility does/does not receive and treat septage. The permitted capacity of the facility is 3.4 MGD. The average daily flow treated at the facility during calendar year 2021 was 1.4. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 2.1 MGD. The facility exceeded 80% capacity for 2 days during this period. Effluent from the plant is discharged to the Middle Fork Holston River. Sludge from the facility will be composted until Class 1 treatment level is suitable for land application.

Facility Operation – The facility is operated and maintained by The Town of Marion. Currently, 5 full time and \_\_\_\_\_ part time licensed operators work at the facility. 2 Class 1, 2 Class 2 and 1 Class 3. The facility is required to be staffed 8 hours/day M-F and 4 hours/day S-S.

Permit Violations – The facility has had 2 permit violations over the past 2 years. The violations were the result of overflows at the WWTP during periods of heavy rain.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

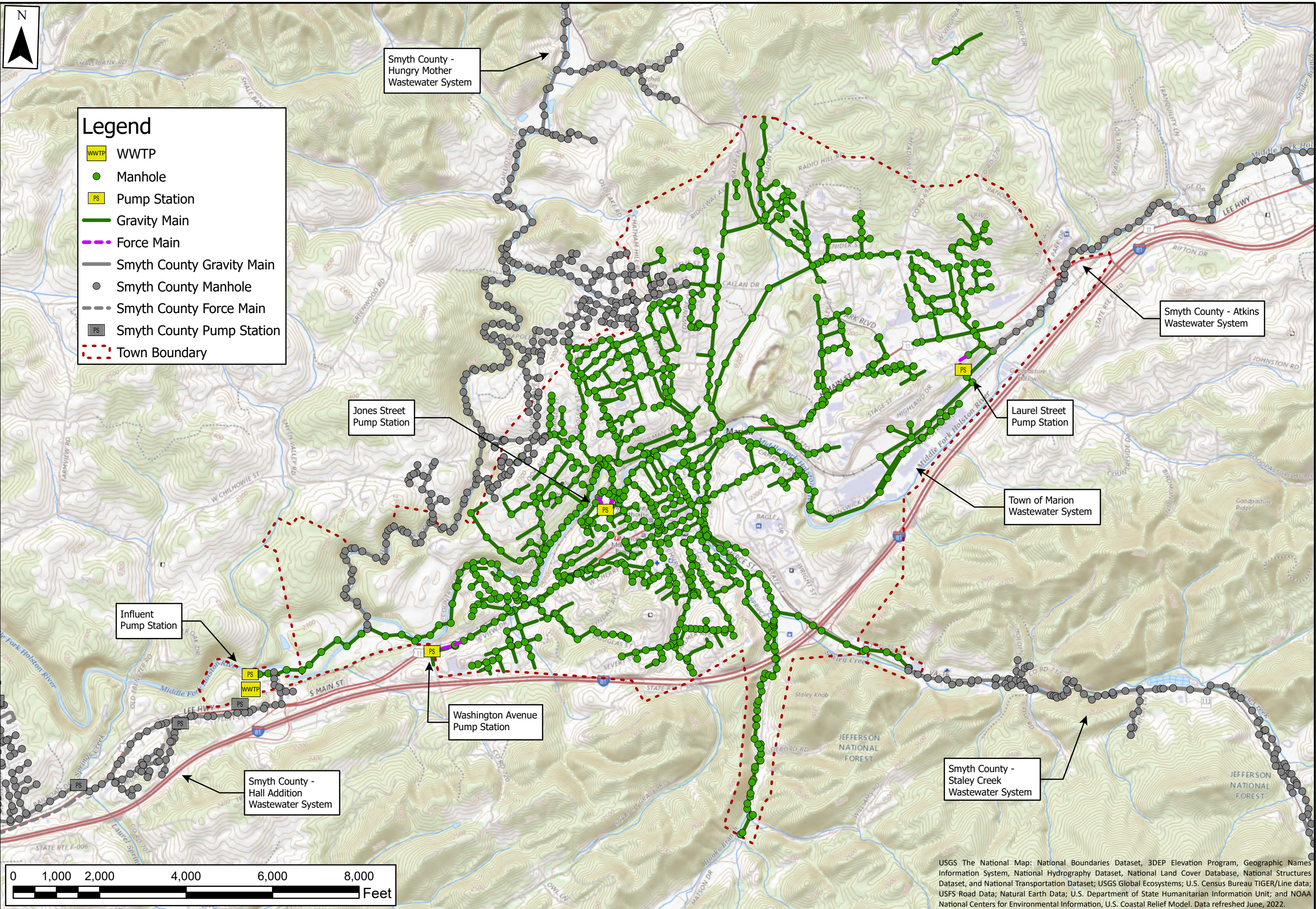
- Equipment replacement
- Repairs to existing facilities
- Need for a Generator

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- The Town of Marion has identified about \$1.5 million of rehab and repair work at the WWTP

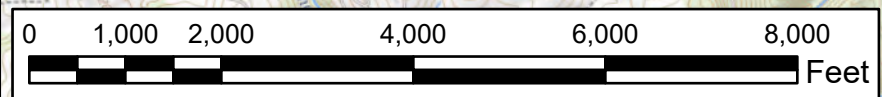
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$ 1.5 million. (Include tale breakdown if possible)





**Legend**

- WWTP
- Manhole
- PS
- Gravity Main
- Force Main
- Smyth County Gravity Main
- Smyth County Manhole
- Smyth County Force Main
- PS
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
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TOWN OF MARION  
 WASTEWATER  
 SYSTEM



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# TOWN OF RURAL RETREAT COLLECTION SYSTEM

## TOWN OF RURAL RETREAT

Mount Rogers Planning District Commission

System Description – The Rural Retreat collection system primarily serves the Town of Rural Retreat located just south of I-81, Exit 60. A small portion of gravity sewer extends to around 70 residents of Wythe County (outside of Town limits). The collection system was constructed in the 1960’s and 1970’s with upgrades in 2022.

The approximate number of customers served by the system was reported to be:

<u>674</u>	Residential Customers
<u>59</u>	Commercial Customers
<u>5</u>	Industrial Customers
<u>4</u>	<u>Other Municipal Systems (Public Authorities)</u>
<b>742</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **60%** residential and **40%** non-residential.

The collection system consists of 8” through 15” gravity lines. It is estimated that approximately 10% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 2022. The oldest areas of the system are estimated to have been constructed in 1960’s.

No area of the system experiences problems with capacity due to inadequately sized lines.

The system includes one pump station:

- Black Lick Road Pump Station – 200 GPM suction lift pump station serving the north section of the Rural Retreat system, generally land north of the Food Country shopping center. The pump station discharges through a 8” force main that empties into an 8” gravity sewer line south of the pump station about 5,000 LF on Main Street near Food Country.

The system also collects flow from Wythe County residents adjacent to Town limits.

Flow collected by the system is conveyed to the Town of Rural Retreat WWTP system. Treatment is ultimately provided at the Town of Rural Retreat WWTP (VPDES Permit #0021326 ).

System Flows - Flows for the collection system are estimated based on meters at the WWTP. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	7,800,000	3,900,000	50.0%
February	16,800,000	3,100,000	18.5%
March	15,400,000	3,800,000	24.7%
April	8,800,000	3,300,000	37.5%
May	4,800,000	3,600,000	75.0%
June	4,900,000	3,700,000	75.5%
July	6,000,000	3,900,000	65.0%
August	5,100,000	3,700,000	72.5%
September	4,100,000	3,400,000	82.9%
October	4,000,000	3,500,000	87.5%
November	3,100,000	3,400,000	109.7%
December	3,200,000	3,800,000	118.8%
<b>Monthly Average</b>	<b>7,000,000</b>	<b>3,591,667</b>	<b>51.3%</b>
<b>Daily Average</b>	<b>230,137</b>	<b>118,082</b>	<b>51.3%</b>



Permit Violations/System Overflows/Consent Order

- The Town of Rural Retreat collection system had 2 reported sewer system overflows during calendar year 2021. The overflows were due to excessive Infiltration and Inflow.
- The system has had several permit violations over the past 2 to 3 years. Refer to VDEQ Consent Order for details (below).
- The system is under consent order with the DEQ. The consent order is dated August 24, 2021 and was issued for several reasons as described below.
  1. The WWTP exceeded the discharge limitations for certain parameters. Specifically, E.Coli average concentration was exceeded in September 2020, 353 ammonia concentrations were exceeded in October 2020, Biologic Oxygen Demand (BOD) was exceeded in February and March 2021, and Total Suspended Solids (TSS) was exceeded in February 2021.
  2. Several manhole overflows were noted. Some of the overflows and other violations were not properly reported to VDEQ within the required 5 day timeframe.
  3. The WWTP reported monthly flow exceeding 95% of the design flow for several consecutive months over a 2-year period.
  4. Certain monitoring at the WWTP was not being conducted at the frequency required by the permit.

The Consent Order prompted a sewer system rehabilitation plan. The Town developed a plan to reduce infiltration and inflow into the system. The initial phase, Phase 1 Sewer System Improvements Project is nearing completion. The WWTP has already noted a reduction of flow during and after heavy rains. This \$1.4 million project is intended to minimize infiltration and inflow into the system.

The WWTP has also upgraded their monitoring frequency to comply with the Permit.

Other Maintenance Related Issues Experienced by System

- Cleaning of basins, clarifiers, UV lights, and equipment during high flow events

System Needs

- Future capacity needs, cleaning basins, replacing worn valves

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the Town's sewer system in 2022 by The Lane Group. The study region included the Town's northern sewer shed. The SSES identified \$ 430,000 of recommended system rehabilitation projects. The project is scheduled to be funded by VDEQ.

Capital Improvements Plan

The system currently does not have a CIP adopted. Proposed sewer line rehabilitation or replacement projects the Town is considering are summarized in the *Questions Pertaining to Potential Future Projects*. The opinion of probable cost for these projects is approximately \$4.4 million.

Asset Management Plan

The system has an asset management plan prepared by The Lane Group in 2022 as part of the SSES.



Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

**Sewer Rates**

First 2,000 gallons	\$25.64 minimum bill
Next 2,000 gallons	\$6.36 per 1,000 gallons
Next 2,000 gallons	\$6.56 per 1,000 gallons
Next 4,000 gallons	\$6.96 per 1,000 gallons
Over 10,000 gal.	\$8.62 per 1,000 gallons

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ 4.4 million. (see *Questions Pertaining to Potential Future Projects*).

System Dept and Maturity Date of Outstanding Loans

The system currently has approximately \$517,347 in outstanding loans.

<b>Loan</b>	<b>Borrower/Placement</b>	<b>Maturity Date</b>	<b>Balance as of June 30, 2022</b>
1	Rural Development	9/27/2041	376,851
2	VRA Water Facilities Loan	5/1/2033	53,720
3	2011 Refunding Bond	10/27/2028	86,776



**TOWN OF RURAL RETREAT WWTP – VPDES PERMIT #0021326**  
**TOWN OF RURAL RETREAT, WWTP FACILITY OWNER**  
*MOUNT ROGERS PDC*

Facility Description – The treatment facility is located at 403 Four Seasons Road, Rural Retreat, VA (see attached general vicinity map). The facility was originally constructed in 1943. The last major upgrade/expansion was completed in 1986 and involved improvements to current conditions. The facility utilizes Extended Aeration Activated Sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Rural Retreat and about 75 residents/authorities of Wythe County collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.25 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.17 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.46 MGD. The facility exceeded 80% capacity for 83 days during this period. Effluent from the plant is discharged to South Fork Reed Creek, unnamed tributary. Sludge from the facility is disposed of at BFI Carter Valley Landfill, Bluff City, TN by Fort Chiswell Septic.

Facility Operation – The facility is operated and maintained by The Town of Rural Retreat. Currently, 2 full time and \_\_\_\_\_ part time licensed operators work at the facility. 1 Class 3. The facility is required to be staffed 8 hours/day M-F and 4 hours/day S-S.

Permit Violations – The facility has had sever permit violations over the past 2 to 3 years. Due to the violations, the Town is under Consent Order by VDEQ. The Consent Order is summarized in a later document. Work to address permit violations is under way.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Cleaning of basins, clarifiers, UV lights, and equipment during high flow events

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- Replacing worn valves
- Cleaning Aeration basins
- Future capacity issues

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$ To Be Determined. (Include tale breakdown if possible)







# TOWN OF SALTVILLE COLLECTION SYSTEM

## TOWN OF SALTVILLE

*Mount Rogers Planning District Commission*

System Description – The Town of Saltville collection system serves the Town of Saltville and Smyth County communities adjacent to Saltville, which is located about 10 miles north of I-81 Exit 35 (Chilhowie exit) via state Rte. 107. The collection system was constructed in the early 1970's.

The approximate number of customers served by the system was reported to be:

<u>880</u>	Residential Customers
<u>61</u>	Commercial Customers
<u>2</u>	Industrial Customers
<u>4</u>	<u>Other Municipal Systems</u>
<b>947</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately **95%** residential and **5%** non-residential.

The collection system consists of 6" through 12" gravity lines. It is estimated that approximately \_\_\_\_% of the system consists of terra cotta or concrete lines and approximately \_\_\_\_% of the manholes are masonry brick. The newest area of the system was constructed in 2018. The oldest areas of the system are estimated to have been constructed in the early 1970's.

The Government Plant Road area of the system experiences problems with capacity due to inadequately sized lines.

The system includes seven pump stations:

- McCready Pump Station – 176 GPM submersible grinder pump station serving the McCready area of Saltville and residents of Smyth County. The McCready area is located on the northeastern side of Saltville along E. Main Street. The pump station discharges through a 6" force main westerly along Main Street about 3,200 LF that empties into an 8" gravity sewer.
- Henrytown Pump Station – 78 GPM submersible grinder pump station serving the north end of Henrytown Road. The pump station discharges through a 4" force main that empties into an 8" gravity sewer line about 2500 LF southeast of pump station adjacent to Henrytown Road.
- Farm Road Pump Station – Low flow older pneumatic Pot system that serves the Food Country center, the Wellness Center, and other downtown buildings. The pump station discharges through a 4" force main that travels about 1000 LF and empties into a 8" gravity sewer line near the intersection of Palmer Avenue and Panther Lane.
- Government Plant Road Pump Station – 350 GPM suction lift sewage pump station that receives flow McCready sewer pump station and gravity sewer lines from the southeastern side of Saltville. The pump station discharges through a 8" force main that empties into an 8" gravity sewer line along East Main Street about 3,600 LF southeast of the pump station.
- Plasterco Pump Station – 200 GPM suction lift sewage pump station that receives flow from the southwestern portion of Saltville, including W. Main Street, Old Quarry Road and Edgemont Subdivision, located on the east side of Worthy Blvd (Rte 107). The pump station discharges through a 6" force main that runs around 2700 LF along Main Street, where it empties into an 8" gravity sewer that flows to Rte. 91 Pump Station.
- Rte. 91 Pump Station – 250 GPM suction lift sewage pump station that receives flow Plasterco and Henrytown sewer pump stations plus 8" gravity lines to the east and west along Main Street. The pump station discharges through a 6" force main that travels along East Main about 3,000 LF that empties into an 8" gravity sewer line.



- Rte. 634/Headworks Pump Station – 350 GPM suction lift sewage pump station that receives all flow from this collections system. The pump station discharges through a 10” force main that takes flow to the WWTP.

The system also collects flow from bordering Smyth County customers from the Allison Gap subsystem.

Flow collected by the system is conveyed to the Town of Saltville sewer system. Treatment is ultimately provided at the Saltville WWTP (VPDES Permit #0026808).

System Flows - Flows for the collection system (Town and Smyth County) are estimated based on meters at the WWTP. A summary of the system’s collected and billed flows (including flow from Smyth County Allison Gap subsystem) for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	11,501,000	2,342,252	20.4%
February	16,436,000	2,196,651	13.4%
March	18,383,000	1,991,443	10.8%
April	12,720,000	2,257,029	17.7%
May	8,060,000	2,288,538	28.4%
June	7,140,000	2,264,483	31.7%
July	7,161,000	2,541,367	35.5%
August	7,998,000	2,357,332	29.5%
September	6,990,000	2,251,788	32.2%
October	8,928,000	2,234,545	25.0%
November	7,020,000	2,598,066	37.0%
December	7,750,000	2,132,799	27.5%
<b>Monthly Average</b>	<b>10,007,250</b>	<b>2,288,024</b>	<b>22.9%</b>
<b>Daily Average</b>	<b>329,005</b>	<b>75,223</b>	<b>22.9%</b>
<b>Avg / Customer</b>	<b>359</b>	<b>82</b>	

Permit Violations/System Overflows/Consent Order

- The Saltville collection system had 12 reported sewer system overflows during calendar year 2021. The overflows were due to excessive Infiltration and Inflow (4), manhole blockage with debris (2), and equipment failure (6).
- The system has had approximately 25 permit violations over the past 2 years. The violations were the result of infiltration and inflow, manhole blockages, and equipment failures.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Frequent issues with pump stations maintenance.

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES was performed on the Town’s sewer system in 2022 by The Lane Group. The study region included areas draining to the Government Plant Road Pump Station. The SSES identified \$ 1.3 million of recommended system rehabilitation projects. The project is scheduled to be funded by VDEQ.



Capital Improvements Plan

The system currently does not have a CIP adopted.

Asset Management Plan

The system has an asset management plan prepared by The Lane Group in 2022 as part of the SSES.

Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

<b>Sewer Rate - Residential</b>		
	<b>In-Town</b>	<b>Out of Town</b>
0-3,000 gallons	\$32.53	\$58.63
3,001 and over gallons	\$9.30 per 1,000 gal	\$14.52 per 1,000 gal

<b>Sewer Rate - Commercial</b>		
	<b>In-Town</b>	<b>Out of Town</b>
0-3,000 gallons	\$51.12	\$77.12
3,001 and over gallons	\$12.78 per 1,000 gal	\$16.27 per 1,000 gal

Values for 0-3000 gallons are the Minimum Bill

Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is \$ \$6.9 million. (see *Questions Pertaining to Potential Future Projects*)

System Dept and Maturity Date of Outstanding Loans

The system currently has approximately \$1,366,091 in outstanding loan.

<b>Loan</b>	<b>Borrower/Placement</b>	<b>Maturity Date</b>	<b>Balance as of June 30, 2021</b>
1	Rural Development	2044	233,423
2	Rural Development	2044	77,808
3	Rural Development	2044	310,114
4	VRA	2030	744,746 (as of 11/22)



**SALTVILLE WWTP – VPDES PERMIT #0026808**  
**TOWN OF SALTVILLE, FACILITY OWNER**  
*MOUNT ROGERS PDC*

Facility Description – The treatment facility is located at 336 Allison Gap Road (see attached general vicinity map). The facility was originally constructed in 1971. The last major upgrade/expansion was completed in 2003 and involved construction of an aeration basin, 2 clarifiers, 3 digesters, a flow control building and UV lighting . The facility utilizes activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Saltville and residents of Smyth County in close proximity to the town limits. collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 0.99 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.3 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.53 MGD. The facility exceeded 80% capacity for 8 days during this period. Effluent from the plant is discharged to North Fork Holston River . Sludge from the facility is disposed of at Ecoh Safe Landfill by Republic Services .

Facility Operation – The facility is operated and maintained by EMS, Inc. Currently, 2 full time and 1 part time licensed operators work at the facility. 1 Class 2, 1 Class 3, and 1 Class 4. The facility is required to be staffed 8 hours/day M-F and 4 hours/day S-S.

Permit Violations – The facility has had approximately 40 permit violations over the past 2 years. The violations were primarily the result of manhole overflows during periods of heavy rain.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

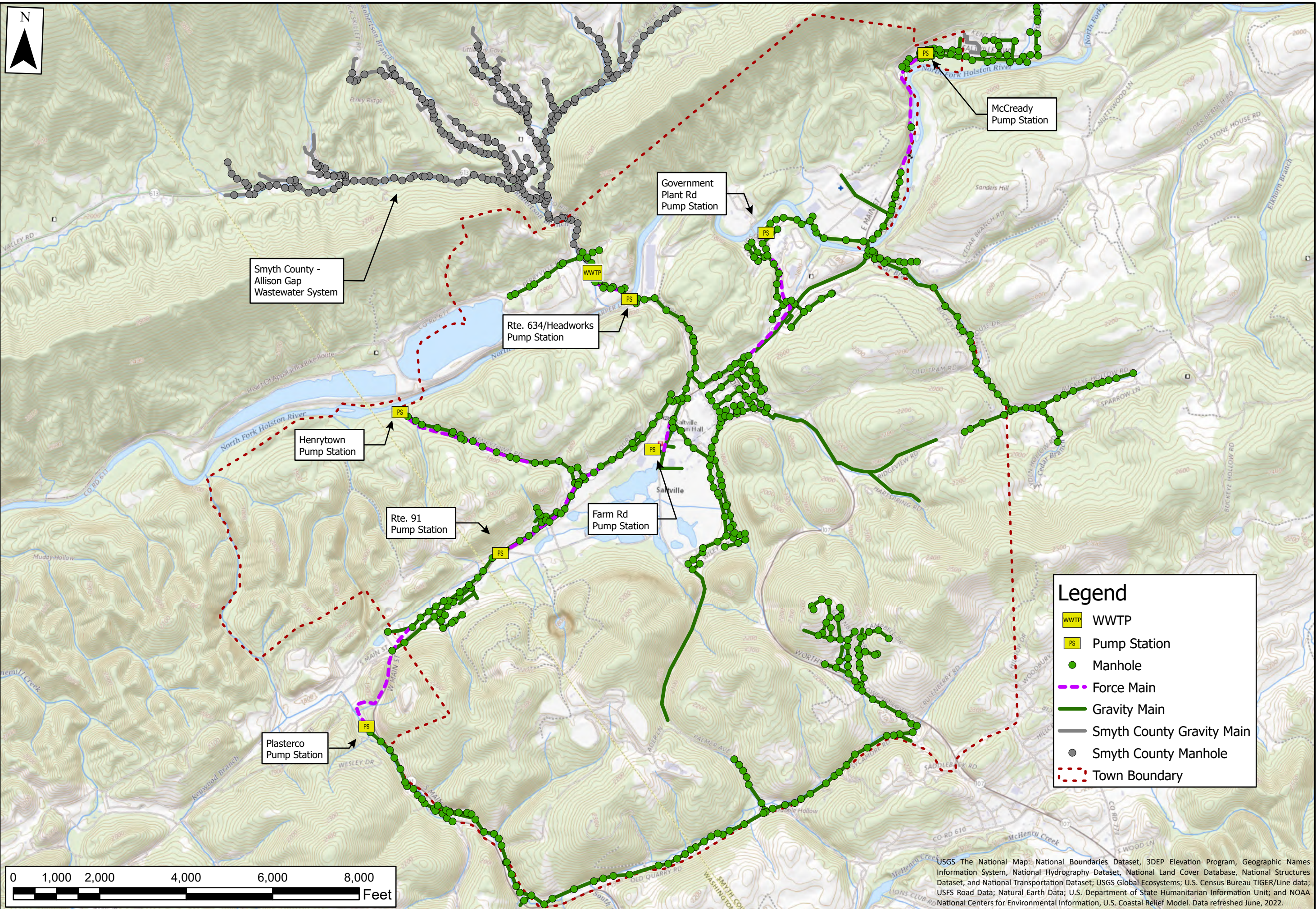
- Aging mechanical mixers need to be replaced by diffusers
- Aging UV light system needs upgrade
- Concrete wall deterioration needs repairs
- Aging headworks needs upgrade

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- App. \$800,000 needed to upgrade headworks; proposed project funded by USDA RD

Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$ 6.9 million. (see *Questions Pertaining to Potential Future Projects*)





Smyth County - Allison Gap Wastewater System

Rte. 634/Headworks Pump Station

Government Plant Rd Pump Station

McCready Pump Station

Henrytown Pump Station

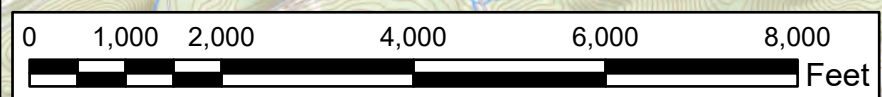
Rte. 91 Pump Station

Farm Rd Pump Station

Plasterco Pump Station

**Legend**

- WWTP
- PS
- Manhole
- Force Main
- Gravity Main
- Smyth County Gravity Main
- Smyth County Manhole
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

SALTVILLE  
WASTEWATER  
SYSTEM



DATE:	11/10/2022		
SHEET:			
DRAWN BY:	JR	CHECKED BY:	
PROJECT NO.:	2248		
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# SMYTH COUNTY COLLECTION SYSTEM

## SMYTH COUNTY – ADWOLFE SUBSYSTEM

*Mount Rogers Planning District Commission*

System Description – The Smyth County collection system serves multiple communities. Wastewater is collected in small subsystems bordering the towns of Marion, Saltville and Chilhowie where it ultimately flows into each town’s wastewater plant. The systems will be discussed by individual subsystem.

- Adwolfe Subsystem – collection system in Adwolfe Community adjacent to Hall Addition, about 3.5 miles southwest of Marion, located near the I-81 Exit 44. The collection system was constructed in 2018. The system serves approximately 36 residential customers and 34 commercial customers

The approximate number of customers served by the system was reported to be:

<u>36</u>	Residential Customers
<u>10</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>24</u>	<u>Other Municipal Systems</u>
<b>70</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **50%** residential and **50%** non-residential.

The collection system consists of 8” gravity lines. It is estimated that approximately 0 % of the system consists of terra cotta or concrete lines and approximately 0 % of the manholes are masonry brick. The newest area of the system was constructed in 2018. The oldest areas of the system are estimated to have been constructed in 2018.

The system includes four pump stations: **All DETAILS Not Updated on Pump Stations**

- Exit 39 Pump Station – ?? GPM duplex suction lift pump station serving the southwest side of Marion near the South Main Street/ Washington Avenue intersection. The pump station discharges through a 6” force main that empties into an 8” gravity sewer line east on Lee Highway.
- I81 Crossing/Dip Dog Pump Station – ?? GPM duplex suction lift pump station serving the north side of the Route 52/ Blue Ridge Parkway intersection. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line along Route 52.
- Oak Point Elementary School Pump Station – 30 GPM simplex grinder sewage pump station serving hat receives all flow from this collection system. The pump station discharges through a 6” force main that empties into an 8” gravity sewer line located near the Carroll County Industrial Park at I-77 Exit 14. The receiving sewer system is part of the Carroll County PSA’s Gladeville/ Cranberry Sewer System.
- Rolling Hills Drive Pump Station – 5900 GPM Triplex submersible pump station pumping into WWTP.

Flow collected by the system is conveyed to the Town of Marion Wastewater Treatment Plant. Treatment is ultimately provided at the Town of Marion WWTP (VPDES Permit # 0086304).



System Flows - Flows for the collection system are estimated based on meter at the Marion WWTP. The gallons treated are based on an estimated 65% flow from Hall/Cedars and 35% from Adwolfe subsystems. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	565,000	291,400	52%
February	630,000	246,600	39%
March	653,000	307,000	47%
April	336,000	325,000	97%
May	172,000	299,000	174%
June	196,000	319,000	163%
July	197,000	326,000	165%
August	292,000	298,000	102%
September	191,000	363,000	190%
October	262,000	345,000	132%
November	175,000	343,000	196%
December	151,000	347,000	229%
<b>Monthly Average</b>	<b>318,333</b>		<b>132%</b>
<b>Daily Average</b>	<b>10,466</b>		
<b>Avg / Customer</b>	<b>150</b>		

Permit Violations/System Overflows/Consent Order

- The Adwolfe collection subsystem had **0** reported sewer system overflows during calendar year 2021.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Unknown.

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES has not been performed on the subsystem.

Capital Improvements Plan

The subsystem does not have a CIP.

Asset Management Plan

The subsystem does not have an asset management plan.



Sewer Rate Structure

The following sewer rate structure (see attached) was last modified on July 1, 2022.

**Sewer Rate - Residential**

0-1,000 gallons	\$23.29 minimum bill
1,001 to 6,000 gallons	\$10.09 per 1,000 gallons
6,001 and over	\$12.42 per 1,000 gallons
Residential Flat Rate	\$51.54 per month

**Sewer Rate - Commercial**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

**Sewer Rate - Industrial and Industrial Enterprise**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

Opinion of Probable Cost for Necessary System Improvements – No projects are currently planned for the subsystem.

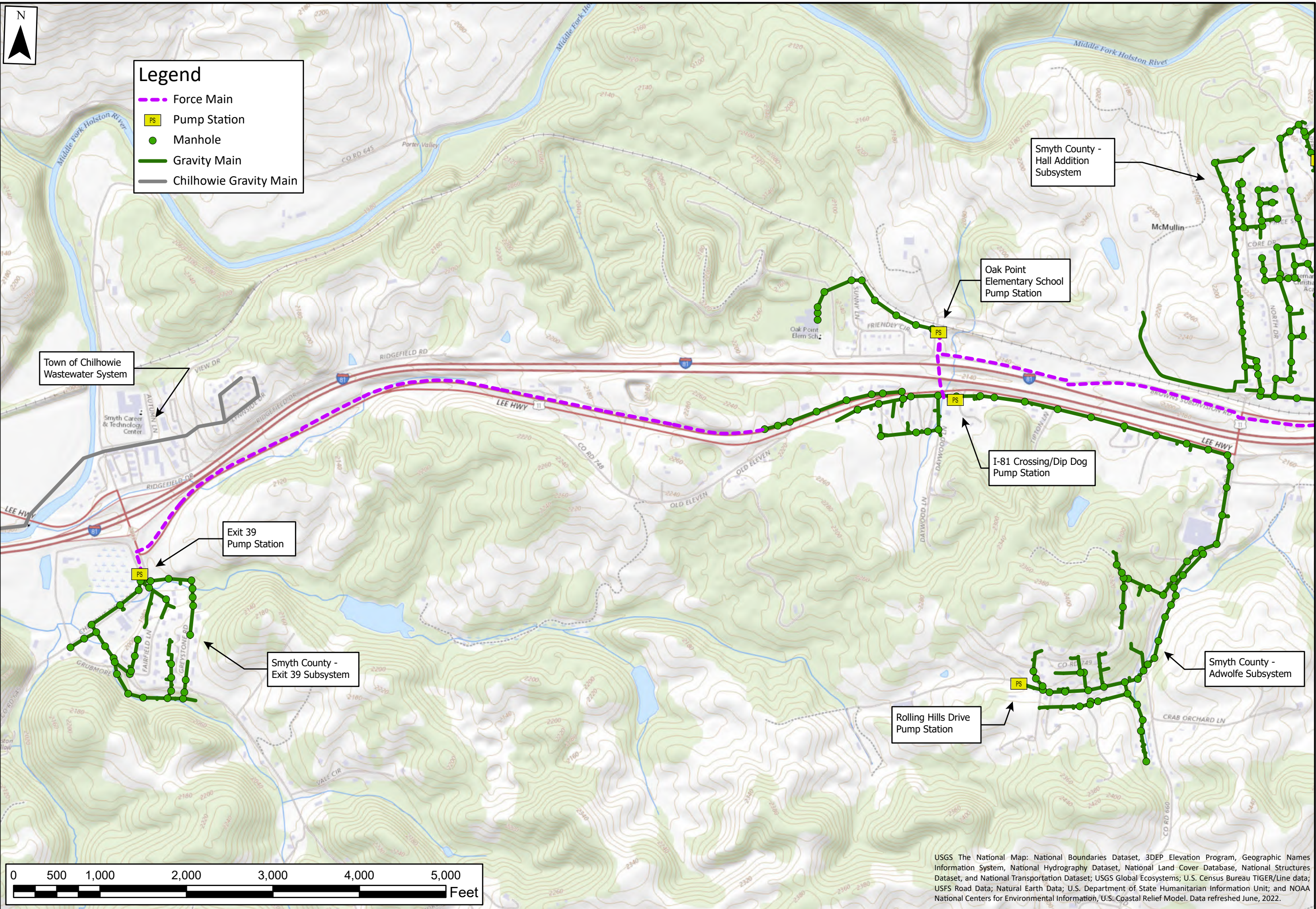
System Dept and Maturity Date of Outstanding Loans – **Details not updated as of this draft.**

The subsystem currently has approximately \$ \_\_\_\_\_ in outstanding loans as of June 22, 2022.

<b>Loan</b>	<b>Borrower/Placement</b>	<b>Maturity Date</b>	<b>Balance as of June 30, 2022</b>
1	USDA RD	2060	

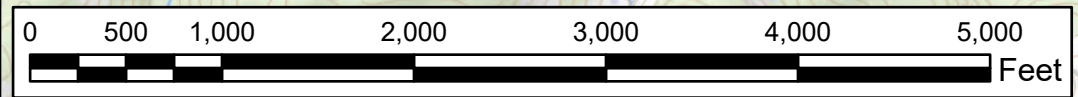
Yearly payment on Loan 1 are \$78,492.





**Legend**

- Force Main
- PS Pump Station
- Manhole
- Gravity Main
- Chilhowie Gravity Main



Smyth County - Hall Addition Subsystem

Oak Point Elementary School Pump Station

I-81 Crossing/Dip Dog Pump Station

Exit 39 Pump Station

Smyth County - Exit 39 Subsystem

Rolling Hills Drive Pump Station

Smyth County - Adwolfe Subsystem

Town of Chilhowie Wastewater System

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

SMYTH COUNTY  
WASTEWATER SYSTEM -  
ADWOLFE SUBSYSTEM



DATE:	11/10/2022
SHEET:	
DRAWN BY:	JJR
CHECKED BY:	
PROJECT NO.:	2248
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# SMYTH COUNTY COLLECTION SYSTEM

## SMYTH COUNTY – ALLISON GAP SUBSYSTEM

Mount Rogers Planning District Commission

System Description – The Smyth County collection system serves multiple communities. Wastewater is collected in small subsystems bordering the towns of Marion, Saltville and Chilhowie where it ultimately flows into each town’s wastewater plant. The systems will be discussed by individual subsystem.

- Allison Gap Subsystem – collection system in Allison Gap Community north of Saltville. The collection system was constructed in the early 1970’s. The system serves approximately 113 residential customers and 3 commercial customers

The approximate number of customers served by the system was reported to be:

<u>113</u>	Residential Customers
<u>1</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>2</u>	Other Municipal Systems
<b>116</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **99%** residential and **1%** non-residential.

The collection system consists of 8” through 10” gravity lines. It is estimated that approximately 0 % of the system consists of terra cotta or concrete lines and approximately 0 % of the manholes are masonry brick. The newest area of the system was constructed in 1970. The oldest areas of the system are estimated to have been constructed in the 1970’s.

The system includes no pump stations:

Flow collected by the system is conveyed to the Town of Saltville sewer system. Treatment is ultimately provided at the Town of Saltville WWTP (VPDES Permit # 0026808).

System Flows - Flows for the collection system are estimated based on meters at the WWTP. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	653,500	240,892	37
February	811,930	226,315	28
March	1,016,540	206,500	20
April	443,250	225,098	51
May	368,870	254,455	69
June	313,450	291,539	93
July	387,620	232,968	60
August	470,660	255,045	54
September	503,900	239,340	47
October	387,410	219,986	57
November	268,380	321,625	120
December	428,910	222,973	52
<b>Monthly Average</b>	<b>504,535</b>	<b>244,736</b>	<b>57</b>
<b>Daily Average</b>	<b>16,587</b>	<b>8,046</b>	
<b>Avg / Customer</b>	<b>143</b>	<b>70</b>	



### Permit Violations/System Overflows/Consent Order

- The Allison Gap collection subsystem had 0 reported sewer system overflows during calendar year 2021.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- Infiltration and Inflow needs.

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

A SSES has not been performed on the subsystem.

### Capital Improvements Plan

The subsystem does not have a CIP.

### Asset Management Plan

The subsystem does not have an asset management plan.

### Sewer Rate Structure

The following sewer rate structure (Smyth County) was last modified on July 1, 2022

#### **Sewer Rate - Residential**

0-1,000 gallons	\$23.29 minimum bill
1,001 to 6,000 gallons	\$10.09 per 1,000 gallons
6,001 and over	\$12.42 per 1,000 gallons

Residential Flat Rate                      \$51.54 per month

#### **Sewer Rate - Commercial**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

#### **Sewer Rate - Industrial and Industrial Enterprise**

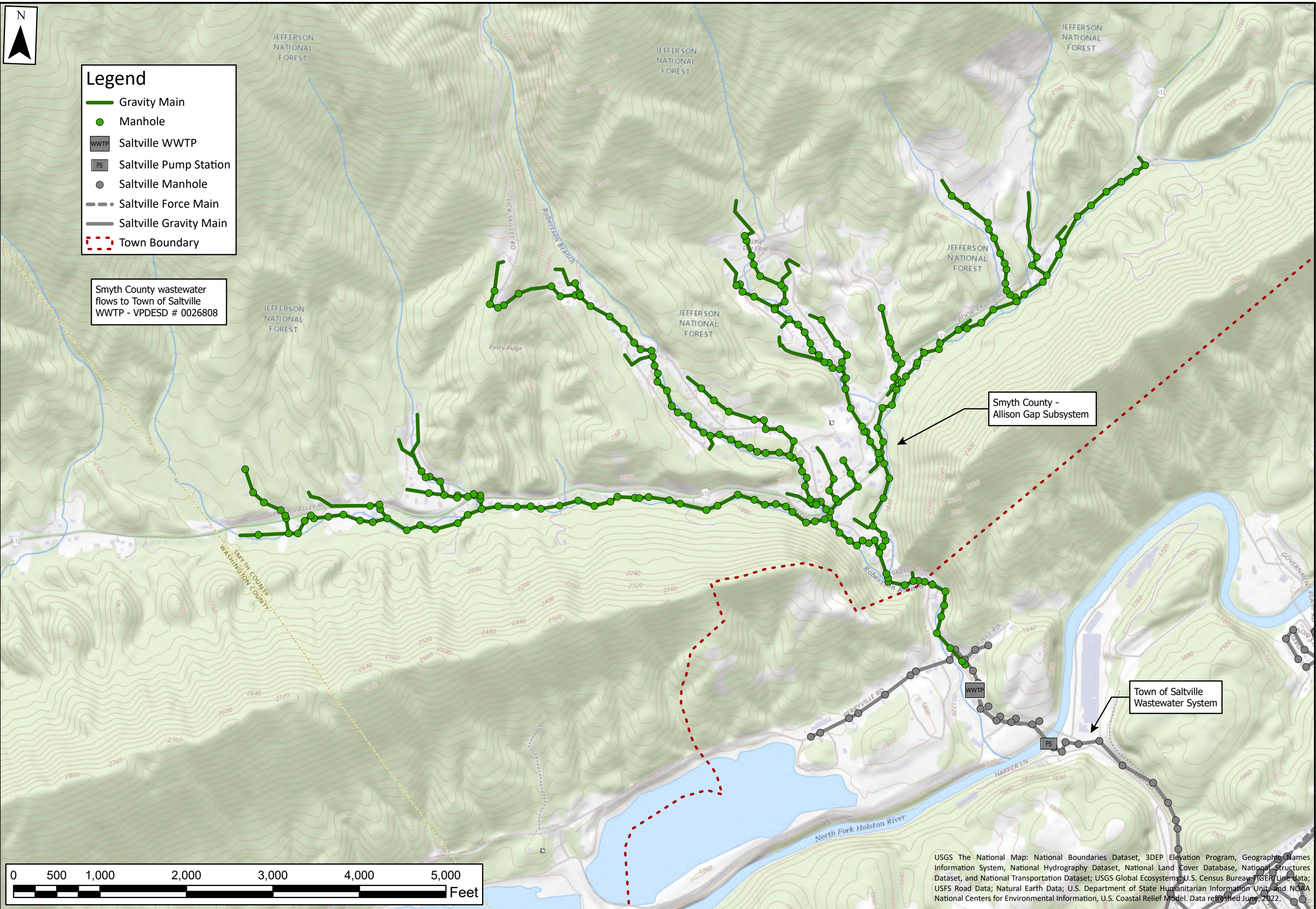
0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

Opinion of Probable Cost for Necessary System Improvements – No projects are currently planned for the subsystem.

### System Dept and Maturity Date of Outstanding Loans

The subsystem currently has no known debt.



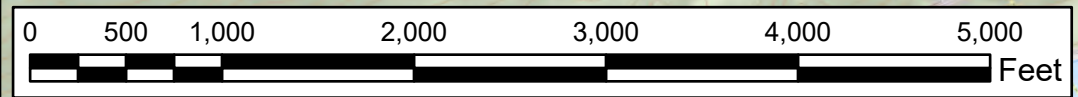


- Legend**
- Gravity Main
  - Manhole
  - WWTP Saltville WWTP
  - PS Saltville Pump Station
  - Saltville Manhole
  - Saltville Force Main
  - Saltville Gravity Main
  - Town Boundary

Smyth County wastewater flows to Town of Saltville WWTP - VPDES # 0026808

Smyth County - Allison Gap Subsystem

Town of Saltville Wastewater System



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

SMYTH COUNTY  
 WASTEWATER SYSTEM -  
 ALLISON GAP  
 SUBSYSTEM



DATE:	11/10/2022
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DRAWN BY:	JJR
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# SMYTH COUNTY COLLECTION SYSTEM

## SMYTH COUNTY – ATKINS SUBSYSTEM

Mount Rogers Planning District Commission

System Description – The Smyth County collection system serves multiple communities. Wastewater is collected in small subsystems bordering the towns of Marion, Saltville and Chilhowie where it ultimately flows into each town’s wastewater plant. The systems will be discussed by individual subsystem.

- Atkins Subsystem – collection system stretches about 5.5 miles east along Lee Highway (Rte. 11) to the western side of Atkins, located near the I-81 Exit 49. The collection system was constructed in 1980’s. The system serves approximately 59 residential customers and 26 commercial customers.

The approximate number of customers served by the system was reported to be:

<u>59</u>	Residential Customers
<u>26</u>	Commercial Customers
<u>    </u>	Industrial Customers
<u>    </u>	Other Municipal Systems
<b>85</b>	<b>Total Number of Customers</b>

The system’s customer billings for the second half of 2021 were available at the time of this report. Based on billing data, flows were estimated to be approximately **10%** residential and **90%** non-residential.

The collection system consists of 8” through 12” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 2021. The oldest areas of the system are estimated to have been constructed in the 1920’s.

The system includes one pump station:

- Rest Area Pump Station – pump station details were not known at the time of this report.

Flow collected by the system is conveyed to the Town of Marion Wastewater Treatment Plant. Treatment is ultimately provided at the Town of Marion WWTP (VPDES Permit # 0086304).

System Flows - Flows for the collection system are estimated based on meters at the WWTP. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	5,296,840		%
February	8,747,910		%
March	3,020,280		%
April	4,051,020		%
May	5,844,770		%
June	3,788,890	1,444,960	38%
July	5,871,780	1,784,937	30%
August	5,992,000	1,793,180	30%
September	5,795,830	1,875,398	32%
October	5,521,550	1,694,394	31%
November	4,873,390	1,608,828	34%
December	4,806,760	2,044,671	43%
<b>Monthly Average</b>	<b>5,300,918</b>		<b>34%</b>
<b>Daily Average</b>	<b>174,277</b>		
<b>Avg / Customer</b>	<b>2,050</b>		



### Permit Violations/System Overflows/Consent Order

- The Atkins collection subsystem had 0 reported sewer system overflows during calendar year 2021.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- Infiltration and Inflow needs.

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

A SSES has not been performed on the subsystem.

### Capital Improvements Plan

The subsystem does not have a CIP.

### Asset Management Plan

The subsystem does not have an asset management plan.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

#### **Sewer Rate - Residential**

0-1,000 gallons	\$23.29 minimum bill
1,001 to 6,000 gallons	\$10.09 per 1,000 gallons
6,001 and over	\$12.42 per 1,000 gallons

Residential Flat Rate	\$51.54 per month
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#### **Sewer Rate - Commercial**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

#### **Sewer Rate - Industrial and Industrial Enterprise**

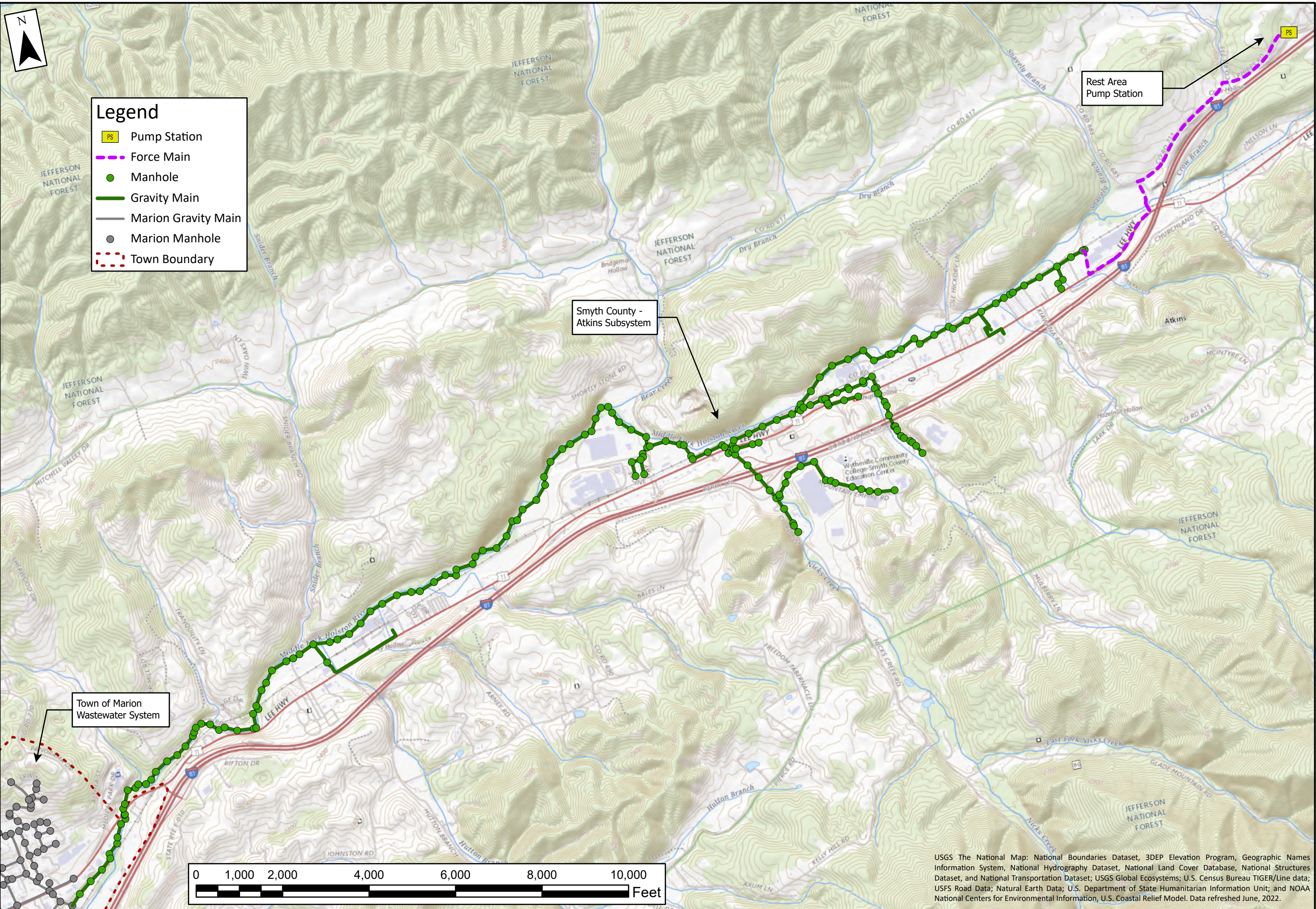
0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

Opinion of Probable Cost for Necessary System Improvements – No projects are currently planned for the subsystem.

### System Dept and Maturity Date of Outstanding Loans

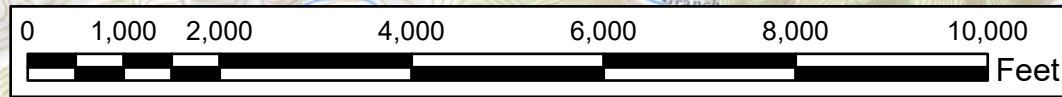
The subsystem currently has no known debt.





**Legend**

- Pump Station
- Force Main
- Manhole
- Gravity Main
- Marion Gravity Main
- Marion Manhole
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**SMYTH COUNTY  
WASTEWATER SYSTEM -  
ATKINS SUBSYSTEM**



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# SMYTH COUNTY COLLECTION SYSTEM

## SMYTH COUNTY – HALL ADDITION/CEDARS SUBSYSTEM

*Mount Rogers Planning District Commission*

System Description – The Smyth County collection system serves multiple communities. Wastewater is collected in small subsystems bordering the towns of Marion, Saltville and Chilhowie where it ultimately flows into each town’s wastewater plant. The systems will be discussed by individual subsystem.

- Hall Addition – collection system stretches about 1.5 miles in length along Lee Highway (Rte.11) about 1.5 to 3 miles southwest of Marion, located near the I-81 Exit 44. The collection system was constructed in 2006 with additions completed in 2011. We are including data for the Cedars subsystem (data collected from Town of Marion). The system serves approximately 195 residential customers and 16 commercial customers.

The approximate number of customers served by the system was reported to be:

<u>195</u>	Residential Customers
<u>7</u>	Commercial Customers
<u>0</u>	Industrial Customers
<u>9</u>	<u>Other Municipal Systems</u>
<b>211</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately **90%** residential and **10%** non-residential.

The collection system consists of 8” through 10” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 2011. The oldest areas of the system are estimated to have been constructed in 2006.

The system includes four pump stations: **All DETAILS Not Updated on Pump Stations**

- Hall Addition/Cedars Pump Station 1 – 21 GPM grinder sewage pump station
- Hall Addition/Cedars Pump Station 2 – 280 GPM duplex grinder pump station serving the south side of Lee Highway near Sapwood Drive. The pump station discharges through a 2” force main that empties into an 8” gravity sewer line along
- Hall Addition Phase II Pump Station – 25 GPM duplex grinder sewage pump station serving that receives all flow from this collection system. The pump station discharges through a 6” force main that empties into an 8” gravity sewer line located near .
- Hall Addition/Cedars Pump Station 3 – 42 GPM duplex grinder pump station pumping into

Flow collected by the system is conveyed to the Town of Marion Wastewater Treatment Plant. Treatment is ultimately provided at the Town of Marion WWTP (VPDES Permit # 0086304).



System Flows - Flows for the collection system are estimated based on meter at the Marion WWTP. The gallons treated are based on an estimated 65% flow from Hall/Cedars and 35% from Adwolfe subsystems. A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	1,049,000	527,000	50%
February	1,170,000	471,000	40%
March	1,214,000	491,000	40%
April	623,000	482,000	77%
May	320,000	492,000	154%
June	364,000	514,000	141%
July	366,000	691,000	189%
August	542,000	551,000	102%
September	354,000	589,000	166%
October	488,000	489,000	100%
November	325,000	476,000	146%
December	281,000	501,000	178%
<b>Monthly Average</b>	<b>591,333</b>		<b>115%</b>
<b>Daily Average</b>	<b>19,441</b>		
<b>Avg / Customer</b>	<b>92</b>		

Permit Violations/System Overflows/Consent Order

- The Hall Addition collection subsystem had 0 reported sewer system overflows during calendar year 2021.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Unknown.

System Needs

- Infiltration and inflow identification and remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

SSES

A SSES has not been performed on the subsystem.

Capital Improvements Plan

The subsystem does not have a CIP.

Asset Management Plan

The subsystem does not have an asset management plan.



Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

**Sewer Rate - Residential**

0-1,000 gallons	\$23.29 minimum bill
1,001 to 6,000 gallons	\$10.09 per 1,000 gallons
6,001 and over	\$12.42 per 1,000 gallons
Residential Flat Rate	\$51.54 per month

**Sewer Rate - Commercial**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

**Sewer Rate - Industrial and Industrial Enterprise**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

Opinion of Probable Cost for Necessary System Improvements – No projects are currently planned for the subsystem.

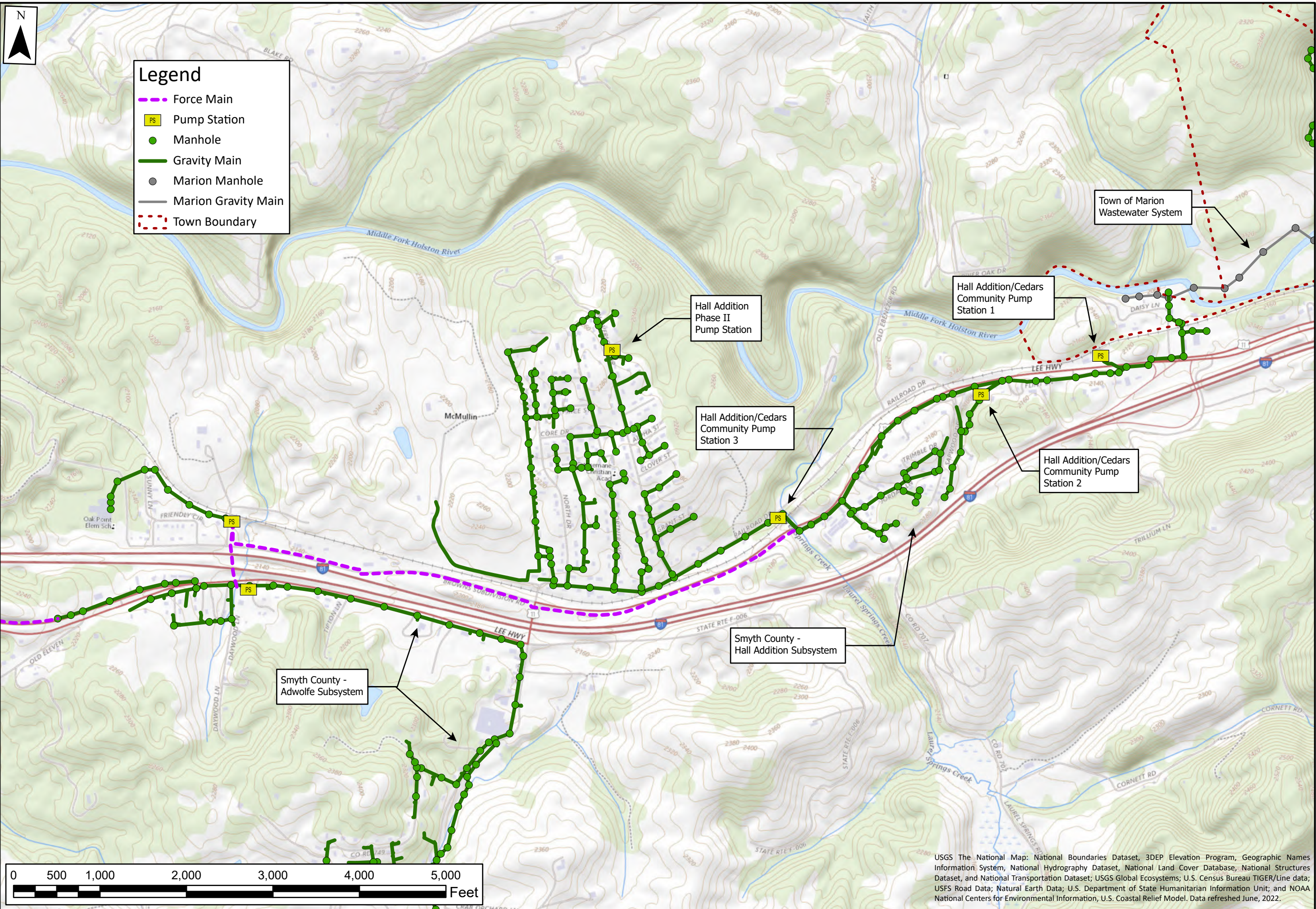
System Dept and Maturity Date of Outstanding Loans - **Details not updated as of this draft.**

The subsystem currently has approximately \$            in outstanding loans as of June 22, 2022.

<b>Loan</b>	<b>Borrower/Placement</b>	<b>Maturity Date</b>	<b>Balance as of June 30, 2022</b>
1	USDA RD	2047	

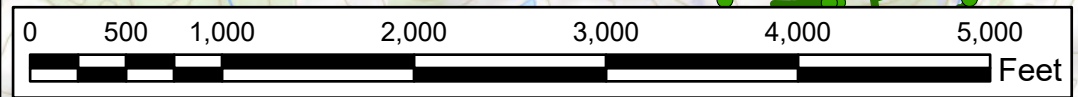
Yearly payment on Loan 1 are \$68,940.





**Legend**

- Force Main
- PS Pump Station
- Manhole
- Gravity Main
- Marion Manhole
- Marion Gravity Main
- - - Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



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COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**SMYTH COUNTY  
WASTEWATER SYSTEM -  
HALL ADDITION  
SUBSYSTEM**



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# SMYTH COUNTY COLLECTION SYSTEM

## SMYTH COUNTY – HUNGRY MOTHER SUBSYSTEM

Mount Rogers Planning District Commission

System Description – The Smyth County collection system serves multiple communities. Wastewater is collected in small subsystems bordering the towns of Marion, Saltville and Chilhowie where it ultimately flows into each town’s wastewater plant. The systems will be discussed by individual subsystem.

- Hungry Mother Subsystem – collection system stretches about 1.5 miles in length along Rte. 16 north of Marion to approximately Hungry Mother Lake. Marion is located near the I-81 Exit 45. The collection system was constructed in 1990’s. The system serves approximately 200 residential customers and 5 commercial customers.

The approximate number of customers served by the system was reported to be:

<u>200</u>	Residential Customers
<u>1</u>	Commercial Customers
<u>    </u>	Industrial Customers
<u>4</u>	Other Municipal Systems
<b>205</b>	<b>Total Number of Customers</b>

The system’s customer billings for the second half of 2021 were available at the time of this report. Based on billing data, flows were estimated to be approximately **35%** residential and **65%** non-residential (includes Hungry Mother Park flow).

The collection system consists of 8” through 12” gravity lines. It is estimated that approximately 0% of the system consists of terra cotta or concrete lines and approximately 0% of the manholes are masonry brick. The newest area of the system was constructed in 2021. The oldest areas of the system are estimated to have been constructed in the 1920’s.

The system includes zero pump stations:

Flow collected by the system is conveyed to the Town of Marion Wastewater Treatment Plant. Treatment is ultimately provided at the Town of Marion WWTP (VPDES Permit # 0086304).

System Flows - Flows for the collection system are estimated based on water usage of customers in the Hungry Mother subsystem. A summary of the system’s collected and billed flows for calendar year 2021 is currently not available.

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	1,771,200		
February	1,649,890		
March	1,821,337		
April	1,699,690		
May	1,576,530		
June	2,008,890	698,230	35%
July	1,897,023	734,000	39%
August	1,775,360	680,610	38%
September	1,677,530	658,880	39%
October	1,564,467	638,620	41%
November	1,622,590	700,410	43%
December	1,790,200	603,520	34%
<b>Monthly Average</b>	<b>1,737,892</b>		<b>38%</b>
<b>Daily Average</b>	<b>57,136</b>		
<b>Avg / Customer</b>	<b>279</b>		



### Permit Violations/System Overflows/Consent Order

- The Hungry Mother collection subsystem had 0 reported sewer system overflows during calendar year 2021.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- Infiltration and Inflow needs.

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

A SSES has not been performed on the subsystem.

### Capital Improvements Plan

The subsystem does not have a CIP.

### Asset Management Plan

The subsystem does not have an asset management plan.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022.

#### **Sewer Rate - Residential**

0-1,000 gallons	\$23.29 minimum bill
1,001 to 6,000 gallons	\$10.09 per 1,000 gallons
6,001 and over	\$12.42 per 1,000 gallons

Residential Flat Rate                      \$51.54 per month

#### **Sewer Rate - Commercial**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

#### **Sewer Rate - Industrial and Industrial Enterprise**

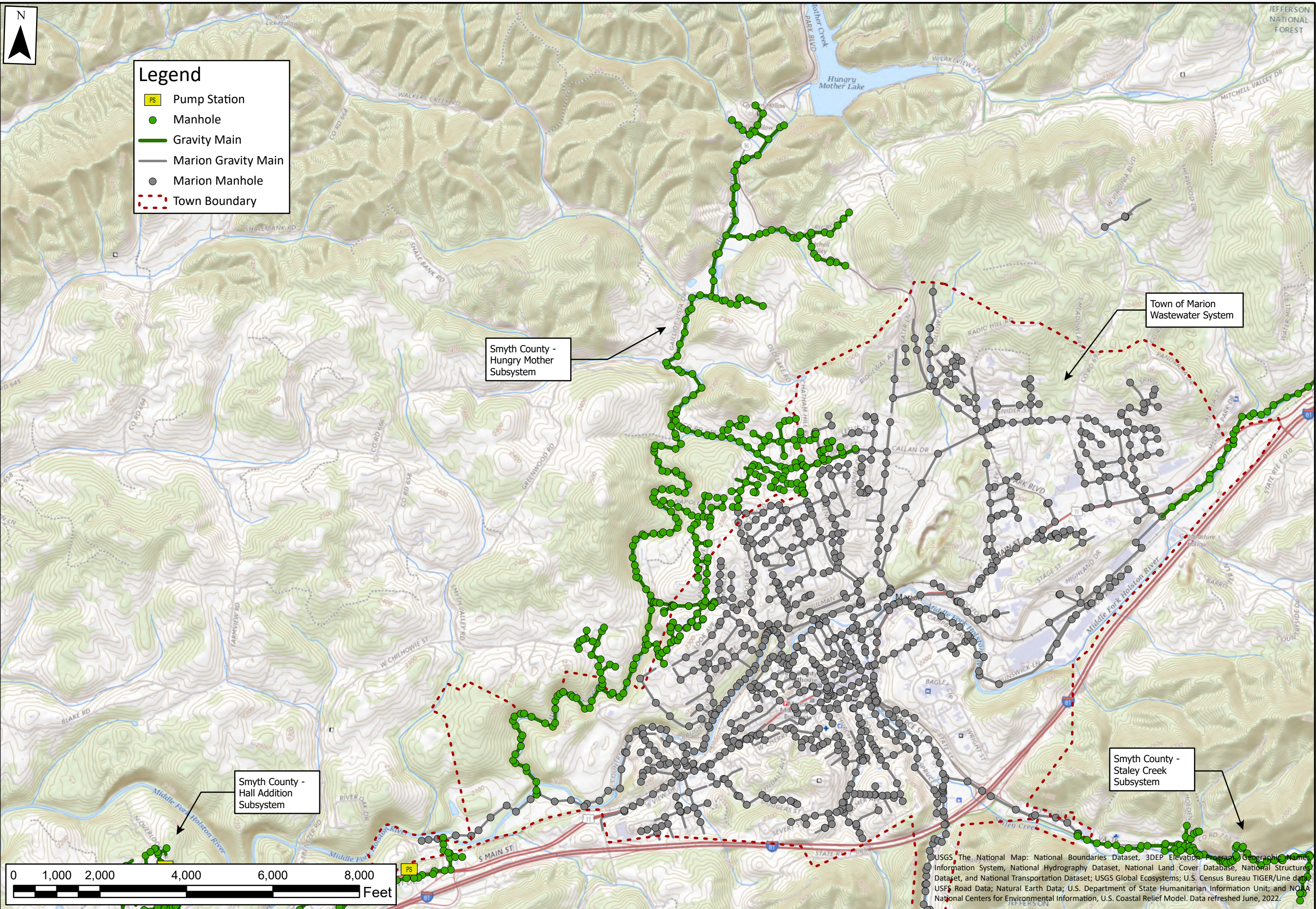
0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

Opinion of Probable Cost for Necessary System Improvements – No projects are currently planned for the subsystem.

### System Debt and Maturity Date of Outstanding Loans

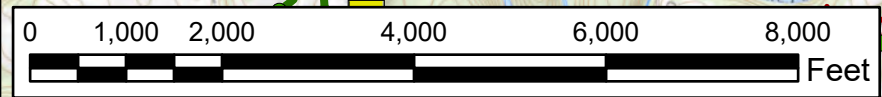
The subsystem currently has no known debt.





**Legend**

- PS Pump Station
- Manhole
- Gravity Main
- Marion Gravity Main
- Marion Manhole
- Town Boundary



USGS, The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Name Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS, Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
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SEWER STUDY 2022**

**SMYTH COUNTY  
WASTEWATER SYSTEM -  
HUNGRY MOTHER  
SUBSYSTEM**



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# SMYTH COUNTY COLLECTION SYSTEM

## SMYTH COUNTY – STALEY CREEK SUBSYSTEM

Mount Rogers Planning District Commission

System Description – The Smyth County collection system serves multiple communities. Wastewater is collected in small subsystems bordering the towns of Marion, Saltville and Chilhowie where it ultimately flows into each town’s wastewater plant. The systems will be discussed by individual subsystem.

- Staley Creek Subsystem – collection system stretches about 2.3 miles south of Marion along Rte. 16, located near the I-81 Exit 45. The collection system was constructed in 1993. The system serves approximately 73 residential customers and 9 commercial customers

The approximate number of customers served by the system was reported to be:

<u>73</u>	Residential Customers
<u>6</u>	Commercial Customers
<u>    </u>	Industrial Customers
<u>3</u>	Other Municipal Systems
<b>82</b>	<b>Total Number of Customers</b>

The system’s customer billings for the second half of 2021 were available at the time of this report. Based on billing data, flows were estimated to be approximately **85%** residential and **15%** non-residential.

The collection system consists of 8” through 10” gravity lines. It is estimated that approximately 0 % of the system consists of terra cotta or concrete lines and approximately 0 % of the manholes are masonry brick. The newest area of the system was constructed in 1993. The oldest areas of the system are estimated to have been constructed in the 1990’s.

The system includes zero pump stations:

Flow collected by the system is conveyed to the Town of Marion Wastewater Treatment Plant. Treatment is ultimately provided at the Town of Marion WWTP (VPDES Permit # 0086304).

System Flows - Flows for the collection system are estimated based on a meter where the Staley Creek subsystem connects to the Town of Marion sewer system. A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	3,305,840		
February	3,445,478		
March	3,793,266		
April	3,181,457		
May	2,606,389		
June	2,304,448	184,180	8%
July	2,368,860	207,360	9%
August	2,398,337	220,290	9%
September	2,266,053	208,660	9%
October	2,393,880	201,360	8%
November	2,122,527	226,990	11%
December	2,230,413	178,740	8%
<b>Monthly Average</b>	<b>2,701,412</b>		<b>9%</b>
<b>Daily Average</b>	<b>88,813</b>		
<b>Avg / Customer</b>	<b>1,083</b>		



### Permit Violations/System Overflows/Consent Order

- The Town of Marion collection system had 0 reported sewer system overflows during calendar year 2021. The last overflow of record was in November 2020. The overflow occurred during heavy rains and were thought to be due to high inflow.
- The system has had 0 permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

### Other Maintenance Related Issues Experienced by System

- Infiltration and Inflow needs

### System Needs

- Infiltration and inflow identification and remediation.

### Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

### SSES

A SSES has not been performed on the subsystem.

### Capital Improvements Plan

The subsystem does not have a CIP.

### Asset Management Plan

The subsystem does not have an asset management plan.

### Sewer Rate Structure

The following sewer rate structure was last modified on July 1, 2022

#### **Sewer Rate - Residential**

0-1,000 gallons	\$23.29 minimum bill
1,001 to 6,000 gallons	\$10.09 per 1,000 gallons
6,001 and over	\$12.42 per 1,000 gallons
Residential Flat Rate	\$51.54 per month

#### **Sewer Rate - Commercial**

0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

#### **Sewer Rate - Industrial and Industrial Enterprise**

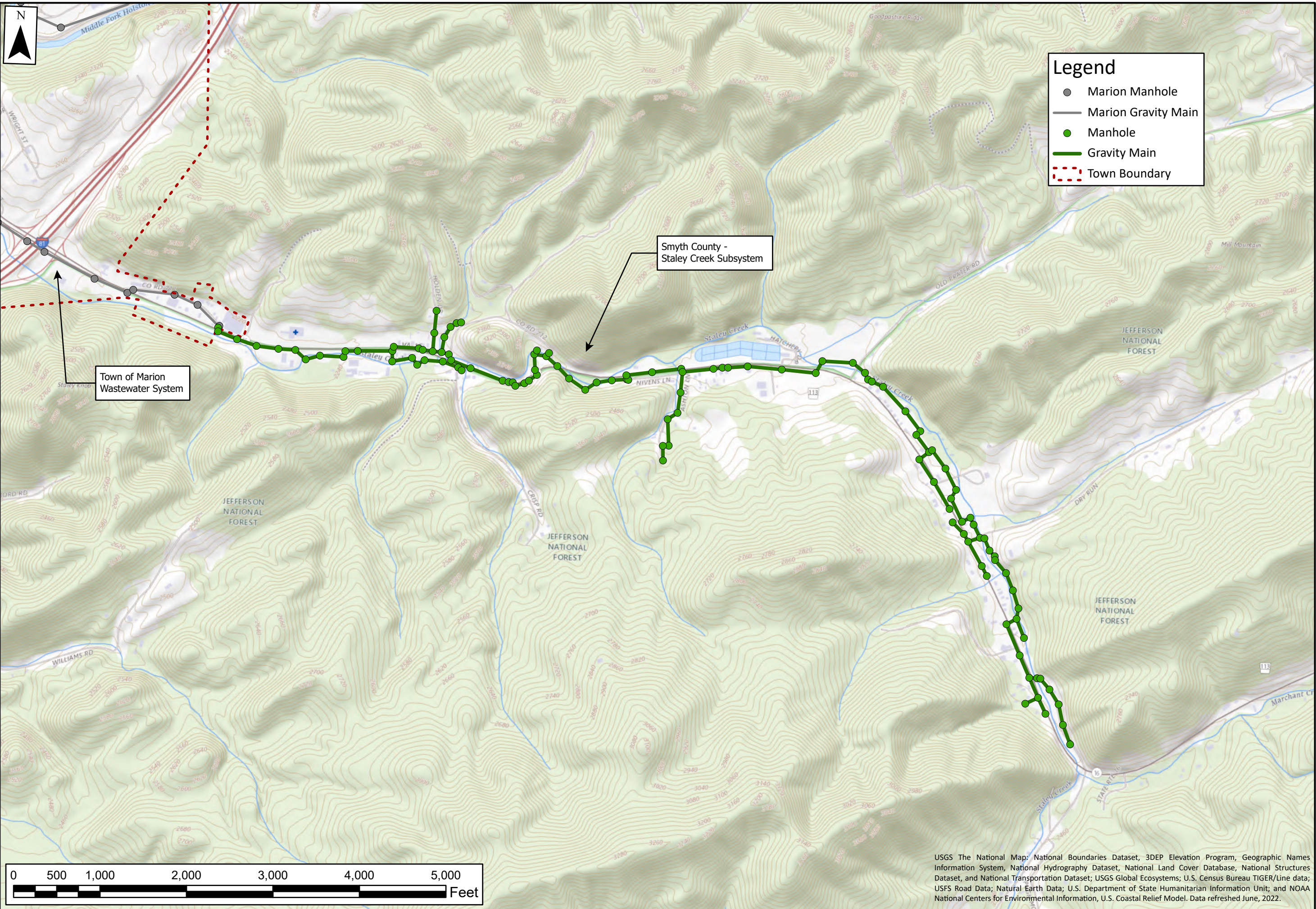
0-4,000 gallons	\$54.32 minimum bill
4,001 and over	\$12.42 per 1,000 gallons

Opinion of Probable Cost for Necessary System Improvements – No projects are currently planned for the subsystem.

### System Dept and Maturity Date of Outstanding Loans

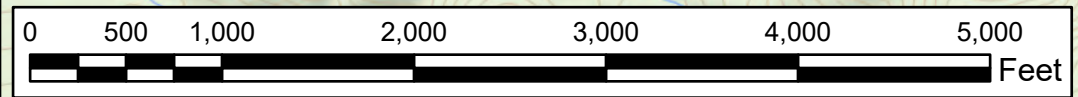
The subsystem currently has no known debt.





**Legend**

- Marion Manhole
- Marion Gravity Main
- Manhole
- Gravity Main
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



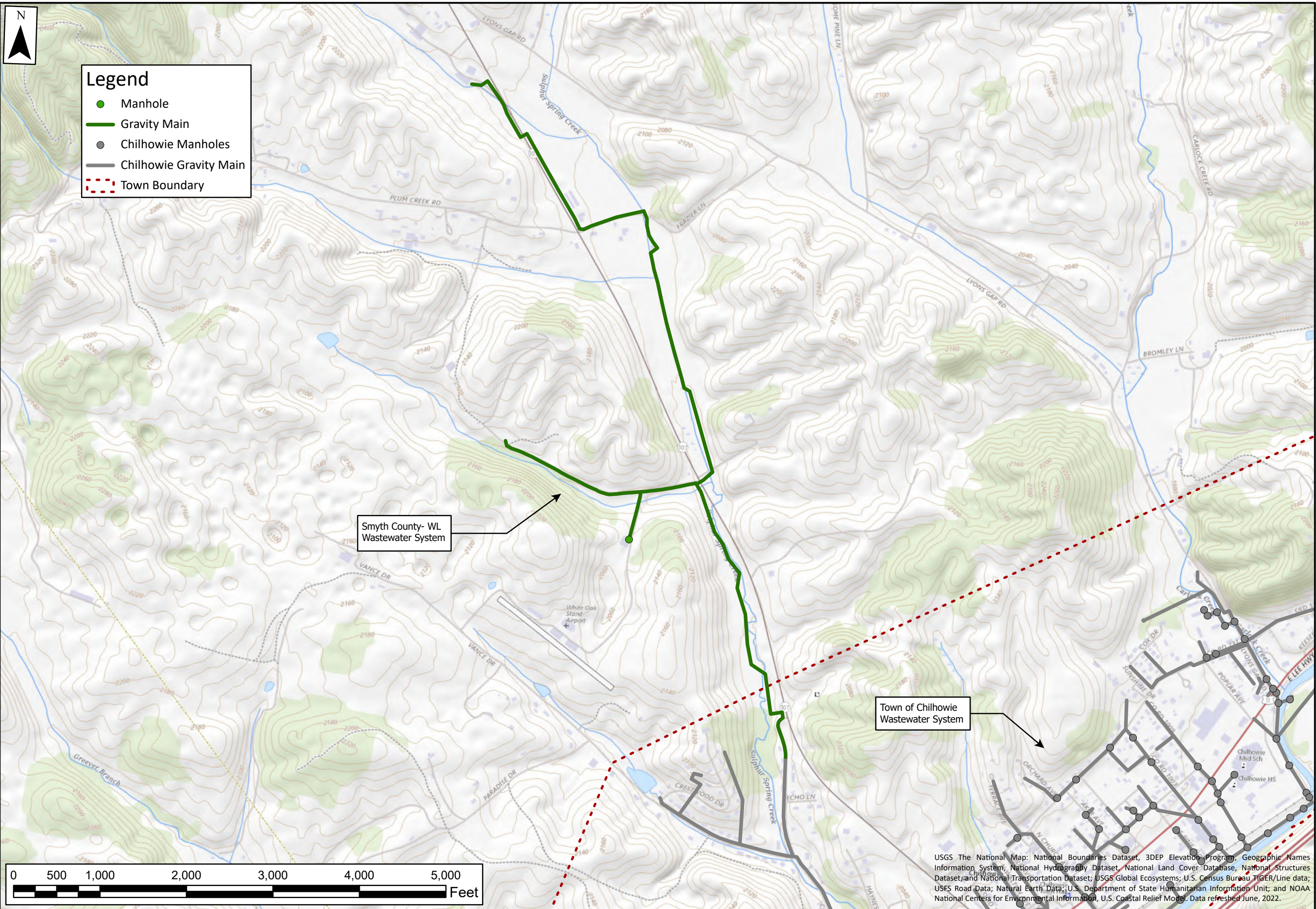
**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**SMYTH COUNTY  
WASTEWATER SYSTEM -  
STALEY CREEK  
SUBSYSTEM**



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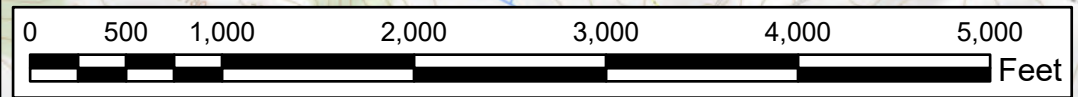


**Legend**

- Manhole
- Gravity Main
- Chilhowie Manholes
- Chilhowie Gravity Main
- - - Town Boundary

Smyth County- WL Wastewater System

Town of Chilhowie Wastewater System



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



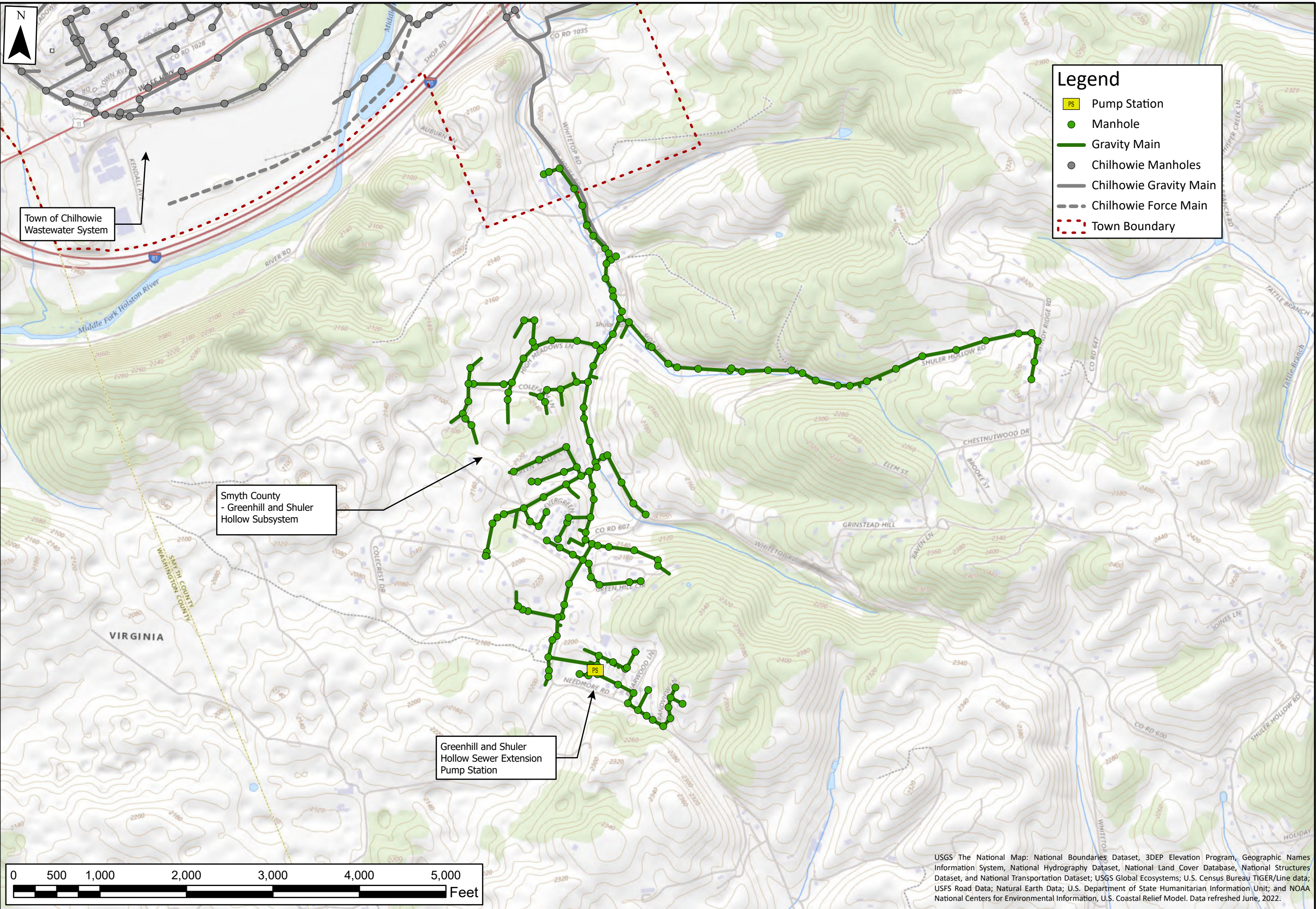
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WL



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**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**SMYTH COUNTY  
WASTEWATER SYSTEM -  
GREEN HILL AND  
SHULER SUBSYSTEM**



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# WASHINGTON COUNTY SERVICE AUTHORITY BVU AREA OF LEE HIGHWAY

*Mount Rogers Planning District Commission*

System Description – The Washington County Service Authority BVU area of Lee Highway sewer system is located in Washington County southwest of the Town of Abingdon.

The approximate number of customers served by the system was reported to be:

<u>387</u>	Residential Customers
<u>42</u>	Commercial Customers
<b>429</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately 67% residential and 33% non-residential.

The collection system consists of 4" through 16" gravity lines. It is estimated that approximately 100% of the system consists of PVC and approximately 100% of the manholes are precast concrete. The newest area of the system was constructed in 2000.

The Industrial Park and Force Mains of the system experiences problems with capacity due to inadequately sized lines.

The system includes fourteen pump stations:

- Eagle Ridge: 49 gpm lift station located at 16130 Old Jonesboro Road. The pump station discharges to a 3 inch force main and empties into an 8 inch gravity line.
- Virginia 13: 35 gpm lift station located at 14485 Long Hole Ridge. The pump station discharges to a 2 inch force main and empties to an 8 inch gravity line.
- Virginia 12: 174 gpm lift station located at 20012 Washing Way. The pump station discharges to a 6 inch force main and empties to an 8 inch gravity line.
- Virginia 7: 41 gpm lift station located at 15057 Spring View Ridge. The pump station discharges to a 2 inch force main and empties to an 8 inch gravity line.
- Virginia 5: 104 gpm lift station located at 14847 Washington Way. The pump station discharges to a 4 inch force main and empties to an 8 inch gravity line.
- Virginia 6: 24 gpm lift station located at 14842 Spring View Ridge. The pump station discharges to a 4 inch force main and empties to an 8 inch gravity line.
- Virginia 4: 100 gpm lift station located at 15036 Washing Way. The pump station discharges to a 4 inch force main and empties to an 8 inch gravity line.
- Virginia 2: 220 gpm lift station located at 15125 Highlands Trail. The pump station discharges to a 4 inch force main and empties to an 8 inch gravity line.
- Virginia 1: 150 gpm lift station located at 14485 Long Hole Ridge. The pump station discharges to a 4 inch force main and empties to an 8 inch gravity line.
- Virginia 3: 46 gpm lift station located at 23008 Virginia Trail. The pump station discharges to a 4 inch force main and empties into an 8 inch gravity line.
- Virginia 11: 79 gpm lift station located at Colleton Court 22468 VA Trail. The pump station discharges to a 2 inch force main and empties into an 8 inch gravity line.
- Virginia 10: 92 gpm lift station located at 22704 Virginia Trail. The pump station discharges to a 4 inch force main and empties into an 8 inch gravity line.
- Greenbriar: 276 gpm lift station located at 1631 Lee Highway. The pump station discharges to a 6 inch force main and empties into an 8 inch gravity line.
- Wyndale: 114 gpm lift station located at 18369 Fortunes Way. The pump station discharges to a 4 inch force main and empties into an 8 inch gravity line.

Flow collected by the system is conveyed to the BVU Collection system. Treatment is ultimately provided at the BVU Treatment Plant.



System Flows -A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	5,349,100	2,808,561	53%
February	7,176,200	2,068,768	29%
March	9,782,000	1,992,072	20%
April	5,356,600	2,596,685	48%
May	3,755,600	2,368,142	63%
June	0	3,768,256	N/A
July	2,995,700	2,905,935	97%
August	3,917,800	2,688,657	69%
September	3,169,150	3,016,117	95%
October	3,700,800	4,068,093	110%
November	3,312,100	2,810,413	85%
December	2,773,500	2,634,955	95%
<b>Monthly Average</b>	<b>4,274,046</b>	<b>2,810,555</b>	<b>66%</b>
<b>Daily Average</b>	<b>140,517</b>	<b>92,402</b>	<b>66%</b>
<b>Avg / Customer</b>	<b>328</b>	<b>215</b>	

Permit Violations/System Overflows/Consent Order

- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Pump station sizing,
- I&I,
- Industrial discharge.

System Needs

- Line rehabilitation,
- Pump station rehabilitation,
- Manhole rehabilitation,
- I&I remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

Capital Improvements Plan

Areas for improvements are known and are in the process of receiving funding.

Asset Management Plan

The system has an asset management plan prepared by Washington County Service Authority in 2022.

Sewer Rate Structure

The following sewer rate structure was last modified in 2022:



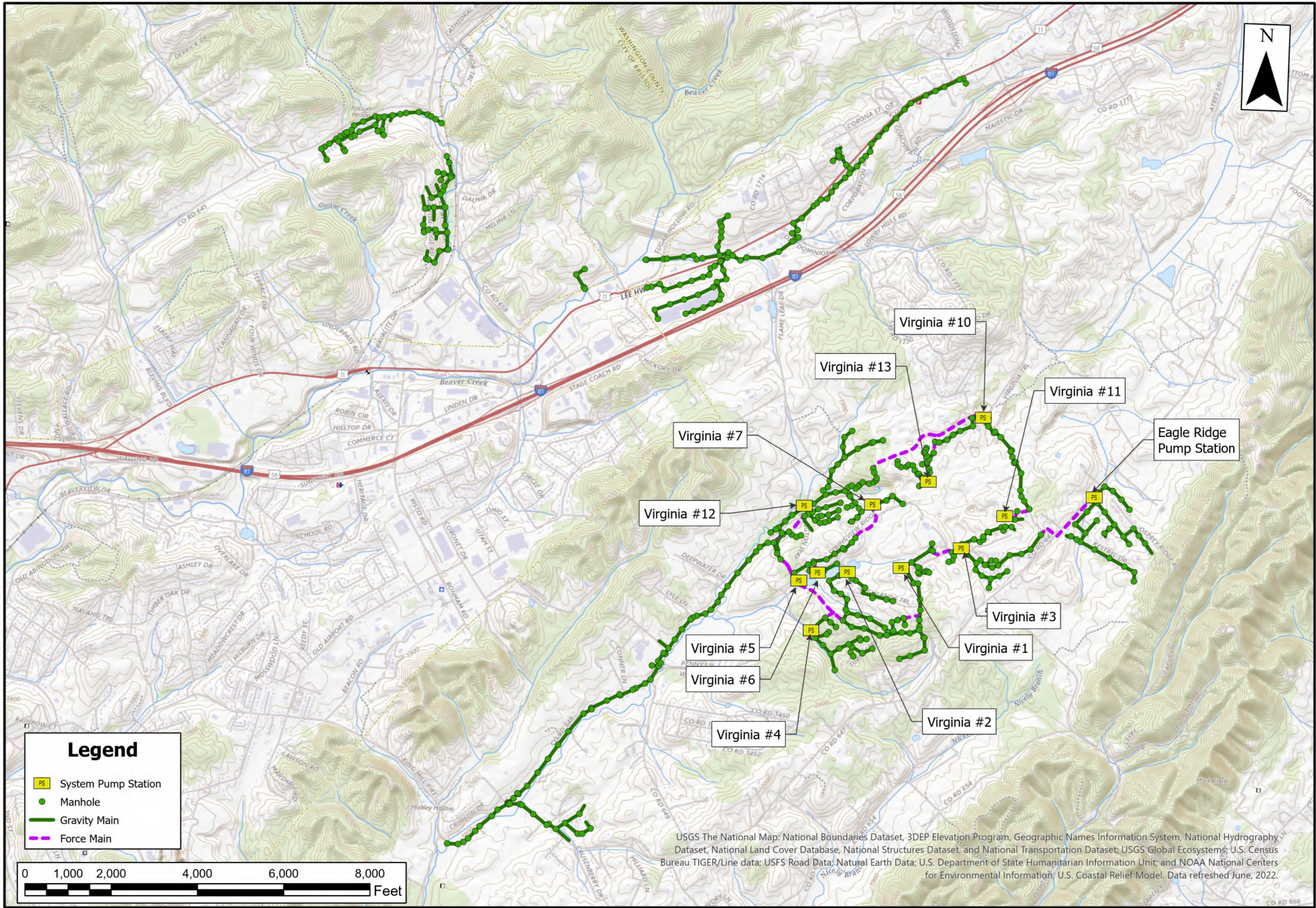
Residential	
\$31.74	Base Rate
\$9.42	Per 1,000 Gallons

Commercial/Industrial	
\$31.74	Base Rate
\$11.04	Per 1,000 Gallons

System Debt and Maturity Date of Outstanding Loans

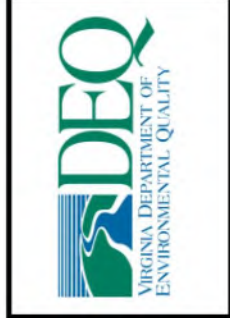
The system currently has approximately \$12,116,590 in outstanding loan.





SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WASHINGTON  
COUNTY SERVICE  
AUTHORITY -  
BVU LEE HIGHWAY



DATE: 10/10/2022	
SHEET: SHEET	
DRAWN BY: DRW	CHECKED BY: CHK
PROJECT NO: 10000	
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# WASHINGTON COUNTY SERVICE AUTHORITY DAMASCUS (VA0021130)

Mount Rogers Planning District Commission

System Description – The Washington County Service Authority Damascus sewer system is located southeast of the Town of Abingdon. The collection system was constructed in the 1975.

The approximate number of customers served by the system was reported to be:

<u>420</u>	Residential Customers
<u>70</u>	Commercial Customers
<b>490</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately 78% residential and 22% non-residential.

The collection system consists of 6" through 16" gravity lines. It is estimated that approximately <5% of the system consists of terra cotta or concrete lines and approximately <1% brick masonry manholes. The newest area of the system was constructed in 2009. The oldest areas of the system are estimated to have been constructed in the 1980s.

System Flows -A summary of the system's collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	5,690,000	3,207,914	56%
February	7,740,000	2,362,928	31%
March	10,090,000	2,275,327	23%
April	6,110,000	2,965,910	49%
May	3,880,000	2,704,871	70%
June	3,270,000	4,304,068	132%
July	4,110,000	3,319,133	81%
August	3,480,000	3,070,960	88%
September	3,140,000	3,444,982	110%
October	3,790,000	4,646,540	123%
November	2,730,000	3,210,029	118%
December	2,710,000	3,009,622	111%
<b>Monthly Average</b>	<b>4,728,333</b>	<b>3,210,190</b>	<b>68%</b>
<b>Daily Average</b>	<b>159,382</b>	<b>108,209</b>	<b>68%</b>
<b>Avg / Customer</b>	<b>325</b>	<b>221</b>	

## Permit Violations/System Overflows/Consent Order

- The system has had 4 permit violations over the past 2 years. The violations were the result of dissolved oxygen violations due to excessive rainfall.
- The system is not under consent order with the DEQ.

## Other Maintenance Related Issues Experienced by System

- Replacement of the clarifier chain,
- Replacement of shear pin,
- The dissolved oxygen sensors need replacement,
- The diffusers need to be replaced.



System Needs

- Line rehabilitation,
- Manhole rehabilitation,
- I&I remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

Capital Improvements Plan –

Areas for improvements are known and are in the process of receiving funding.

Asset Management Plan

The system has an asset management plan prepared by Washington County Service Authority in 2022.

Sewer Rate Structure

The following sewer rate structure was last modified in 2022:

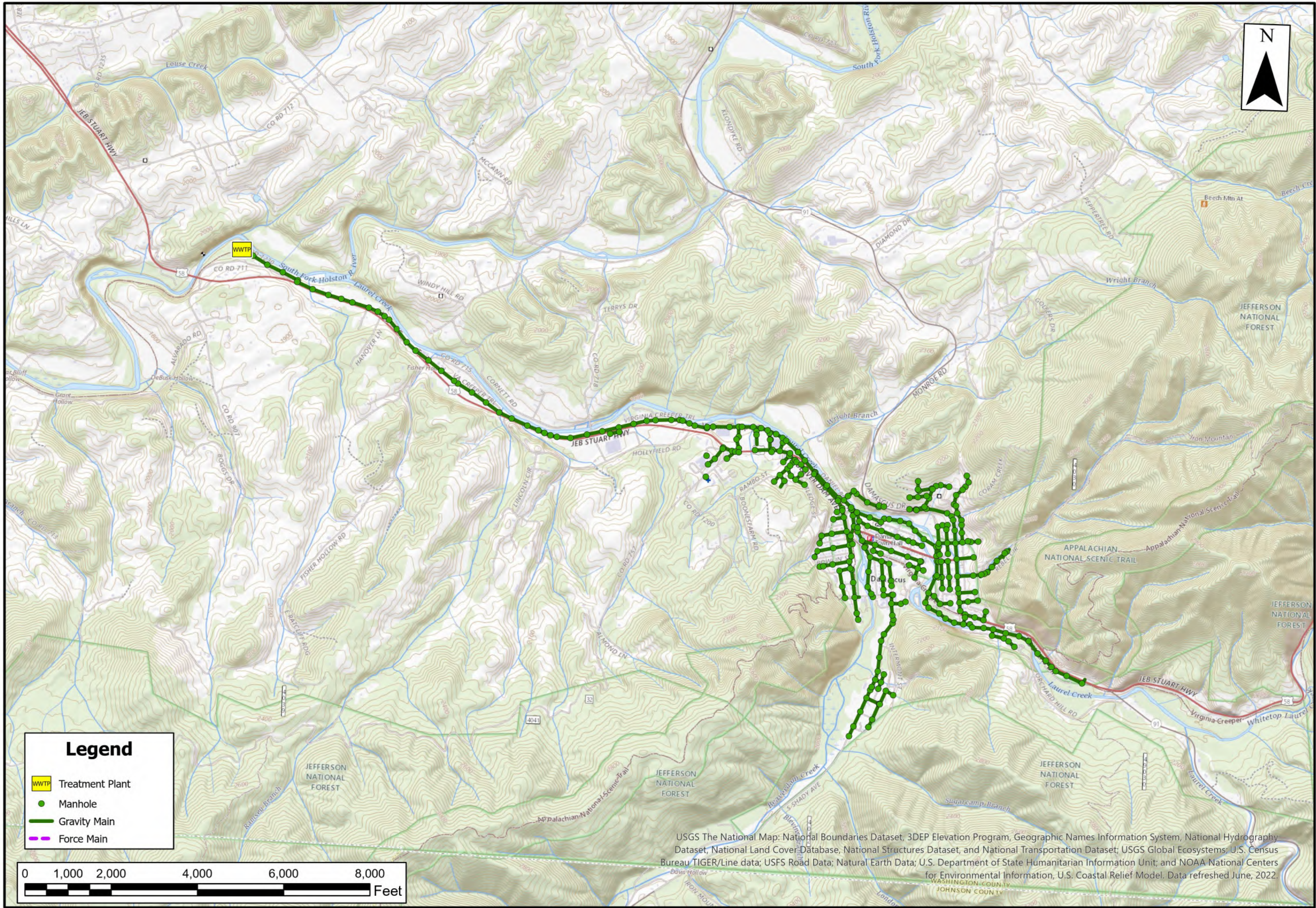
Residential	
\$31.74	Base Rate
\$9.42	Per 1,000 Gallons

Commercial/Industrial	
\$31.74	Base Rate
\$11.04	Per 1,000 Gallons

System Debt and Maturity Date of Outstanding Loans

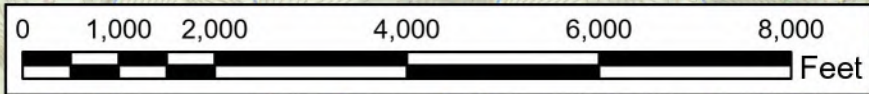
The system currently has approximately \$12,116,590 in outstanding loan.





**Legend**

- WWTP Treatment Plant
- Manhole
- Gravity Main
- Force Main



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WASHINGTON COUNTY  
JOHNSON COUNTY



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WASHINGTON  
COUNTY SERVICE  
AUTHORITY -  
DAMASCUS



DATE: xx/xx/xxxx	
SHEET: SHEET	
DRAWN BY: DRW	CHECKED BY: CHK
PROJECT NO: xxxxx	
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# WASHINGTON COUNTY SERVICE AUTHORITY EXIT 13 AREA OF LEE HIGHWAY

Mount Rogers Planning District Commission

System Description – The Washington County Service Authority Exit 13 Area of Lee Highway sewer system is located in Washington County southwest of the Town of Abingdon. The collection system was constructed in 2015.

The approximate number of customers served by the system was reported to be:

<u>342</u>	Residential Customers
<u>37</u>	Commercial Customers
<b>379</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 85% residential and 15% non-residential.

The collection system consists of 4” through 16” gravity lines. It is estimated that approximately 100% of the system consists of PVC and approximately 100% of the manholes are precast concrete. The newest area of the system was constructed in 2015. The oldest areas of the system are estimated to have been constructed in 2015.

The Exit 13 pump station experiences problems with capacity due to inadequately sized lines.

The system includes four pump stations:

- Oak Park 1: 39 gpm lift station located at 18395 Westinghouse Road. The pump station discharges to a 3 inch force main and empties into an 8 inch gravity line.
- Oak Park 2: 60 hp lift station located on Oak Park Drive. The pump station discharges to a 12 inch force main and empties into a 15 inch gravity line.
- Exit 13: 550 gpm lift station located at 18213 Old Jonesboro Highway. The pump station discharges to a 16 inch force main and discharges to the Town of Abingdon Treatment Plant.
- Foxfire: 94 gpm lift station located at 1904 Trotters Lane. The pump station discharges to a 4 inch force main and discharges to an 8 inch gravity line.

Flow collected by the system is conveyed to the Wolf Creek WCWRF Collection system. Treatment is ultimately provided at the Wolf Creek WCWRF (VPDES#: VA0026531) Treatment Plant.

System Flows -A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	1,946,000	2,481,223	128%
February	1,950,000	1,827,653	94%
March	2,226,000	1,759,896	79%
April	2,679,000	2,294,041	86%
May	2,045,000	2,092,135	102%
June	1,875,000	3,329,065	178%
July	1,641,000	2,567,248	156%
August	1,511,000	2,375,294	157%
September	2,319,000	2,664,588	115%
October	1,263,000	3,593,956	285%
November	2,202,000	2,482,859	113%
December	2,217,000	2,327,851	105%



<b>Monthly Average</b>	<b>1,989,500</b>	<b>2,482,984</b>	<b>125%</b>
<b>Daily Average</b>	<b>65,408</b>	<b>81,632</b>	<b>125%</b>
<b>Avg / Customer</b>	<b>173</b>	<b>215</b>	

Permit Violations/System Overflows/Consent Order

- The system has had no permit violations over the past 2 years.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Wear on impellers due to industrial discharges.

System Needs

- Line rehabilitation,
- Pump station rehabilitation,
- Manhole rehabilitation,
- I&I remediation.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

Capital Improvements Plan

Areas for improvements are known and are in the process of receiving funding.

Asset Management Plan

The system has an asset management plan prepared by Washington County Service Authority in 2022.

Sewer Rate Structure

The following sewer rate structure was last modified in 2022:

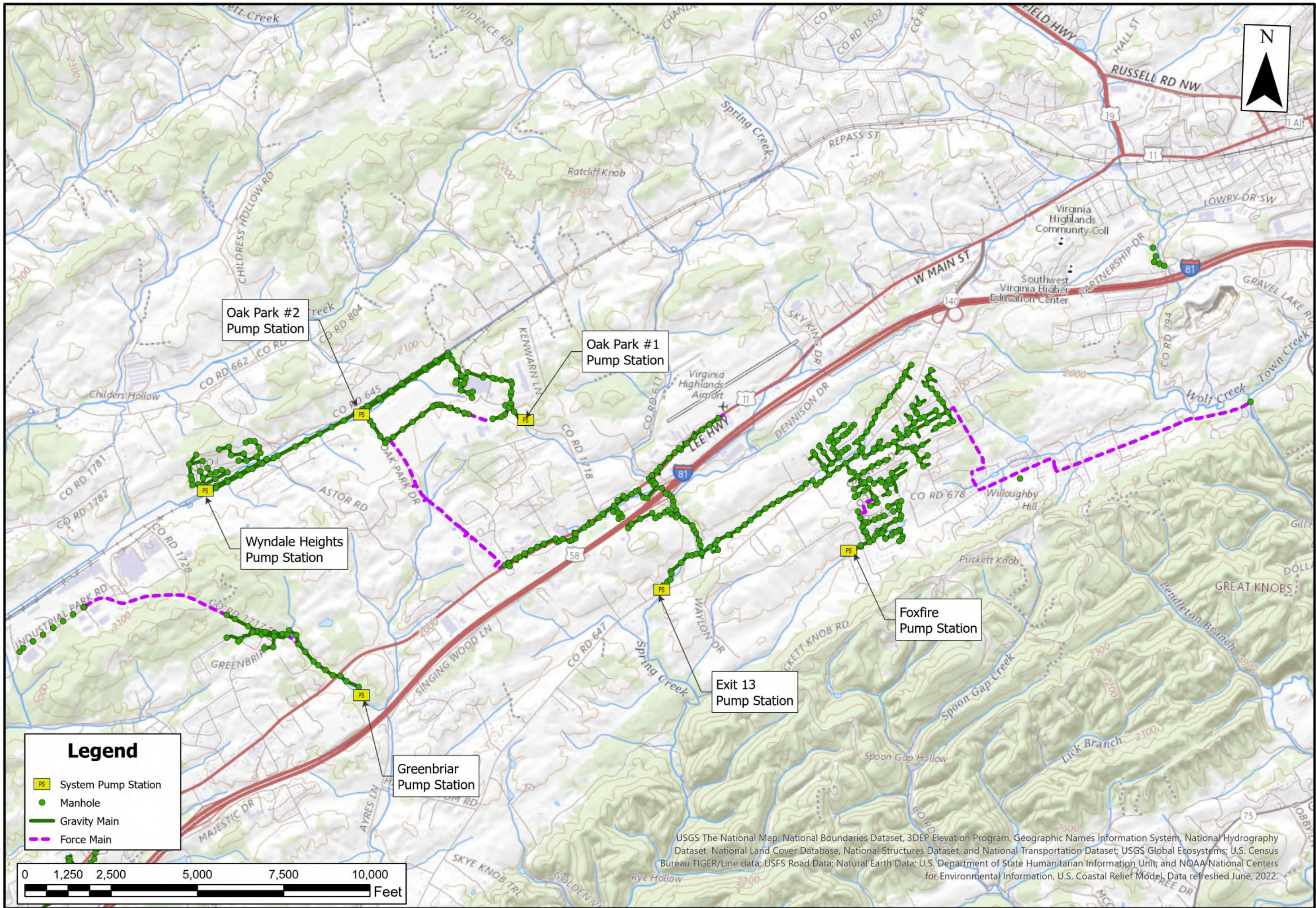
Residential	
\$31.74	Base Rate
\$9.42	Per 1,000 Gallons

Commercial/Industrial	
\$31.74	Base Rate
\$11.04	Per 1,000 Gallons

System Debt and Maturity Date of Outstanding Loans

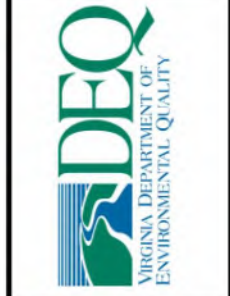
The system currently has approximately \$12,116,590 in outstanding loan.





SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

WASHINGTON COUNTY  
 SERVICE AUTHORITY -  
 EXIT 13 LEE HIGHWAY



DATE:	xx/xx/xxxx
SHEET:	
<b>SHEET</b>	
DRAWN BY:	CHECKED BY:
PROJECT NO.:	xxxx
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# WASHINGTON COUNTY SERVICE AUTHORITY HALL CREEK (VA0087378)

*Mount Rogers Planning District Commission*

System Description – The Washington County Service Authority Hall Creek sewer system is located in Washington County east of the Town of Abingdon. The collection system was constructed in the 1996.

The approximate number of customers served by the system was reported to be:

<u>1,308</u>	Residential Customers
<u>174</u>	Commercial Customers
<b>1,482</b>	<b>Total Number of Customers</b>

The system’s customer billings flows for 2021 were estimated to be approximately 49% residential and 51% non-residential.

The collection system consists of 4” through 12” gravity lines. It is estimated that approximately 75% of the system consists of PVC and approximately 100% of the manholes are precast concrete. The newest area of the system was constructed in 2000. The oldest areas of the system are estimated to have been constructed in the 1996.

The system includes twelve pump stations:

- Glade #1: 553 gpm located at 13084 Monroe Road. Pump station discharges to an 8 inch force main which empties to a 10 and 12 inch gravity line.
- Glade #2: 333 gpm located at East Glade Street. Pump station discharges to an 8 inch force main which empties to an 8 and 10 inch gravity line.
- Glade #3: 27 gpm located at 698 Blue Hills Drive. Pump station discharges to a 2 inch force main which empties to an 8 and 10 inch gravity line.
- Clarksville: 27 gpm located at 10320 Crescent Road. Pump station discharges to an 8 inch force main which empties to a 6, 8, and 10 inch gravity line.
- Spring Hills: 49 gpm located at 33540 Spring Hill Drive. Pump station discharges to 4 inch force main which empties to an 8 and 10 inch gravity line.
- Utility Trailer: 40 gpm located at 13182 Monroe Road. Pump station discharges to 3 inch force main which empties to the Glade #1 pump station.
- Meadowview #1: 275 gpm located at 13280 Cardinal Lane. Pump station discharges to 6 inch force main which empties to an 8, 10, and 12 inch gravity line.
- Meadowview #2: 24 gpm located at 13351 Ritchie Road. Pump station discharges to an 8 inch force main which empties to an 8 inch gravity line.
- General Engineering: 49 gpm located on Hillman Highway. Pump station discharges to a 3 inch force main which empties to an 8 inch gravity line.
- Loves: 155 gpm located at 14079 Glenbrook Drive. Pump station discharges to a 6 inch force main which empties to an 8 inch gravity line.
- IPP: 200 gpm located at 14128 Industrial Park Road. Pump station discharges to a 6 inch force main which empties to an 8 inch gravity line.
- Abingdon Steel: 75 gpm located on Hillman Highway. Pump station discharges to a four inch force main which empties to an 8 inch gravity line.

System Flows -A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	9,844,000	9,702,302	99%
February	11,811,000	7,146,652	61%
March	14,253,000	6,881,704	48%



April	10,560,000	8,970,365	85%
May	8,399,000	8,180,853	97%
June	8,800,000	13,017,611	148%
July	9,140,000	10,038,684	110%
August	9,795,000	9,288,088	95%
September	9,211,000	10,419,313	113%
October	9,431,000	14,053,412	149%
November	8,431,000	9,708,699	115%
December	8,149,000	9,102,572	112%
<b>Monthly Average</b>	<b>9,818,667</b>	<b>9,709,188</b>	<b>99%</b>
<b>Daily Average</b>	<b>322,805</b>	<b>319,206</b>	<b>99%</b>
<b>Avg / Customer</b>	<b>218</b>	<b>215</b>	

Permit Violations/System Overflows/Consent Order

- The system has had 3 permit violations over the past 2 years. The violations were the result of chlorine residuals being too high as a result of the SO2 tanks going empty.

The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Pumps and blowers need to be replaced.

System Needs

- All metal structures for the system need to be stripped and painted,
- The sewer treatment plant needs to have potable water source.

Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps and lateral lines.

Capital Improvements Plan – No plan in Action

No plan in action.

Asset Management Plan

The system has an asset management plan prepared by Washington County Service Authority in 2022.

Sewer Rate Structure

The following sewer rate structure was last modified in 2022:

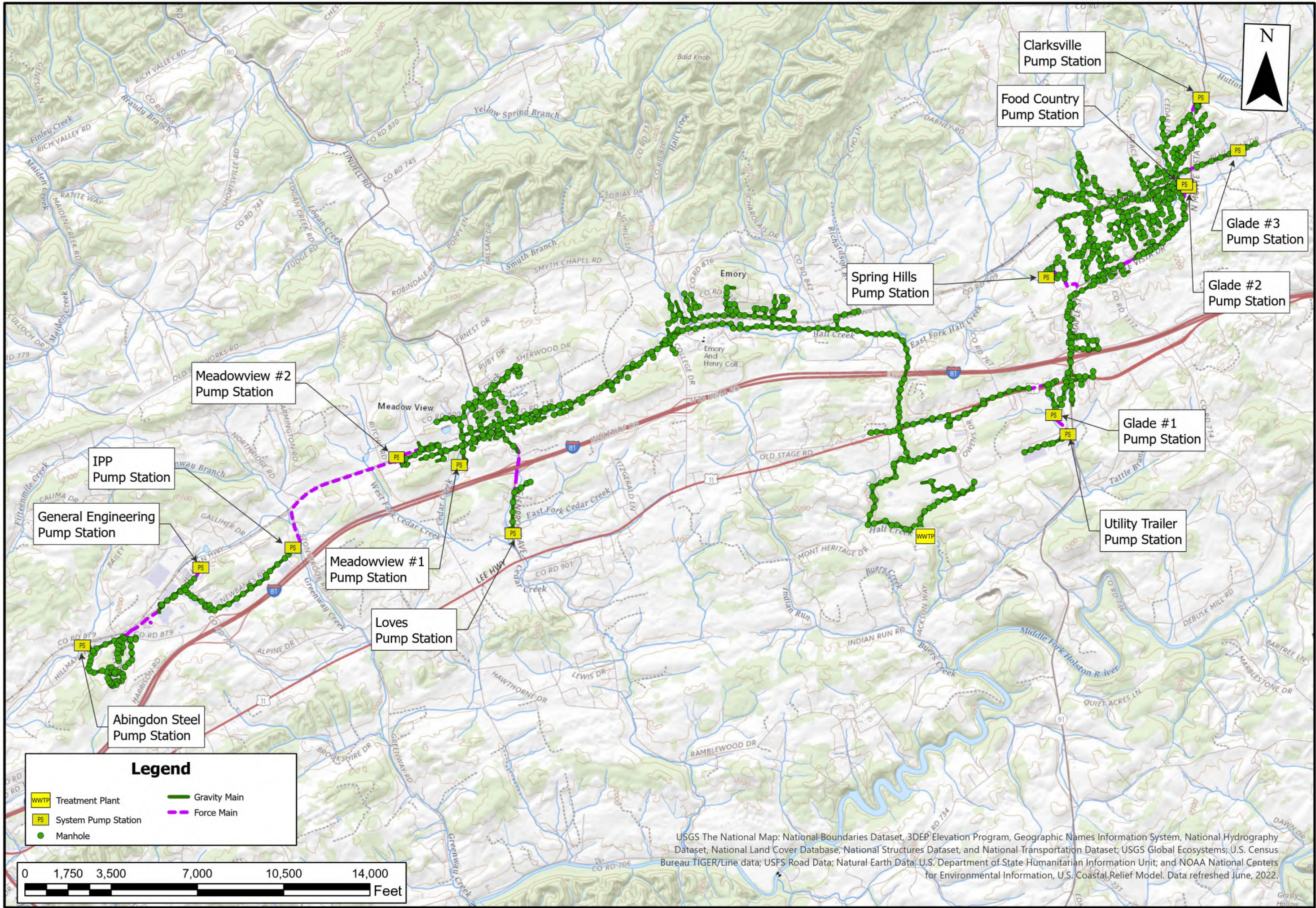
Residential	
\$31.74	Base Rate
\$9.42	Per 1,000 Gallons

Commercial/Industrial	
\$31.74	Base Rate
\$11.04	Per 1,000 Gallons

System Dept and Maturity Date of Outstanding Loans

The system currently has approximately \$12,116,590 in outstanding loan.





SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

WASHINGTON  
 COUNTY SERVICE  
 AUTHORITY -  
 HALL CREEK



DATE:	xx/xx/xxxx
SHEET:	
<b>SHEET</b>	
DRAWN BY:	CHEKED BY:
PROJECT NO.:	xxxx
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# TOWN OF WYTHEVILLE (VA0020281)

Mount Rogers Planning District Commission

System Description – The Town of Wytheville sewer system is located in Wythe County near mile marker 70 on US Route 81. The collection system was constructed in the 1920s.

The approximate number of customers served by the system was reported to be:

<u>2,754</u>	Residential Customers
<u>426</u>	Commercial Customers
<u>26</u>	Industrial Customers
<u>13</u>	Other Municipal Systems
<b>3,219</b>	<b>Total Number of Customers</b>

The system's customer billings flows for 2021 were estimated to be approximately 32% residential and 68% non-residential.

The collection system consists of 6" through 24" gravity lines. It is estimated that approximately 70% of the system consists of terra cotta, transite, and concrete lines and approximately 84% of the manholes are masonry brick. The newest area of the system was constructed in 2022. The oldest areas of the system are estimated to have been constructed in 1949.

The system includes sixteen pump stations:

- Pump 1: 500 GPM lift pump located at 395 Chapman Road. The pump feeds a 12 inch force main and empties into a 12 inch gravity line.
- Pump 2: 375 GPM lift pump located at 290 Lithia Road. The pump feeds a 10 inch force main and empties into a 10 inch gravity line.
- Pump 3: 75 GPM lift pump located at 297 County Lane. The pump feeds a 2 inch force main and empties into an 8 inch gravity line.
- Pump 4: 250 GPM lift pump located at 1715 Peppers Ferry Road. The pump feeds a 6 inch force main and empties into an 8 inch gravity line.
- Pump 5: 250 GPM lift pump located at 620 Cove Road. The pump feeds a 6 inch force main and empties into an 8 inch gravity line.
- Pump 6: 490 GPM lift pump located at 3185 West Ridge Road. The pump feeds an 8 inch force main and empties into a 10 inch gravity line.
- Pump 7: 120 GPM lift pump located at 1645 West Fulton Street. The pump feeds a 3 inch force main and empties into an 8 inch gravity line.
- Pump 8: 257 GPM lift pump located at 157 County Club Lane. The pump feeds a 6 inch force main and empties into an 8 inch gravity line.
- Pump 9: 420 GPM lift pump located at 1210 Old Stage Road. The pump feeds a 6 inch force main and empties into an 8 inch gravity line.
- Pump 10: 742 GPM lift pump located at 415 Grayson Road. The pump feeds a 6 inch force main and empties into a 15 inch gravity line.
- Pump 11: 380 GPM lift pump located at 1810 Old Stage Road. The pump feeds a 6 inch force main and empties into an 8 inch gravity line.
- Pump 12: 180 GPM lift pump located at 285 North Petunia Road. The pump feeds a 6 inch force main and empties into an 8 inch gravity line.
- Pump 13: 75 GPM lift pump located at 1985 West Ridge Road. The pump feeds a 4 inch force main and empties into an 8 inch gravity line.



- Pump 14: 25 GPM lift pump located at 125 Caroline Circle. The pump feeds a 2 inch force main and empties into an 8 inch gravity line.
- Pump 15: 35 GPM pump located at 690 Old Stage Road. The pump feeds a 2 inch force main and empties into an 8 inch gravity line.
- Pump 16: 180 GPM lift pump located at 290 Echo Hollow Road. The pump feeds a 6 inch force main and empties into an 8 inch gravity line.

System Flows -A summary of the system’s collected and billed flows for calendar year 2021 is provided as follows:

<u>Month</u>	<u>Gallons Treated</u>	<u>Gallons Billed</u>	<u>Percent Accountable</u>
January 2021	75,155,000	31,573,810	42%
February	91,537,000	29,897,530	33%
March	101,253,000	35,612,790	35%
April	79,864,000	35,556,970	45%
May	56,279,000	35,697,750	63%
June	51,306,000	31,734,820	62%
July	60,176,000	34,487,860	57%
August	53,308,000	37,745,860	71%
September	48,348,000	35,571,630	74%
October	53,245,000	36,485,100	69%
November	41,430,000	30,605,050	74%
December	40,808,000	31,992,010	78%
<b>Monthly Average</b>	<b>62,725,750</b>	<b>33,913,432</b>	<b>54%</b>
<b>Daily Average</b>	<b>2,062,216</b>	<b>1,114,962</b>	<b>54%</b>
<b>Avg / Customer</b>	<b>640</b>	<b>346</b>	

Permit Violations/System Overflows/Consent Order

- The Town of Wytheville collection system had 25+ reported sewer system overflows during calendar year 2021. 5 were due to excessive Infiltration and Inflow, 20+ were due to line blockages created by root intrusion, grease, or other debris.
- The system has had 10 permit violations over the past 2 years. The violations were the result of line breaks within the system.
- The system is not under consent order with the DEQ.

Other Maintenance Related Issues Experienced by System

- Worn out equipment,
- High maintenance costs.

System Needs

- Line rehabilitation,
- Pump station rehabilitation,
- Manhole rehabilitation,
- I&I remediation,
- Increased system capacity.



Sewer Use Ordinance

The system is governed by an existing sewer use ordinance. The ordinance does address private side issues such as connections with roof gutters, sump pumps, and lateral lines.

Capital Improvements Plan

The system currently has a CIP adopted in 2018. The CIP includes \$5,900,000 of projects for completion in the next 5 years.

Asset Management Plan

The system does not have an asset management plan.

Sewer Rate Structure

The following sewer rate structure was last modified in January 2022:

\$13.00	Fixed Rate	
\$1.81	Per 1,000 Gallons	Between 0 - 3,000 Gallons
\$6.13	Per 1,000 Gallons	Between 3,000 - 7,000 Gallons
\$6.19	Per 1,000 Gallons	Between 7,000 - 15,000 Gallons
\$5.97	Per 1,000 Gallons	Between 15,000 - 75,000 Gallons
\$6.50	Per 1,000 Gallons	Between 75,000 - 3,400,000 Gallons
\$8.30	Per 1,000 Gallons	Between 3,400,000 - 6,500,000 Gallons
\$8.28	Per 1,000 Gallons	6,500,000 Gallons Over

System Debt and Maturity Date of Outstanding Loans

The system currently has approximately \$3,305,374.48 in outstanding loan.



## **TOWN OF WYTHVILLE– VPDES PERMIT #VA0020281**

### **TOWN OF WYTHVILLE**

*Mount Rogers Planning Commission*

Facility Description – The treatment facility is located at 852 Atkins Mill Rd, Wytheville, VA 24382 (see attached general vicinity map). The facility was originally constructed in 1977. The last major upgrade/expansion was completed in 1993 and involved installing two additional clarifiers and increased total capacity to 4 mgd. The facility utilizes activated sludge as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Wytheville collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 4.0 MGD. The average daily flow treated at the facility during calendar year 2021 was 1.941 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 3.066 MGD. The facility exceeded 80% capacity for 0 days during this period. Effluent from the plant is discharged to Reed Creek. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by the Town of Wytheville. Currently, 7 full time and 0 part time licensed operators work at the facility. 2 Class 1, 2 Class 2, and 2 Class 3. The facility is required to be staffed 16 hours/day.

Permit Violations – The facility has had 10 permit violations over the past 2 years. The violations were the result of breaks withing the system.

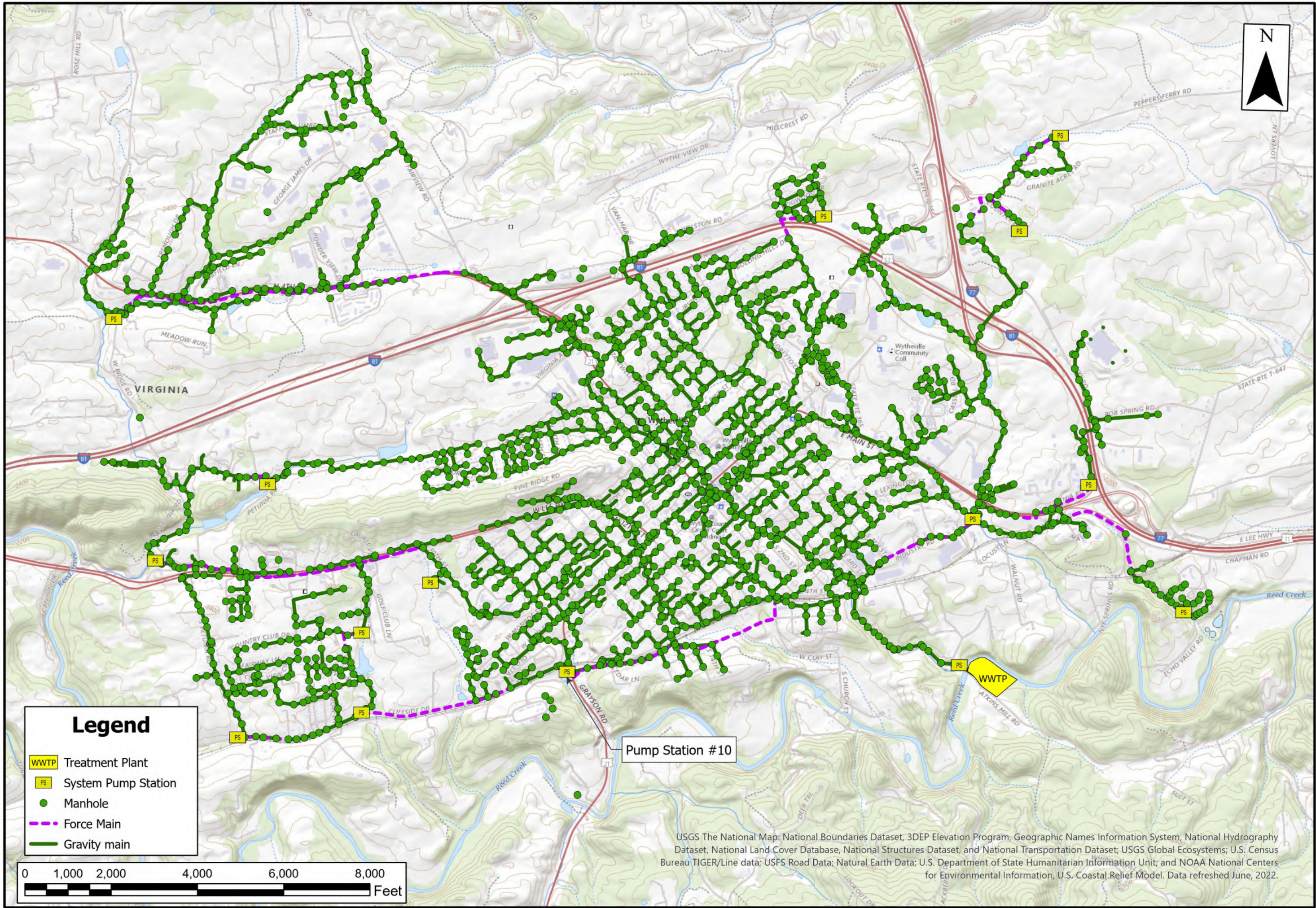
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- Worn out equipment,
- Require upgrades,

Facility Needs – Identified facility (identified in CIP, PER, etc..) needs are as follows:

- Solids handling equipment,
- Replacing the thickener,
- Installation of larger digesters.





**Legend**

- WWTP Treatment Plant
- PS System Pump Station
- Manhole
- - - Force Main
- Gravity main

Pump Station #10

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

TOWN OF  
 WYTHEVILLE



DATE:	xx/xx/xxxx
SHEET:	
<b>SHEET</b>	
DRAWN BY:	CHEKED BY:
PROJECT NO.:	xxxx
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**WYTHE COUNTY AUSTINVILLE– VPDES PERMIT #VA0067059**  
**WYTHE COUNTY BOARD OF SUPERVISORS**

*Mount Rogers Planning Commission*

Facility Description – The treatment facility is located at 334 Kohler Ave, Austinville VA 24312 (see attached general vicinity map). The facility was originally constructed in 1949. The last major upgrade/expansion was completed in 2022 and involved conveyance system in most of the roadways and basic upgrades at the plant. The facility utilizes Trickling Filter as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Town of Austinville collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.02 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.003 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.003 MGD. The facility exceeded 80% capacity for 0 days during this period. Effluent from the plant is discharged to the Bubble Branch of the New River. Sludge from the facility is disposed of at a landfill.

Facility Operation – The facility is operated and maintained by Wythe County Board of Supervisors. Currently, 3 full time and 0 part time licensed operators work at the facility. 3 Class 2. The facility is required to be staffed 4 hours/day.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

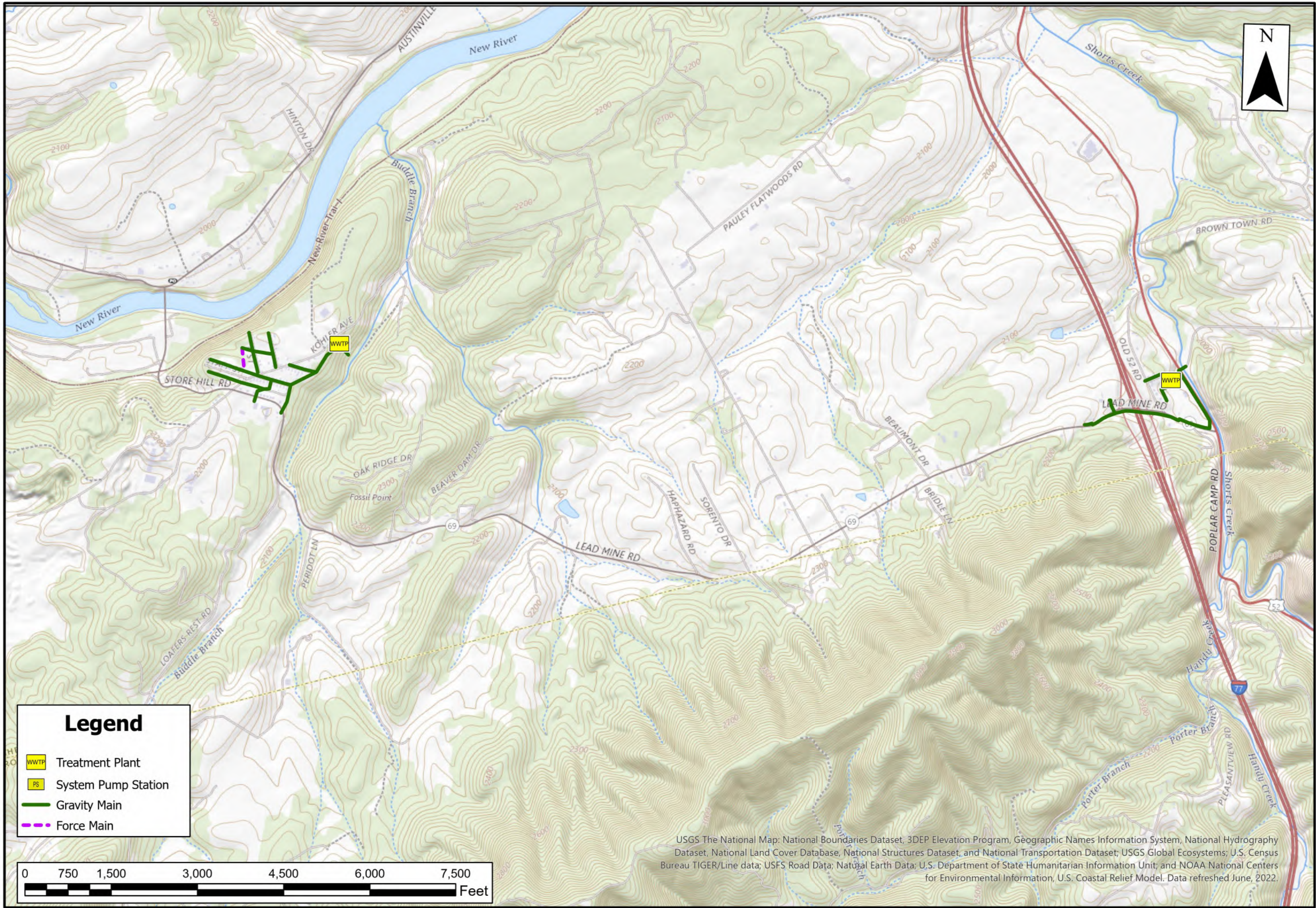
- Repair of trickling filter enclosure

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- UV disinfection,
- Enclosure repair.

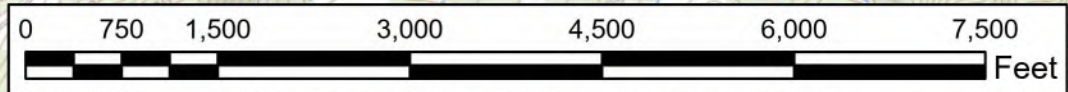
Opinion of Probable Cost for Necessary Facility Improvements – The opinion of probable cost for the identified facility improvements is \$100,000.





**Legend**

- Treatment Plant
- System Pump Station
- Gravity Main
- Force Main

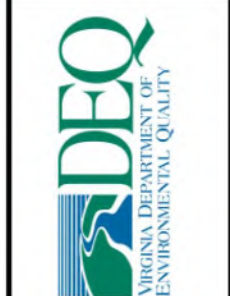


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WYTHE COUNTY -  
EXIT 24  
POPLAR CAMP /  
AUSTINVILLE



DATE: xx/xx/xxxx	
SHEET: SHEET	
DRAWN BY: DRW	CHECKED BY: CHK
PROJECT NO: xxxxx	
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**WYTHE COUNTY FORT CHISWELL– VPDES PERMIT #VA0074161**  
**WYTHE COUNTY BOARD OF SUPERVISORS**

*Mount Rogers Planning Commission*

Facility Description – The treatment facility is located at 631 Locust Hill Rd, Max Meadows, VA 24360 (see attached general vicinity map). The facility was originally constructed in 1998. The last major upgrade/expansion was completed in 2010 and involved increasing the plant’s capacity to 1.25 mgd. The facility utilizes Sequencing Batch Reactors as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Fort Chiswell, Grahams Forge, and Reed Creek Progress Park collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 1.25 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.38 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.549 MGD. The facility exceeded 80% capacity for 2 days during this period. Effluent from the plant is discharged to Reed Creek. Sludge from the facility is disposed of at a landfill.

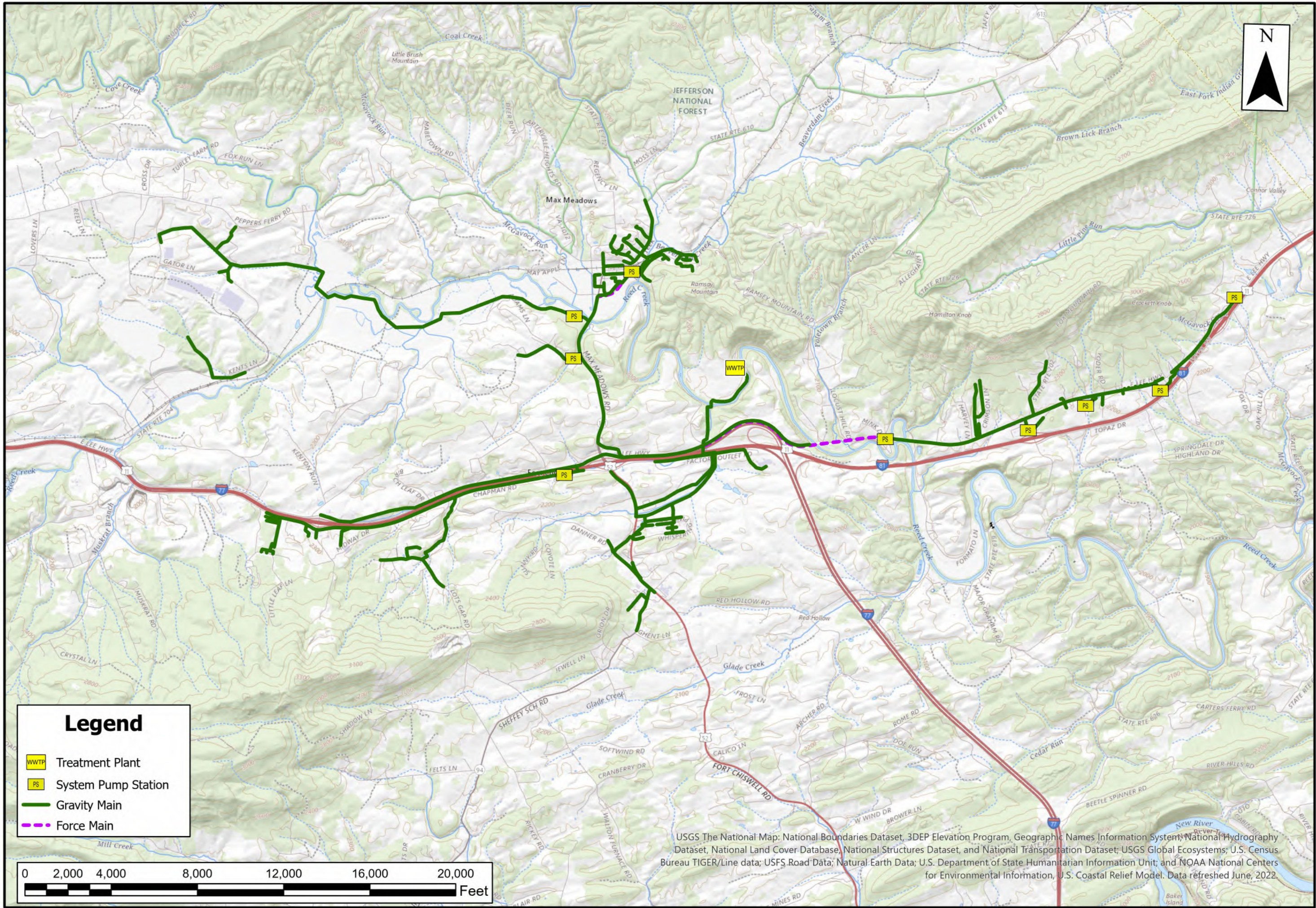
Facility Operation – The facility is operated and maintained by the Wythe County Board of Supervisors. Currently, 3 full time and 0 part time licensed operators work at the facility. 3 Class 2. The facility is required to be staffed 8 hours/day.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

Facility Needs – Identified facility (identified in CIP, PER, etc..) needs are as follows:

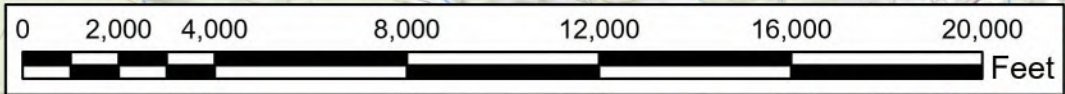
- Expansion.





**Legend**

- WWTP Treatment Plant
- PS System Pump Station
- Gravity Main
- Force Main

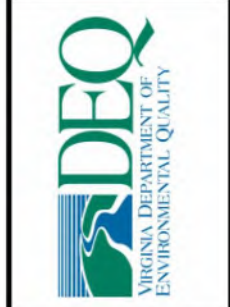


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**WYTHE COUNTY -  
FORT CHISWELL /  
MAX MEADOWS**



DATE: 10/09/2022	
SHEET: SHEET	
DRAWN BY: DRW	CHECKED BY: CHK
PROJECT NO: 10000	
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**WYTHE COUNTY SHORTS CREEK – VPDES PERMIT #VA0092843**  
**WYTHE COUNTY BOARD OF SUPERVISORS**

*Mount Rogers Planning Commission*

Facility Description – The treatment facility is located at 186 Castleton Rd, Austinville, VA 24312 (see attached general vicinity map). The facility was originally constructed in 2018. The facility utilizes extended aeration as the method of sewage treatment.

Flow Characteristics – The treatment facility receives sewage from the Poplar Camp Exit 24 collection system(s). The facility does not receive and treat septage. The permitted capacity of the facility is 0.02 MGD. The average daily flow treated at the facility during calendar year 2021 was 0.002 MGD. The average daily flow treated at the facility for the highest three consecutive month period during calendar year 2021 was 0.002 MGD. The facility exceeded 80% capacity for 0 days during this period. Effluent from the plant is discharged to Shorts Creek. Sludge from the facility is disposed of at the Fort Chiswell treatment plant.

Facility Operation – The facility is operated and maintained by Wythe County Board of Supervisors. Currently, 3 full time and 0 part time licensed operators work at the facility. 3 Class 2. The facility is required to be staffed 4 hours/day.

Permit Violations – The facility has had 0 permit violations over the past 2 years.

Facility Needs – Identified facility (identified in CIP, PER, etc.) needs are as follows:

- More flow.



## APPENDIX B

### POTENTIAL NEW WASTEWATER EXTENSION & DECENTRALIZED SEWER PROJECTS

This Appendix includes individual project description sheets and updated construction cost estimates for potential new wastewater extension projects that were either a) identified in the 2005 Study but have not yet been completed or b) requested by the utility provider(s) to be included in this Study.

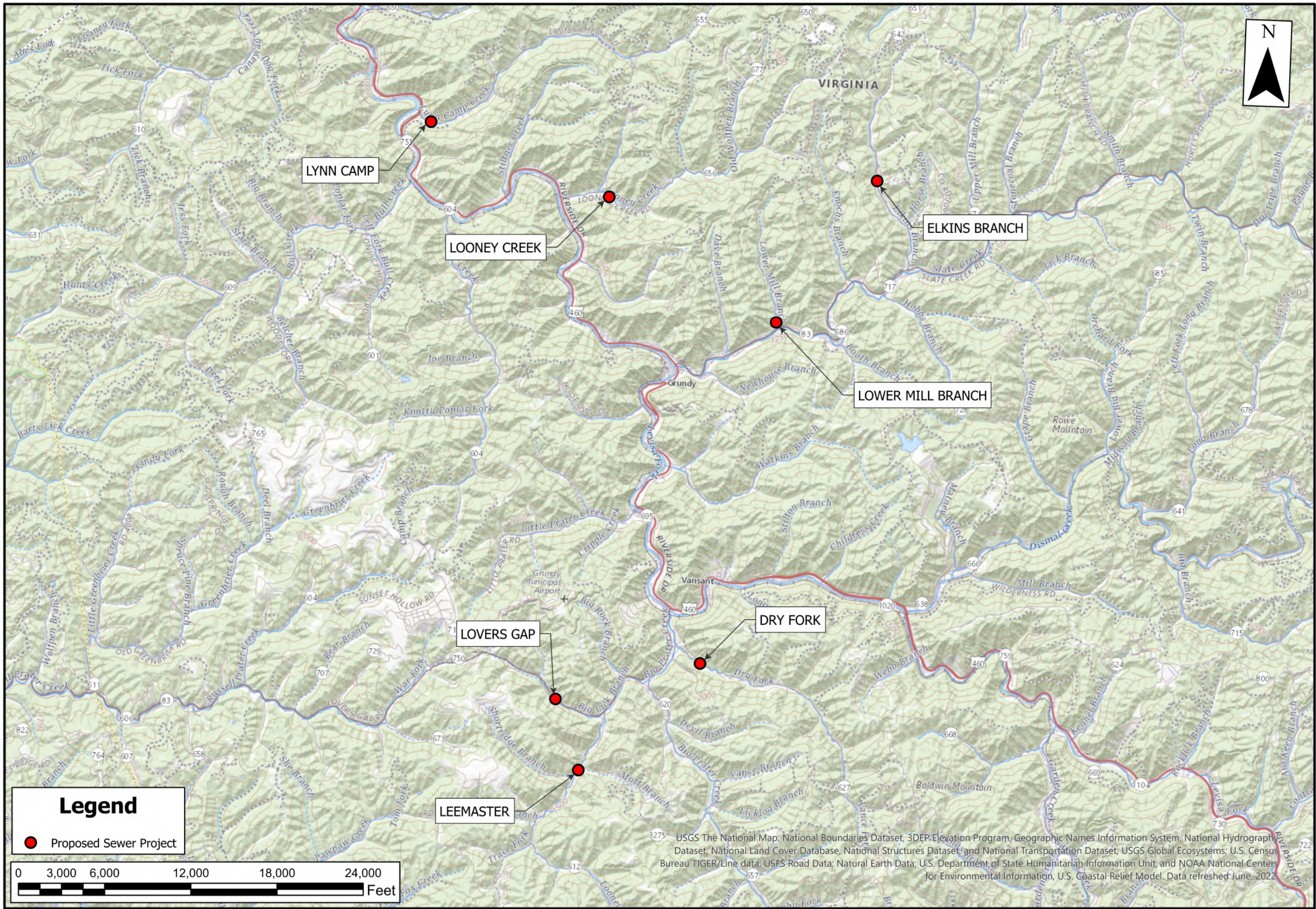
The Conventional-type collection projects have been categorized into the three Planning Districts. A location map is provided for each County. All Decentralized collection projects have been grouped together at the back of this section.



APPENDIX B

CUMBERLAND PLATEAU PLANNING DISTRICT  
CONVENTIONAL PROJECTS





LYNN CAMP

LOONEY CREEK

ELKINS BRANCH

LOWER MILL BRANCH

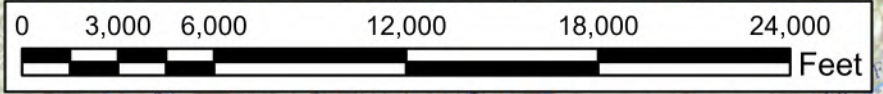
DRY FORK

LOVERS GAP

LEEMASTER

**Legend**

● Proposed Sewer Project



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022



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SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

BUCHANAN COUNTY  
PUBLIC SERVICE  
AUTHORITY -  
PROPOSED PROJECTS



DATE:	xx/xx/xxxx
SHEET:	
<b>SHEET</b>	
DRAWN BY: DRW	CHECKED BY: CHK
PROJECT NO.:	xxxx
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# PROJECT DATA SHEET

Project Name:	Leemaster/Lovers Gap/Dry Fork Sewer Extension		
County:	Buchanan		
Planning District:	Cumberland Plateau		
Utility Provider:	Buchanan County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 47,400 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Conaway WWTP	
	Design Flow:	2.00	MGD
	Average Flow:	1.667	MGD
	Receiving Stream:	Levisa Fork	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Trace Fork Big Lick Branch Dry Fork	Impaired (Y/N): No No No
Equivalent Customers Served:	Residential =	257	Commercial = 13 Industrial = 2
Health Hazards:	Failing septic systems and straight pipes suspected.		
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Low		
Total Project Cost:	\$14,381,380		
Cost Per Connection:	\$52,873		



## PROJECT DATA SHEET

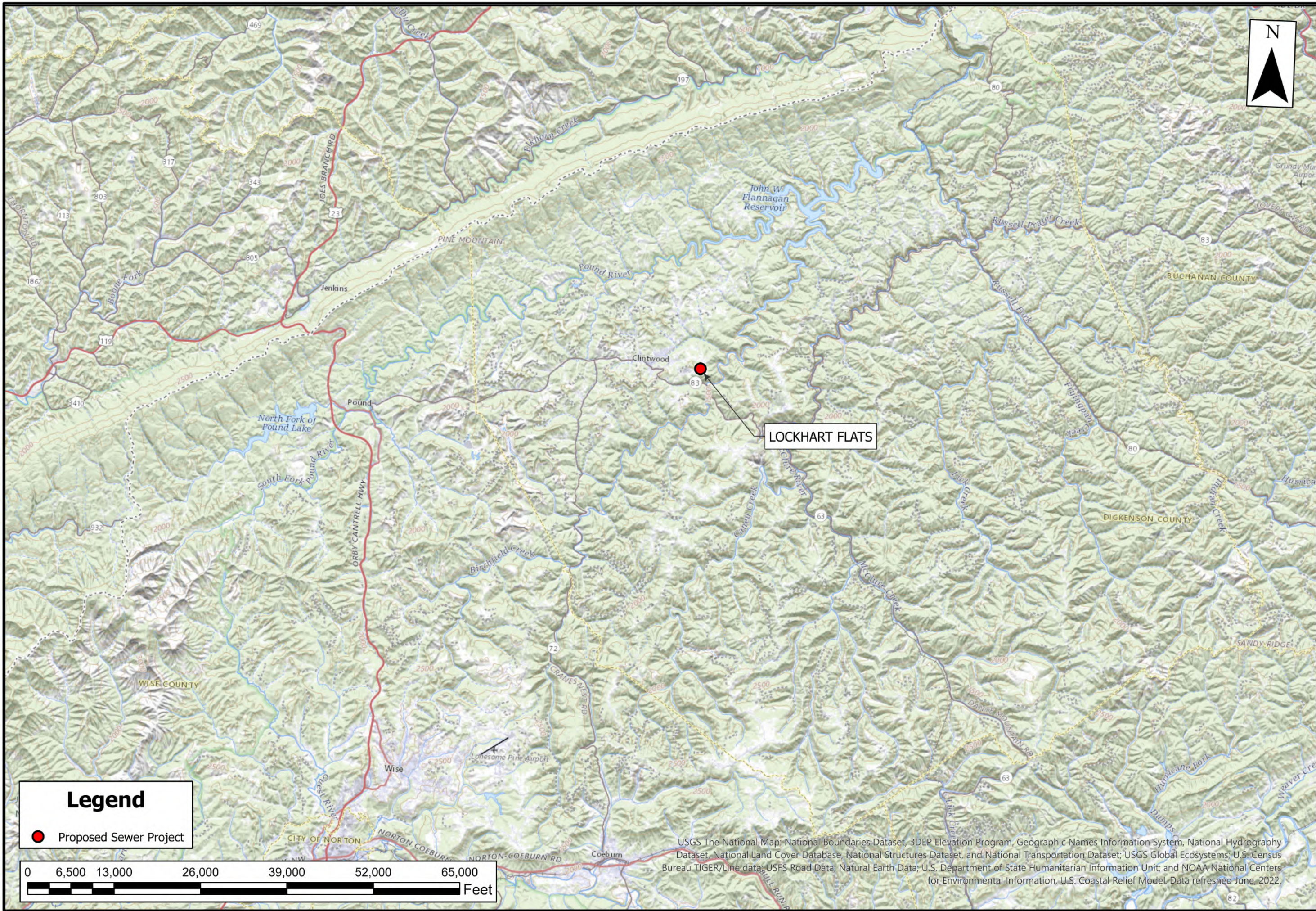
Project Name:	Lower Mill Branch/Elkins Branch Sewer Extension		
County:	Buchanan		
Planning District:	Cumberland Plateau		
Utility Provider:	Buchanan County Public Service Authority		
Served by Public Water (Y/N):	Approximately 1/3 of project area		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 28,500 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Conaway WWTP	
	Design Flow:	2.00	MGD
	Average Flow:	1.667	MGD
	Receiving Stream:	Levisa Fork	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Lower Mill Branch Elkins Branch	Impaired (Y/N): No No
Equivalent Customers Served:	Residential =	99	Commercial = 4 Industrial = 0
Health Hazards:	Failing septic systems and straight pipes suspected.		
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - High Commercial - Moderate Industrial - Low		
Total Project Cost:	\$8,312,525		
Cost Per Connection:	\$80,704		



## PROJECT DATA SHEET

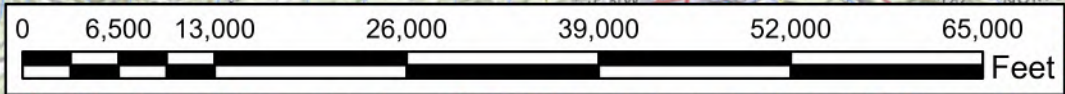
Project Name:	Lynn Camp/Looney Creek Sewer Extension			
County:	Buchanan			
Planning District:	Cumberland Plateau			
Utility Provider:	Buchanan County Public Service Authority			
Served by Public Water (Y/N):	No			
Existing Conditions:	The project area is currently not served by a public sewage system.			
Proposed Project:	The project consists of approximately 24,000 linear feet of 8-inch gravity sewer.			
Existing WWTP:	Name:	Conaway WWTP		
	Design Flow:	2.00	MGD	
	Average Flow:	1.667	MGD	
	Receiving Stream:	Levisa Fork		
	Stream Classification:	IV		
	Impaired Stream (Y/N):	Yes		
Watershed or Adjacent Stream:	Name:	Lynn Camp Creek Looney Creek	Impaired (Y/N):	No No
Equivalent Customers Served:	Residential =	132	Commercial =	Industrial = 0
Health Hazards:	Failing septic systems and straight pipes suspected.			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.			
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low			
Total Project Cost:	\$7,250,100			
Cost Per Connection:	\$54,925			





**Legend**

- Proposed Sewer Project



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**DICKENSON COUNTY  
PUBLIC SERVICE  
AUTHORITY -  
PROPOSED PROJECTS**



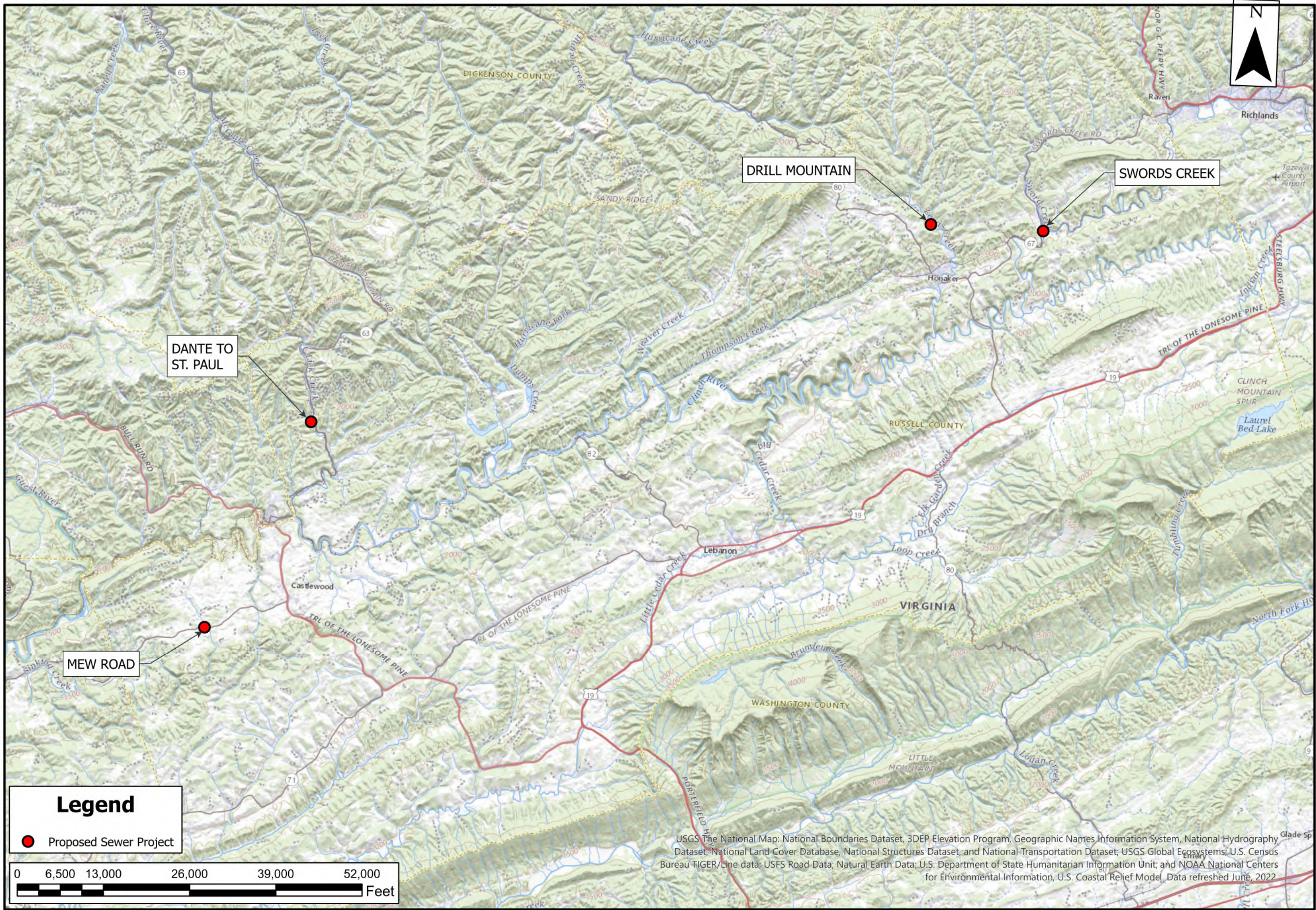
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## PROJECT DATA SHEET

Project Name:	Lockhart Flats Sewer Extension				
County:	Dickenson				
Planning District:	Cumberland Plateau				
Utility Provider:	Town of Clintwood				
Served by Public Water (Y/N):	Yes				
Existing Conditions:	The project area is currently not served by a public sewage system.				
Proposed Project:	The project consists of approximately 13,300 linear feet of 2-inch force main and one grinder pump station.				
Existing WWTP:	Name:	Clintwood WWTP			
	Design Flow:	0.495	MGD		
	Average Flow:	0.153	MGD		
	Receiving Stream:	Cranes Nest River			
	Stream Classification:	IV			
	Impaired Stream (Y/N):	Yes			
Watershed or Adjacent Stream:	Name:	Cranes Nest River	Impaired (Y/N):	Yes	
Equivalent Customers Served:	Residential =	56	Commercial =	Industrial =	0
Health Hazards:					
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.				
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low				
Total Project Cost:	\$3,505,060				
Cost Per Connection:	\$62,590				





SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

RUSSELL COUNTY PUBLIC  
SERVICE AUTHORITY -  
PROPOSED PROJECTS



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PROJECT NO: xxxxx	
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## PROJECT DATA SHEET

Project Name:	Drill Mountain Sewer Extension		
County:	Russell		
Planning District:	Cumberland Plateau		
Utility Provider:	Russell County Public Service Authority		
Served by Public Water (Y/N):	Yes, Construction in progress		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 57,400 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Honaker STP	
	Design Flow:	0.400	MGD
	Average Flow:	0.113	MGD
	Receiving Stream:	Lewis Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Lewis Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	215	Commercial = 5 Industrial = 0
Health Hazard:	Failing septic systems and straight pipes.		
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Low/Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$16,811,080		
Cost Per Connection:	\$76,414.00		



## PROJECT DATA SHEET

Project Name:	Swords Creek Sewer Extension			
County:	Russell			
Planning District:	Cumberland Plateau			
Utility Provider:	Russell County Public Service Authority			
Served by Public Water (Y/N):	Yes			
Existing Conditions:	The project area is currently not served by a public sewage system.			
Proposed Project:	The project consists of approximately 60,000 linear feet of 8-inch gravity sewer, 7,600 linear feet of 6-inch force main and one pump station.			
Existing WWTP:	Name:	Honaker STP		
	Design Flow:	0.400	MGD	
	Average Flow:	0.113	MGD	
	Receiving Stream:	Lewis Creek		
	Stream Classification:	IV		
	Impaired Stream (Y/N):	Yes		
Watershed or Adjacent Stream:	Name:	Swords Creek	Impaired (Y/N):	Yes
Equivalent Customers Served:	Residential =	328	Commercial =	12
			Industrial =	0
Health Hazard:	Failing septic systems.			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.			
Growth Potential:	Residential - Moderate Commercial - Low/Moderate Industrial - Low			
Total Project Cost:	\$20,012,980			
Cost Per Connection:	\$58,861.71			



## PROJECT DATA SHEET

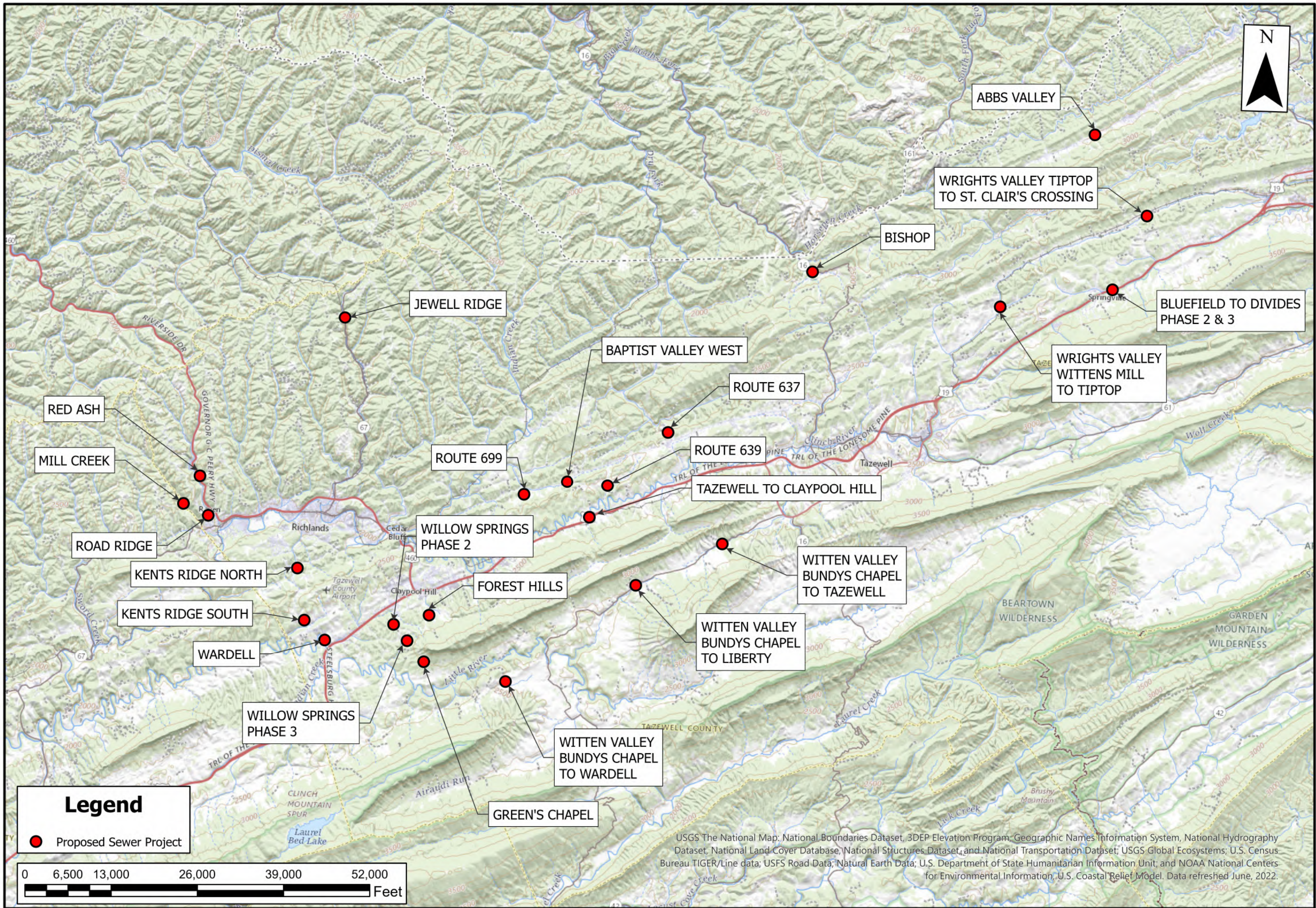
Project Name:	Castlewood Sewer Project – Phase II (Mew Road)					
County:	Russell					
Planning District:	Cumberland Plateau					
Utility Provider:	Russell County Public Service Authority					
Served by Public Water (Y/N):	Yes					
Existing Conditions:	The project area is currently not served by a public sewage system.					
Proposed Project:	The Castlewood Sewer Project – Phase II will extend public sewer service to the west along Mew Road (Route 65). The project will begin near the intersection of U.S. Route 58 and Mew Road and extend to the intersection of Mew Road and Longview Drive. The project will include one (1) pump station and (4) grinder stations with approximately 19,000 linear feet of gravity sewer 6,500 linear feet of force main to provide sanitary sewer service to 145 residential connections.					
Existing WWTP:	Name:	St. Paul				
	Design Flow:	0.50	MGD			
	Average Flow:	0.081	MGD			
	Receiving Stream:	Clinch River				
	Stream Classification:	IV				
	Impaired Stream (Y/N):	Yes				
Watershed or Adjacent Stream:	Name:	Castle Run	Impaired (Y/N):	No		
Equivalent Customers Served:	Residential =	145	Commercial =		Industrial =	0
Health Hazards:						
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.					
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low					
Total Project Cost:	\$7,962,175					
Present Worth Per Connection:	\$54,912					



## PROJECT DATA SHEET

Project Name:	Dante To St. Paul		
County:	Russell		
Planning District:	Cumberland Plateau		
Utility Provider:	Russell County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is served by a public sewage system. The wastewater is conveyed to and treated at the Dante Community WWTP. The intent of this project is to abandon the existing WWTP and convey the wastewater to the St. Paul Wastewater Treatment Plant.		
Proposed Project:	The Dante To St. Paul Sewer Project will abandon the Dante WWTP and convey the wastewater to the St. Paul WWTP. The project will begin at the existing force main on Route 63 that conveys the sewer to the Dante WWTP and extend to the Town of St. Paul. Approximately 18 additional connections along Route 63 will be provided sewer service with this project. The project will include one (1) pump station and (2) grinder pump stations with approximately 30,000 linear feet of 6-inch force main, and 1,500 linear feet of 8-inch gravity sewer to provide sanitary sewer service to a total of 182 residential connections.		
Existing WWTP:	Name:	St. Paul	
	Design Flow:	0.50	MGD
	Average Flow:	0.081	MGD
	Receiving Stream:		Clinch River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Castle Run	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	182	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will abandon the approximately 30 year old Dante WWTP which will need to be rehabilitated or replaced in the near future and convey the wastewater to connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$3,219,713		
Present Worth Per Connection:	\$17,691		





SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

TAZEVELL COUNTY  
 PUBLIC SERVICE  
 AUTHORITY -  
 PROPOSED PROJECTS



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# PROJECT DATA SHEET

Project Name: Wrights Valley/ Tiptop to St. Clair's Crossing Sewer

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Portions of the service area are served by public water

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems

Proposed Project: The project consists of approximately 51,250 linear feet of 8-inch gravity sewer extending from Tiptop to Saint Clair's Crossing. The sewerage generated within the project area would ultimately be conveyed to the existing Westside WWTP

Existing WWTP: Name: Bluefield Westside WWTP  
Design Flow: 8.1 MGD  
Average Flow: 3.858 MGD  
Receiving Stream: Bluestone River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Middle New Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 250 Commercial = 0 Industrial = 3

Health Hazard:

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$15,322,450

Cost Per Connection: \$60,563



# PROJECT DATA SHEET

Project Name: Wrights Valley/Wittens Mill to Tiptop Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems.

Proposed Project: The project consists of approximately 65,125 linear feet of 8-inch gravity sewer, 4,000 LF of 4-inch force main and 1 pump station extending from Wright's Valley to Tiptop. The sewerage generated within the project area would ultimately be conveyed to the existing Tazewell WWTP.

Existing WWTP: Name: Tazewell WWTP  
Design Flow: 2.00 MGD  
Average Flow: 0.893 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 291 Commercial = 5 Industrial = 5

Health Hazard:

Construction Feasibility: Low - Requires the construction of the Tazewell to Divides collection system. It is anticipated that rock will be encountered throughout the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$20,376,688

Cost Per Connection: \$67,697



# PROJECT DATA SHEET

Project Name: Mill Creek Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): No

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems.

Proposed Project: The project consists of approximately 28,000 linear feet of 8-inch gravity sewer extending from the Mill Creek area of Tazewell County to the existing Raven/Doran collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 106 Commercial = 0 Industrial = 0

Health Hazard:

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$8,193,250

Cost Per Connection: \$77,295



# PROJECT DATA SHEET

Project Name: Bluefield to Divides Sewer Extension Phases 2 and 3

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems.

Proposed Project: The project consists of approximately 22,935 linear feet of 12-inch gravity sewer, 44,545 linear feet of 8-inch gravity sewer, 4,600 LF of 2-inch force main and 1 pump station extending from Bluestone Regional Business and Technology Center to the Divides within Tazewell County. The sewerage generated within the project area would ultimately be conveyed to the existing Bluefield Westside WWTP.

Existing WWTP: Name: Bluefield Westside WWTP  
Design Flow: 8.1 MGD  
Average Flow: 3.858 MGD  
Receiving Stream: Bluestone River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Middle New Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 569 Commercial = 15 Industrial = 5

Health Hazard: Per local health officials, failing septic systems and/or "straight pipes" are present. Also there are high total/fecal coliform counts in the Bluestone River in the project area.

Construction Feasibility: Moderate - This project requires the construction of the Bluefield to Divides Phase 1 collection system.

Growth Potential: Residential - High  
Commercial - High  
Industrial - High

Total Project Cost: \$24,253,944

Cost Per Connection: \$41,178



# PROJECT DATA SHEET

Project Name: Green's Chapel Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems.

Proposed Project: The project consists of approximately 8,800 linear feet of 8-inch gravity sewer, 6,000 LF of 4-inch force main, and 2 pump stations extending from the Green's Chapel area of Tazewell County to the existing Claypool Hill collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Claypool Hill WWTP.

Existing WWTP: Name: Claypool Hill WWTP  
Design Flow: 0.70 MGD  
Average Flow: 0.225 MGD  
Receiving Stream: Little River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 24 Commercial = 0 Industrial = 0

Health Hazard:

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity. It is anticipated that rock will be encountered in about fifty percent of the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$4,111,510

Cost Per Connection: \$171,313



# PROJECT DATA SHEET

Project Name: Baptist Valley West Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water? Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems which are constructed in poor soil conditions with shallow depth to rock.

Proposed Project: The project consists of approximately 19,800 linear feet of 12-inch gravity sewer, 6,600 LF of 10-inch gravity sewer, 127,270 LF of 8-inch gravity sewer, 13,200 LF of 4-inch force main, 330 LF of 2-inch force main, 3-90 GPM pump stations, and 1-30 GPM pump station extending from the Western Baptist Valley area of Tazewell County to the existing Richlands collection system. Sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name = Richlands WWTP  
Design Flow = 4.00 MGD  
Average Flow = 2.182 MGD  
Receiving Stream = Clinch River  
Stream Classification = IV  
Impaired Stream = Yes

Watershed or Adjacent Stream Name = Upper Clinch Impaired= Yes

Equivalent Customers Served: Residential = 1100 Commercial = 8 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$53,249,703

Cost Per Connection: \$48,059



# PROJECT DATA SHEET

Project Name: Wardell Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems which are constructed in poor soil conditions with shallow depth to rock.

Proposed Project: The project consists of approximately 32,000 linear feet of 8-inch gravity sewer extending throughout the Wardell area of Tazewell County to the existing Claypool Hill collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Claypool Hill WWTP.

Existing WWTP: Name: Claypool Hill WWTP  
Design Flow: 0.70 MGD  
Average Flow: 0.225 MGD  
Receiving Stream: Little River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 85 Commercial = 10 Industrial = 5

Health Hazard:

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$9,246,900

Cost Per Connection: \$92,469



# PROJECT DATA SHEET

Project Name: Rte. 639 (Clifffield to Baptist Valley) Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems.

Proposed Project: The project consists of approximately 14,300 linear feet of 8-inch gravity sewer extending from the Rt 639 area in Tazewell County to the proposed Claypool Hill to Tazewell Alt.1 collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 100 Commercial = 2 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Low - Requires the construction of the Claypool Hill to Tazewell Alt. 1 collection system. It is anticipated that rock will be encountered throughout the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$4,448,860

Cost Per Connection: \$43,616



# PROJECT DATA SHEET

Project Name: Route 699 Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems.

Proposed Project: The project consists of approximately 14,300 linear feet of 8-inch gravity sewer extending from the Rt 699 area in Tazewell County to the proposed Claypool Hill to Tazewell Alt.1 collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 50 Commercial = 3 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Low - Requires the construction of the Claypool Hill to Tazewell Alt. 1 collection system. It is anticipated that rock will be encountered throughout the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$4,178,135

Cost Per Connection: \$78,833



# PROJECT DATA SHEET

Project Name: Route 637 Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems.

Proposed Project: The project consists of approximately 9,900 linear feet of 8-inch gravity sewer extending from the Rt. 637 area in Tazewell County to the proposed Claypool Hill to Tazewell Alt.1 collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 42 Commercial = 0 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Moderate - Requires the construction of the Claypool Hill to Tazewell Alt. 1 collection system. It is anticipated that rock will be encountered throughout the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$2,921,880

Cost Per Connection: \$69,569



# PROJECT DATA SHEET

Project Name: Kents Ridge North Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems which are constructed in poor soil conditions with shallow depth to rock.

Proposed Project: The project consists of approximately 24,000 linear feet of 8-inch gravity sewer and 2,200 LF of 6-inch gravity sewer extending from the Northern Kents Ridge area of Tazewell County to the existing Richlands collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 70 Commercial = 4 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity. It is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$7,370,090

Cost Per Connection: \$99,596



# PROJECT DATA SHEET

Project Name: Kents Ridge South Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems which are constructed in poor soil conditions with shallow depth to rock.

Proposed Project: The project consists of approximately 17,500 linear feet of 8-inch gravity sewer, 2,200 LF of 4-inch force main, 1-20 GPM pump station, and 1 pump station upgrade extending from the Southern Kents Ridge area of Tazewell County to the existing Claypool Hill collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Claypool Hill WWTP.

Existing WWTP: Name: Claypool Hill WWTP  
Design Flow: 0.70 MGD  
Average Flow: 0.225 MGD  
Receiving Stream: Little River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 50 Commercial = 0 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity. It is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$6,157,060

Cost Per Connection: \$123,141



# PROJECT DATA SHEET

Project Name: Road Ridge Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents use septic systems which are constructed in poor soil conditions with shallow depth to rock.

Proposed Project: The project consists of approximately 30,700 linear feet of 8-inch gravity sewer, extending from the Road Ridge area of Tazewell County to the existing Raven collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 83 Commercial = 0 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity. It is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$8,799,765

Cost Per Connection: \$106,021



# PROJECT DATA SHEET

Project Name: Willow Springs Sewer Extension Phase 2

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Two septic systems have been condemned and approvals for future septic systems does not seem likely due to poor percolation rates of the soil.

Proposed Project: The project consists of approximately 1,600 linear feet of 8-inch gravity sewer, 1,600 LF of 2-inch force main, and 1-0.02 MGD pump station extending from the Willow Springs area of Tazewell County to the existing Claypool Hill collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Claypool Hill WWTP.

Existing WWTP: Name: Claypool Hill WWTP  
Design Flow: 0.70 MGD  
Average Flow: 0.225 MGD  
Receiving Stream: Little River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 5 Commercial = 0 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$785,525

Cost Per Connection: \$157,105



# PROJECT DATA SHEET

Project Name: Willow Springs Sewer Extension Phase 3

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Two septic systems have been condemned and approvals for future septic systems does not seem likely due to poor percolation rates of the soil.

Proposed Project: The project consists of approximately 4,800 linear feet of 8-inch gravity sewer, 480 LF of 6-inch gravity sewer, 320 LF of 4-inch force main, and 1-0.043 MGD pump station extending from the Willow Springs area of Tazewell County to the existing Claypool Hill collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Claypool Hill WWTP.

Existing WWTP: Name: Claypool Hill WWTP  
Design Flow: 0.70 MGD  
Average Flow: 0.225 MGD  
Receiving Stream: Little River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 30 Commercial = 0 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$2,006,342

Cost Per Connection: \$66,878



# PROJECT DATA SHEET

Project Name: Forest Hills Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): No

Existing Conditions: The project area is currently not served by a public sewage system. The Health Department has limited the development within Forest Hills subdivision because of poor soil conditions.

Proposed Project: The project consists of approximately 14,500 linear feet of 8-inch gravity sewer, 3,000 LF of 4-inch force main, and 1-35gpm pump station extending from the Forest Hills area of Tazewell County to the existing Claypool Hill collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Claypool Hill WWTP.

Existing WWTP: Name: Claypool Hill WWTP  
Design Flow: 0.70 MGD  
Average Flow: 0.225 MGD  
Receiving Stream: Little River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 77 Commercial = 0 Industrial = 0

Health Hazard:

Construction Feasibility: Very feasible - It is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$5,226,975

Cost Per Connection: \$67,883



# PROJECT DATA SHEET

Project Name: Witten Valley (Bundys Chapel - Tazewell) Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): No

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems.

Proposed Project: The project consists of approximately 48,000 linear feet of 8-inch gravity sewer, a 75 gpm pump station and 2,200 LF of 4-inch force main extending from the Bundy's Chapel area of Tazewell Co to the existing Tazewell collection system. The sewerage generated within the project area would ultimately be conveyed to the ex. Tazewell WWTP.

Existing WWTP: Name: Tazewell WWTP  
Design Flow: 2.00 MGD  
Average Flow: 0.893 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 132 Commercial = 0 Industrial = 0

Health Hazard:

Construction Feasibility: Very feasible - The project connects to an existing system with adequate treatment capacity.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$14,506,960

Cost Per Connection: \$109,901



# PROJECT DATA SHEET

Project Name: Witten Valley (Bundys Chapel - Liberty) Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): No

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems.

Proposed Project: The project consists of approximately 18,000 linear feet of 8-inch gravity sewer, 14,000 LF of 4-inch force main, and 1 pump station extending from Bundy's Chapel to the Liberty area of Tazewell County. The sewerage generated within the project area would ultimately be conveyed to the existing Tazewell WWTP.

Existing WWTP: Name: Tazewell WWTP  
Design Flow: 2.00 MGD  
Average Flow: 0.893 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 42 Commercial = 0 Industrial = 0

Health Hazard:

Construction Feasibility: Low - This project requires the construction of the Bundys Chapel to Tazewell collection system.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$7,714,850

Cost Per Connection: \$183,687



# PROJECT DATA SHEET

Project Name: Witten Valley (Bundys Chapel - Wardell) Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): No

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems.

Proposed Project: The project consists of approximately 42,500 linear feet of 8-inch gravity sewer, 20,000 LF of 4-inch force main, and 4 pump stations extending from Bundy's Chaper to the Wardell area of Tazewell County. The sewerage generated within the project area would ultimately be conveyed to the existing Tazewell WWTP.

Existing WWTP: Name: Tazewell WWTP  
Design Flow: 2.00 MGD  
Average Flow: 0.893 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 80 Commercial = 0 Industrial = 0

Health Hazard:

Construction Feasibility: Low - This project requires the construction of both the Bundys Chapel to Tazewell and Bundys Chapel to Liberty collection systems.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$16,695,250

Cost Per Connection: \$208,691



# PROJECT DATA SHEET

Project Name: Tazewell to Claypool Hill Sewer Extension Alternative 1

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Portions of the service area are served by public water

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems.

Proposed Project: The project consists of approximately 72,300 linear feet of 10-inch gravity sewer and 96,400 LF of 8-inch gravity sewer extending from the Claypool Hill/Tazewell area of Tazewell County to the existing Richlands collection system. The sewage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 444 Commercial = 10 Industrial = 10

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very feasible - It is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Moderate  
Commercial - High  
Industrial - High

Total Project Cost: \$51,313,080

Cost Per Connection: \$110,589



# PROJECT DATA SHEET

Project Name: Tazewell to Claypool Hill Sewer Extension Alternative 2

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Portions of the service area are served by public water

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems.

Proposed Project: The project consists of approximately 52,600 linear feet of 10-inch gravity sewer and 96,400 LF of 8-inch gravity sewer extending from the Claypool Hill/Tazewell area of Tazewell County. The sewerage generated within the project area would ultimately be conveyed to the proposed 200,000 GPD WWTP.

Existing WWTP:

Name:	NA
Design Flow:	NA MGD
Average Flow:	NA MGD
Receiving Stream:	NA
Stream Classification:	NA
Impaired Stream (Y/N):	NA

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 444 Commercial = 10 Industrial = 10

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Moderate - Will require the construction of a WWTP. Additionally, it is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Moderate  
Commercial - High  
Industrial - High

Total Project Cost: \$47,766,680

Cost Per Connection: \$102,945



# PROJECT DATA SHEET

Project Name: Abbs Valley Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems that could contaminate the underground stream that flows through the valley

Proposed Project: The project consists of approximately 31,400 linear feet of 8-inch gravity sewer, 8,342 LF of 4-inch force main, 2-80 gpm pump stations, 1,100 LF of 2-inch force main and 1-20 gpm pump station extending from Abbs Valley to Boissevain.

Existing WWTP: Name: Northern Tazewell County WWTP  
Design Flow: 0.50 MGD  
Average Flow: 0.217 MGD  
Receiving Stream: Laurel Fork  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Middle New Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 420 Commercial = 15 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very Feasible - It is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$13,287,732

Cost Per Connection: \$30,547



# PROJECT DATA SHEET

Project Name: Bishop Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems and "straight pipes".

Proposed Project: The project consists of approximately 18,000 linear feet of 8-inch gravity sewer extending from the Bishop area of Tazewell County to a new 60,000 GPD package WWTP.

Existing WWTP: Name: NA  
Design Flow: NA MGD  
Average Flow: NA MGD  
Receiving Stream: NA  
Stream Classification: NA  
Impaired Stream (Y/N): NA

Watershed or Adjacent Stream: Name: Tug Impaired (Y/N): No

Equivalent Customers Served: Residential = 150 Commercial = 5 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Moderate - A new wastewater treatment facility will be required. It is also anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$6,916,975

Cost Per Connection: \$44,626



# PROJECT DATA SHEET

Project Name: Red Ash Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): No

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems which are constructed in poor soil conditions with shallow depth to rock.

Proposed Project: The project consists of approximately 17,000 linear feet of 8-inch gravity sewer, extending from the Red Ash area of Tazewell County to the existing Raven/Doran collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP.

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 105 Commercial = 0 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Very Feasible - It is anticipated that rock will be encountered throughout much of the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$5,199,025

Cost Per Connection: \$49,515



# PROJECT DATA SHEET

Project Name: Jewell Ridge Sewer Extension

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Tazewell County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Therefore, residents utilize septic systems which are constructed in poor soil conditions with shallow depth to rock.

Proposed Project: The project consists of approximately 51,000 linear feet of 8-inch gravity sewer, extending from the Jewell Ridge area of Tazewell County to the existing Richlands collection system. The sewerage generated within the project area would ultimately be conveyed to the existing Richlands WWTP

Existing WWTP: Name: Richlands WWTP  
Design Flow: 4.00 MGD  
Average Flow: 2.182 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Upper Clinch Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 200 Commercial = 3 Industrial = 0

Health Hazard: Based on information provided by local health officials, failing septic systems and/or "straight pipes" are present within the service area.

Construction Feasibility: Moderate - The system will require a collection system from Richlands through Coaldan and Seaboard. It is anticipated that rock will be encountered throughout the project area.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$14,978,275

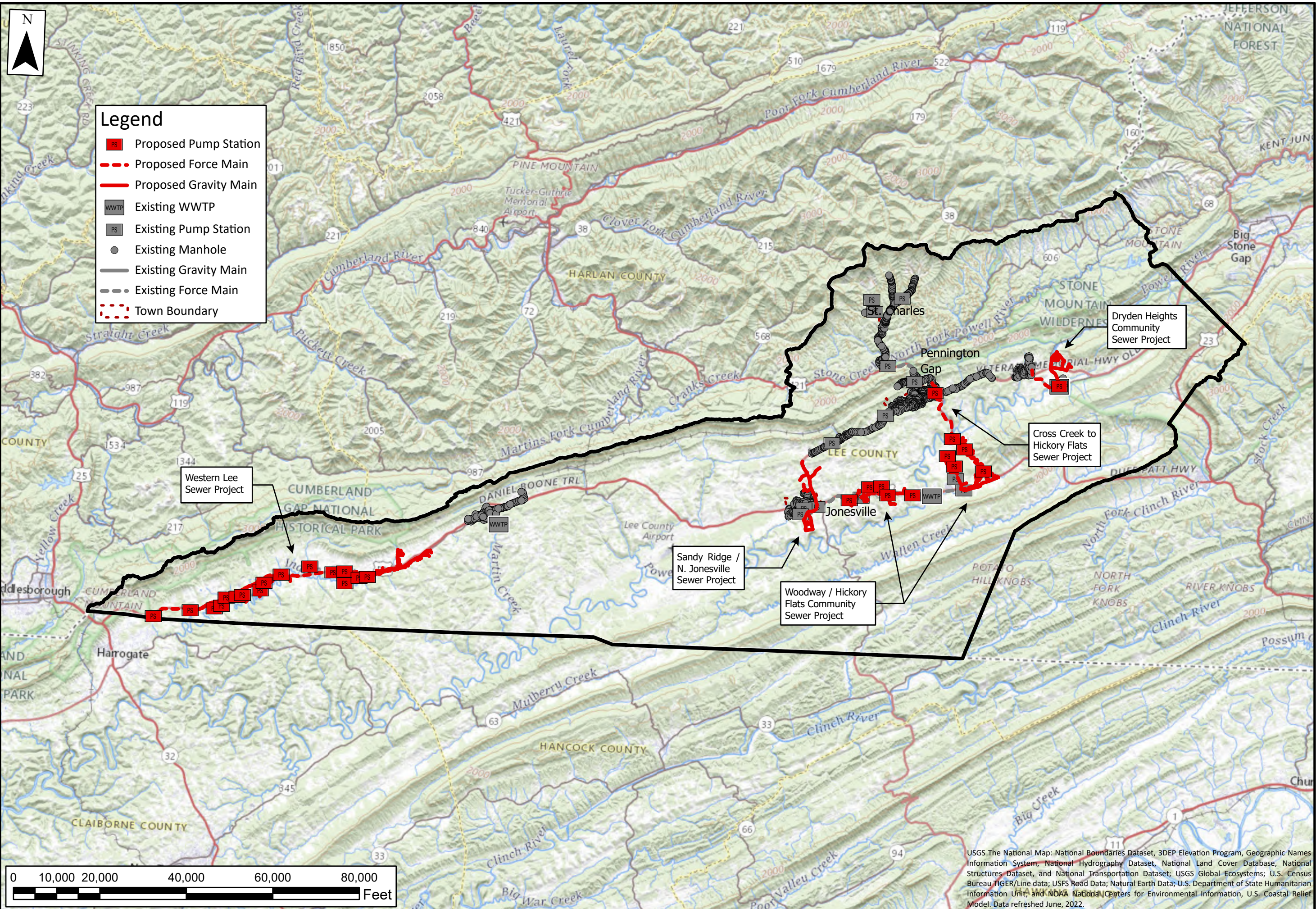
Cost Per Connection: \$73,785



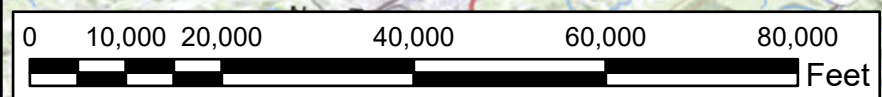
APPENDIX B

LENOWISCO PLANNING DISTRICT  
CONVENTIONAL PROJECTS





- Legend**
- PS Proposed Pump Station
  - - - Proposed Force Main
  - Proposed Gravity Main
  - WWTP Existing WWTP
  - PS Existing Pump Station
  - Existing Manhole
  - Existing Gravity Main
  - - - Existing Force Main
  - - - Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

LEE COUNTY -  
PROPOSED SEWER  
EXTENSIONS



DATE:	1/9/2023
SHEET:	
DRAWN BY:	JR
CHECKED BY:	
PROJECT NO.:	2248
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## PROJECT DATA SHEET

Project Name: Woodway/Hickory Flats Community Sewer Project

County: Lee

Planning District: Lenowisco

Utility Provider: Lee County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system. Documented failing septic systems with existing septic systems over 30 years old. Many systems believed to be discharging directly to sink holes.

Proposed Project: The project consists of approximately 102,000 linear feet of 8-inch gravity sewer, 30,000 of 4-inch force main and 10 grinder pump station.

Existing WWTP:	Name:	Hickory Flats	
	Design Flow:	0.80	MGD
	Average Flow:	0.28	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	710	Commercial =	25	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$41,142,075

Present Worth Per Connection: \$55,976



## PROJECT DATA SHEET

Project Name:	Sandy Ridge/North Jonesville Community Sewer Project		
County:	Lee		
Planning District:	Lenowisco		
Utility Provider:	Lee County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system. Straight pipes exist.		
Proposed Project:	The project consists of approximately 37,000 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Hickory Flats	
	Design Flow:	0.80	MGD
	Average Flow:	0.28	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Town Branch	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	260	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$11,489,400		
Present Worth Per Connection:	\$44,190		



## PROJECT DATA SHEET

Project Name:	Dyrden Heights Community Sewer Project		
County:	Lee		
Planning District:	Lenowisco		
Utility Provider:	Lee County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system. Septic system over 30 years old.		
Proposed Project:	The project consists of approximately 24,000 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Cross Creek	
	Design Flow:	0.30	MGD
	Average Flow:	0.1	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		No
Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	250	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. System could be combined with a future project to eliminate Cross Creek WWTP and eliminate a discharge.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$7,902,050		
Present Worth Per Connection:	\$31,608		



## PROJECT DATA SHEET

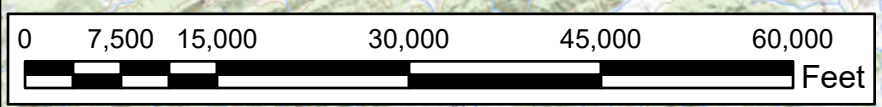
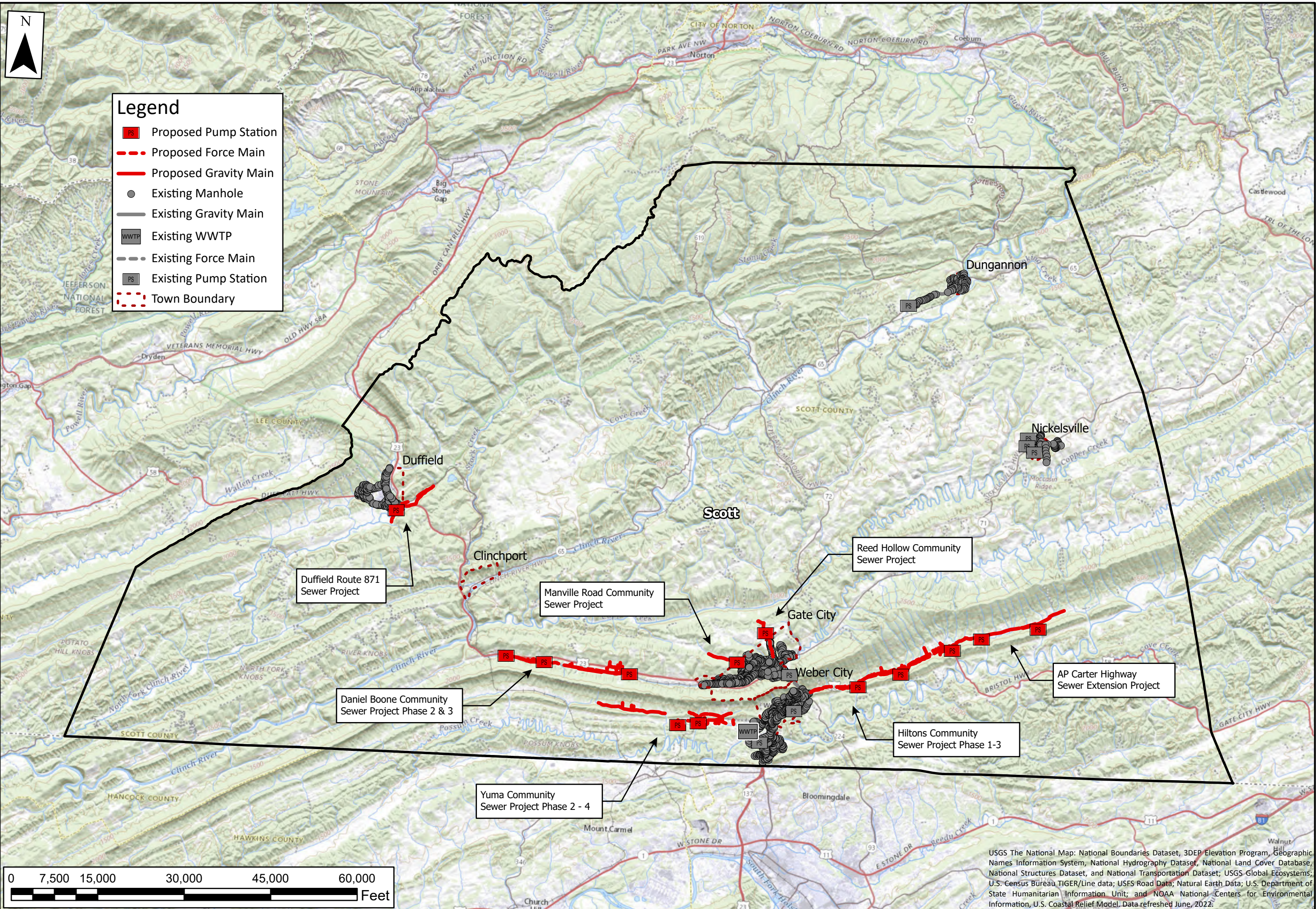
Project Name:	Western Lee Sewer Project		
County:	Lee		
Planning District:	Lenowisco		
Utility Provider:	Lee County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system. Septic system over 30 years old.		
Proposed Project:	The project consists of approximately 102,000 linear feet of gravity sewer ranging in size from 6-inch to 15-inch, 16 pump station and 70,000 linear feet of Forcemain. The project will also include the construction of a new Wastewater Treatment Plant.		
Existing WWTP:	Name:	Western Lee	
	Design Flow:	0.30	MGD
	Average Flow:	0	MGD
	Receiving Stream:		Indian Creek
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Indian Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	350	Commercial = 10 Industrial = 0
Health Hazards:			
Construction Feasibility:	Feasible - The project will construct a new WWTP along with the collection system. U.S. Army Corp providing initial funding for study and preliminary design. Additional funding for the construction will be available.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$58,565,000		
Present Worth Per Connection:	\$162,681		



## PROJECT DATA SHEET

Project Name:	Cross Creek to Hickory Flats Sewer Project		
County:	Lee		
Planning District:	Lenowisco		
Utility Provider:	Lee County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project will involve eliminating the Cross Creek Sewer Treatment Plant and the Town of Pennington Gap Wastewater Treatment Plant. Sewer from each system will be pumped to Hickory Flats Sewer Treatment Plant.		
Proposed Project:	The project consists of approximately 24,000 linear feet of Forcemain ranging in size from 4-inch to 6-inch and 4 pump station. This project assumes the Woodway Hickory Flats Project has been completed. Additional pump stations and forcemains will be needed if this project has not been completed.		
Existing WWTP:	Name:	Hickory Flats	
	Design Flow:	0.80	MGD
	Average Flow:	0.28	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$5,790,200		
Present Worth Per Connection:	#DIV/0!		





USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

SCOTT COUNTY -  
PROPOSED SEWER  
EXTENSIONS



DATE:	1/16/2023
SHEET:	
DRAWN BY:	JJR
CHECKED BY:	
PROJECT NO.:	2248
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## PROJECT DATA SHEET

Project Name:	Daniel Boone Sewer Project Phase 2-3		
County:	Scott		
Planning District:	Lenowisco		
Utility Provider:	Scott County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system. Documented failing septic systems with existing septic systems over 30 years old.		
Proposed Project:	The project consists of approximately 36,000 linear feet of 8-inch gravity sewer, 13,000 of 4-inch force main and 2 grinder pump station.		
Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:		Holston River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Moccasin Creek	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	186	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$13,633,750		
Present Worth Per Connection:	\$73,300		



## PROJECT DATA SHEET

Project Name:	Yuma Community Sewer Project Phase 2-4		
County:	Scott		
Planning District:	Lenowisco		
Utility Provider:	Scott County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system. Documented failing septic systems with existing septic systems over 30 years old.		
Proposed Project:	The project consists of approximately 55,000 linear feet of 8-inch and smaller gravity sewer, 34,000 of 4-inch force main and 3 sewer pump station.		
Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:	Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Holston River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	170	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily.		
Growth Potential:	Residential - High Commercial - Low Industrial - Low		
Total Project Cost:	\$12,493,325		
Present Worth Per Connection:	\$73,490		



Project Name: **Hiltons Community Sewer Project Phase 1-3**

County: **Scott**

Planning District: **Lenowisco**

Utility Provider: **Scott County Public Service Authority**

Served by Public Water (Y/N): **Yes**

Existing Conditions: **The project area is currently not served by a public sewage system. Documented failing septic systems with existing septic systems over 30 years old.**

Proposed Project: **The project consists of approximately 55,000 linear feet of 8-inch and smaller gravity sewer, 34,000 of 4-inch force main and 3 sewer pump station.**

Existing WWTP: Name: **Holston**  
Design Flow: **1.25** MGD  
Average Flow: **0.143** MGD  
Receiving Stream: **Holston River**  
Stream Classification: **IV**  
Impaired Stream (Y/N): **Yes**

Watershed or Adjacent Stream: Name: **Holston River** Impaired (Y/N): **Yes**

Equivalent Customers Served: Residential = **280** Commercial = **20** Industrial = **0**

Health Hazards:

Construction Feasibility: **Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily.**

Growth Potential: **Residential - High  
Commercial - Moderate  
Industrial - Low**

Total Project Cost: **\$22,904,700**

Present Worth Per Connection: **\$76,349**



## PROJECT DATA SHEET

Project Name: AP Carter Highway Community Sewer System

County: Scott

Planning District: Lenowisco

Utility Provider: Scott County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system.

Proposed Project: The project consists of approximately 25,000 linear feet of 8-inch and smaller gravity sewer, 14,000 of 4-inch force main and 2 sewer pump station.

Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:	Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	

Watershed or Adjacent Stream:	Name:	Holston River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	115	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Feasible - The project will connect to an existing system with adequate treatment capacity. Hiltons Phase 1-3 will need to be completed prior to this project. Project can be phased very easily.

Growth Potential: Residential - High  
Commercial - Moderate  
Industrial - Low

Total Project Cost: \$10,810,475

Present Worth Per Connection: \$94,004



## PROJECT DATA SHEET

Project Name: Duffield Route 871 Sewer Extension Project

County: Scott

Planning District: Lenowisco

Utility Provider: Scott County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system.

Proposed Project: The project consists of approximately 17,000 linear feet of 8-inch and smaller gravity sewer, 500 of 2-inch force main and 1 sewer pump station.

Existing WWTP:	Name:	Duffield	
	Design Flow:	0.40	MGD
	Average Flow:	0.2	MGD
	Receiving Stream:		Cinch River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Cinch River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	65	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Feasible - The project will connect to an existing system with adequate treatment capacity.

Growth Potential: Residential - Moderate  
Commercial - Moderate  
Industrial - Low

Total Project Cost: \$5,358,925

Present Worth Per Connection: \$82,445



## PROJECT DATA SHEET

Project Name:	Reed Hollow Community Sewer System		
County:	Scott		
Planning District:	Lenowisco		
Utility Provider:	Scott County Public Service Authority		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public water or sewage system.		
Proposed Project:	The project consists of approximately 8,000 linear feet of 8-inch and smaller gravity sewer, 2,000 of 2-inch force main and 1 sewer pump station.		
Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:	Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Moccasin Creek	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	45	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$3,262,025		
Present Worth Per Connection:	\$72,489		



## PROJECT DATA SHEET

Project Name: Manville Community Sewer System

County: Scott

Planning District: Lenowisco

Utility Provider: Scott County Public Service Authority

Served by Public Water (Y/N): No

Existing Conditions: The project area is currently not served by a public sewage system.

Proposed Project: The project consists of approximately 8,000 linear feet of 8-inch and smaller gravity sewer, 1,000 of 2-inch force main and 1 sewer pump station.

Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:		Holston River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Moccasin Creek	Impaired (Y/N):	No
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Equivalent Customers Served:	Residential =	45	Commercial =	0	Industrial =	0
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Health Hazards:

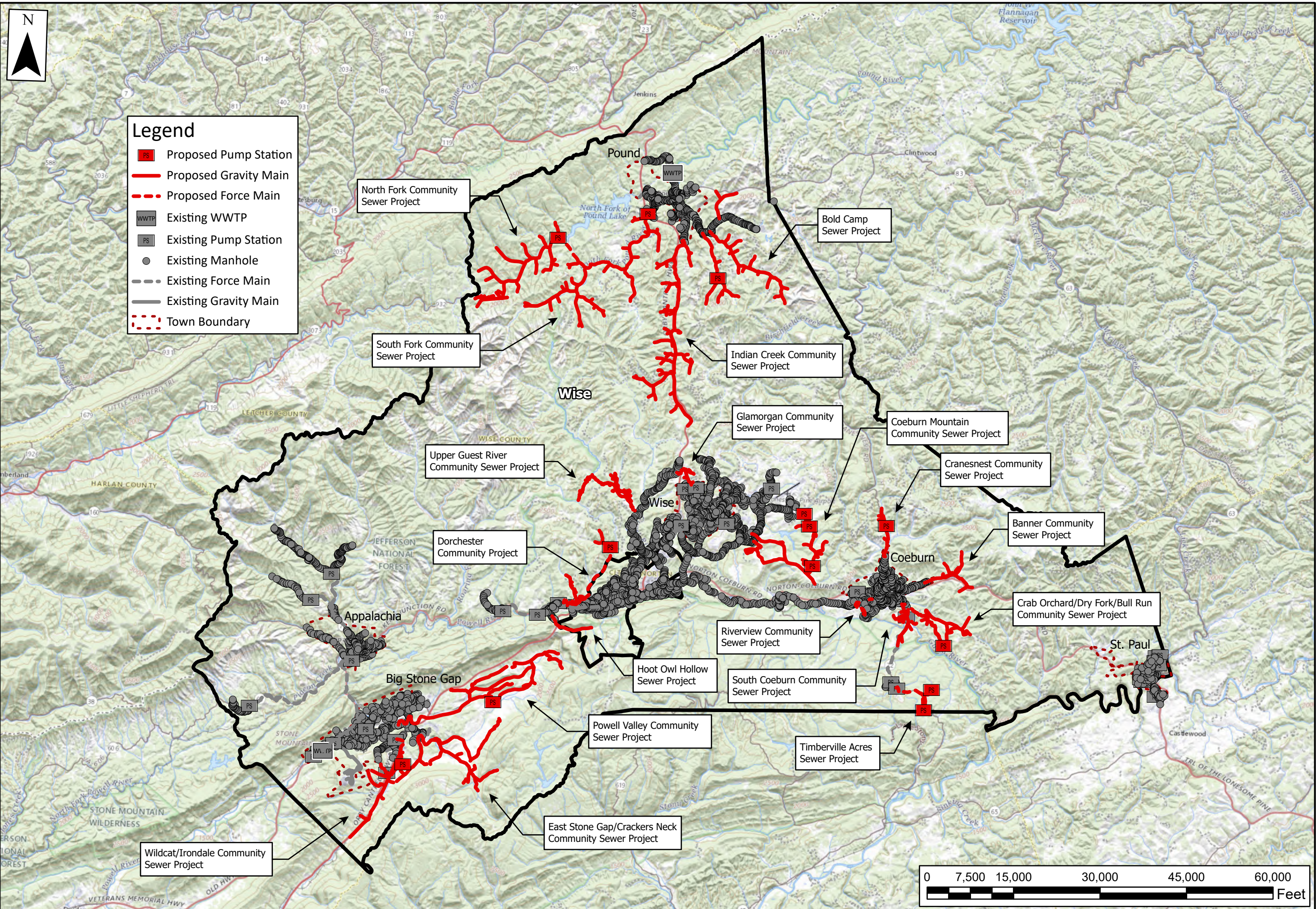
Construction Feasibility: Feasible - The project will connect to an existing system with adequate treatment capacity.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$3,137,225

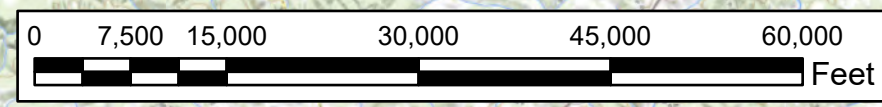
Present Worth Per Connection: \$69,716





**Legend**

- PS Proposed Pump Station
- Proposed Gravity Main
- - - Proposed Force Main
- WWTP Existing WWTP
- PS Existing Pump Station
- Existing Manhole
- - - Existing Force Main
- Existing Gravity Main
- - - Town Boundary





## PROJECT DATA SHEET

Project Name:	East Stone Gap/Cracker Neck Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 60,000 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Big Stone Gap	
	Design Flow:	4.00	MGD
	Average Flow:	1.575	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		No
Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	473	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$18,915,325		
Present Worth Per Connection:	\$39,990		



## PROJECT DATA SHEET

Project Name:	Wildcat/Irondale Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 52,000 linear feet 8-inch and smaller gravity sewer , 1 pump station and 7,500 linear feet of 4-inch forcemain.		
Existing WWTP:	Name:	Big Stone Gap	
	Design Flow:	4.00	MGD
	Average Flow:	1.575	MGD
	Receiving Stream:	Powell River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	377	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$17,781,075		
Present Worth Per Connection:	\$47,165		



## PROJECT DATA SHEET

Project Name: Coeburn Mountain Community Sewer Project

County: Wise

Planning District: Lenowisco

Utility Provider: Wise County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system.

Proposed Project: The project consists of approximately 44,000 linear feet of 8-inch and smaller gravity sewer , 1 pump station and 7,000 linear feet of 4-inch Forcemain.

Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:		Guest River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	450	Commercial =		Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$16,489,850

Present Worth Per Connection: \$36,644



## PROJECT DATA SHEET

Project Name:	Powell Valley Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 82,000 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 6,000 linear feet of 6-inch Forcemain.		
Existing WWTP:	Name:	Big Stone Gap	
	Design Flow:	4.00	MGD
	Average Flow:	1.575	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		No
Watershed or Adjacent Stream:	Name:	Butcher Fork	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	355	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$25,769,575		
Present Worth Per Connection:	\$72,590		



## PROJECT DATA SHEET

Project Name:	Glamorgan Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 8,000 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Sepulcher Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	50	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$2,449,850		
Present Worth Per Connection:	\$48,997		



## PROJECT DATA SHEET

Project Name:	Banner Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 11600 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 1,850 linear feet of 3-inch Forcemain.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Tom's Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	65	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$3,759,925		
Present Worth Per Connection:	\$57,845		



## PROJECT DATA SHEET

Project Name: Crab Orchard/Dry Fork/Bull Run Community Sewer Project

County: Wise

Planning District: Lenowisco

Utility Provider: Wise County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system.

Proposed Project: The project consists of approximately 31,500 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 9,000 linear feet of 6-inch Forcemain.

Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:		Guest River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Crab Orchard Creek	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	117	Commercial =		Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will connect to an existing system with adequate treatment capacity.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$11,303,175

Present Worth Per Connection: \$96,608



## PROJECT DATA SHEET

Project Name:	Cranesnest Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 10,000 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 1,500 linear feet of 4-inch Forcemain.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Tom's Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	106	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. The only current issues is the existing Town of Coeburn's collection system which may need upgraded. Further evaluation will be required.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$3,977,350		
Present Worth Per Connection:	\$37,522		



## PROJECT DATA SHEET

Project Name:	Upper Guest River Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 30,000 linear feet of 8-inch and smaller gravity sewer.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:		Guest River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	140	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. The only current issues is the existing Town of Coeburn's collection system which may need upgraded. Further evaluation will be required.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$8,924,500		
Present Worth Per Connection:	\$63,746		



## PROJECT DATA SHEET

Project Name:	Indian Creek (Wise to Pound) Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 102,000 linear feet of 8-inch and smaller gravity sewer.		
Existing WWTP:	Name:	Pound	
	Design Flow:	0.50	MGD
	Average Flow:	1.053	MGD
	Receiving Stream:	Pound River	
	Stream Classification:	V	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Indian Creek	Impaired (Y/N): <span style="background-color: yellow;">Yes</span>
Equivalent Customers Served:	Residential =	360	Commercial = <span style="background-color: yellow;"> </span> Industrial = <span style="background-color: yellow;">0</span>
Health Hazards:			
Construction Feasibility:	Feasible - Issues with the existing Pound Wastewater Treatment Plant will need to be corrected along with additional treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Low		
Total Project Cost:	\$29,702,400		
Present Worth Per Connection:	\$82,507		



## PROJECT DATA SHEET

Project Name:	South Fork Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 72,000 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 5,000 linear feet of 4-inch Forcemain.		
Existing WWTP:	Name:	Pound	
	Design Flow:	0.50	MGD
	Average Flow:	1.053	MGD
	Receiving Stream:	Pound River	
	Stream Classification:	V	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	South Fork Pound	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	280	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Feasible - Issues with the existing Pound Wastewater Treatment Plant will need to be corrected along with additional treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$22,285,900		
Present Worth Per Connection:	\$79,593		



## PROJECT DATA SHEET

Project Name:	Bold Camp Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 60,000 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 3,000 linear feet of 2-inch Forcemain.		
Existing WWTP:	Name:	Pound	
	Design Flow:	0.50	MGD
	Average Flow:	1.053	MGD
	Receiving Stream:	Pound River	
	Stream Classification:	V	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	South Fork Pound	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	213	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Feasible - Issues with the existing Pound Wastewater Treatment Plant will need to be corrected along with additional treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$18,243,225		
Present Worth Per Connection:	\$85,649		



## PROJECT DATA SHEET

Project Name:	Dorchester Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 35,000 linear feet of 8-inch and smaller gravity sewer , 1 pump station and 9,000 linear feet of 4-inch Forcemain.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	278	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. Project can be phased very easily		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$12,851,150		
Present Worth Per Connection:	\$46,227		



## PROJECT DATA SHEET

Project Name:	South Coeburn Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 22,000 linear feet of 8-inch and smaller gravity sewer.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	152	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$6,817,200		
Present Worth Per Connection:	\$44,850		



## PROJECT DATA SHEET

Project Name:	Riverview Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 5,000 linear feet of 8-inch and smaller gravity sewer.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	63	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. Limiting factor will be the number of connections Wise County currently has with CNW.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$1,706,575		
Present Worth Per Connection:	\$27,088		



## PROJECT DATA SHEET

Project Name:	Timberville Acres Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 8,500 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 10,500 linear feet of 4-inch Forcemain.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	55	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will connect to an existing system with adequate treatment capacity. The project will require the upgrade of the Sheffield Acres Pump Station #1.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$4,654,975		
Present Worth Per Connection:	\$84,636		



## PROJECT DATA SHEET

Project Name:	North Fork Community Sewer Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 62,000 linear feet of 8-inch and smaller gravity sewer, 1 pump station and 6,000 linear feet of 4-inch forcemain.		
Existing WWTP:	Name:	Pound	
	Design Flow:	0.50	MGD
	Average Flow:	1.053	MGD
	Receiving Stream:	Pound River	
	Stream Classification:	V	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	North Fork Pound	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	164	Commercial = Industrial = 0
Health Hazards:			
Construction Feasibility:	Feasible - Issues with the existing Pound Wastewater Treatment Plant will need to be corrected along with additional treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$19,085,300		
Present Worth Per Connection:	\$116,374		



Project Name: Hoot Owl Hollow Sewer Project

County: Wise

Planning District: Lenowisco

Utility Provider: Wise County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The project area is currently not served by a public sewage system.

Proposed Project: The project consists of approximately 9,500 linear feet of 8-inch and smaller gravity sewer.

Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:		Guest River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N):	No
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Equivalent Customers Served:	Residential =	25	Commercial =		Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will connect to an existing system with adequate treatment capacity.

Growth Potential: Residential - Moderate  
Commercial - Low  
Industrial - Low

Total Project Cost: \$2,719,275

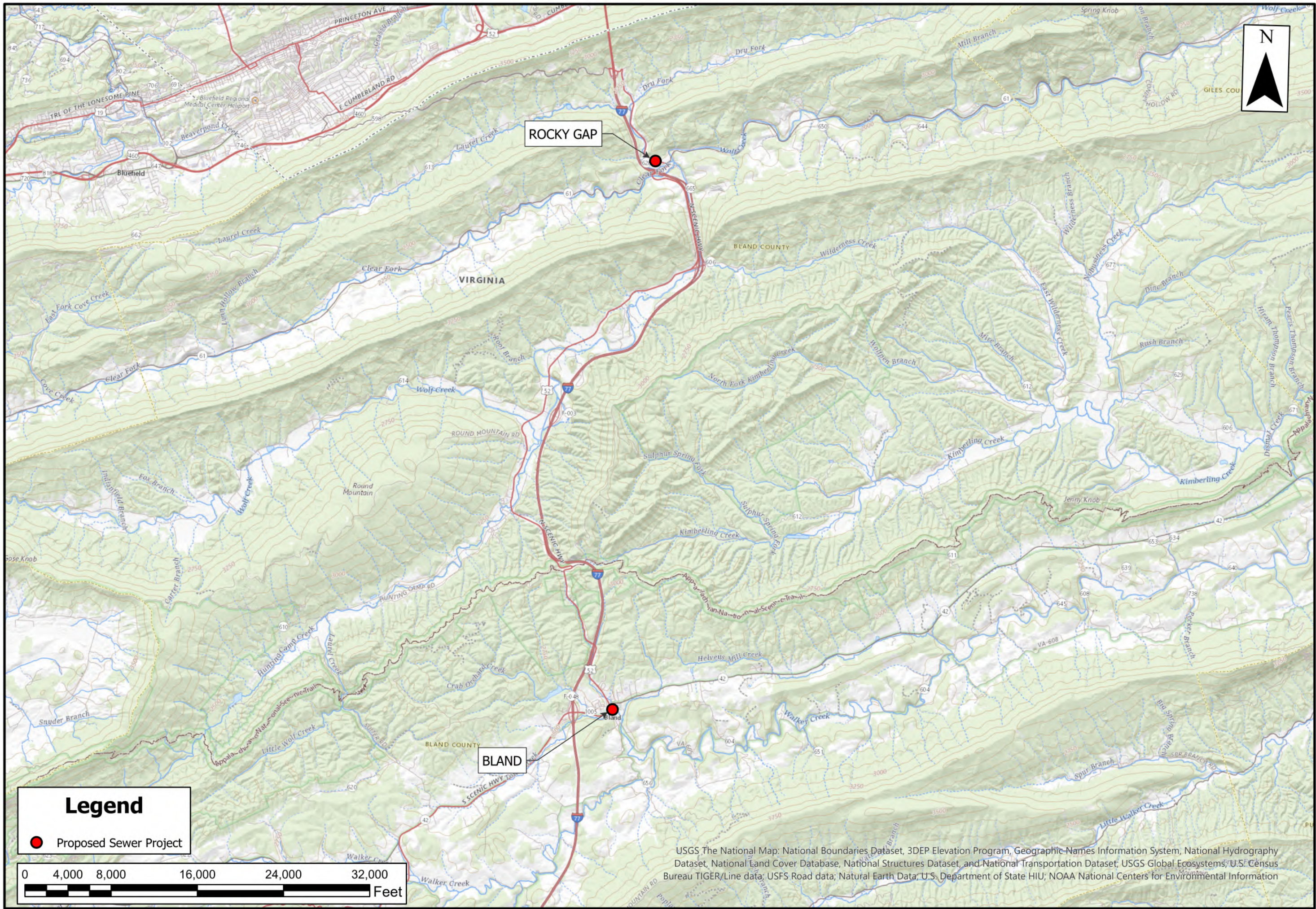
Present Worth Per Connection: \$108,771



APPENDIX B

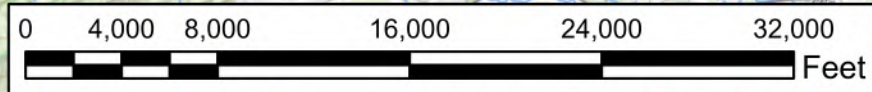
MOUNT ROGERS PLANNING DISTRICT  
CONVENTIONAL PROJECTS





**Legend**

● Proposed Sewer Project



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information



the **LANE** GROUP

**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**BLAND COUNTY  
PROPOSED PROJECTS**



DATE:	xx/xx/xxxx
SHEET:	
<b>SHEET</b>	
DRAWN BY:	CHK
CHECKED BY:	CHK
PROJECT NO.:	xxxx
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## PROJECT DATA SHEET

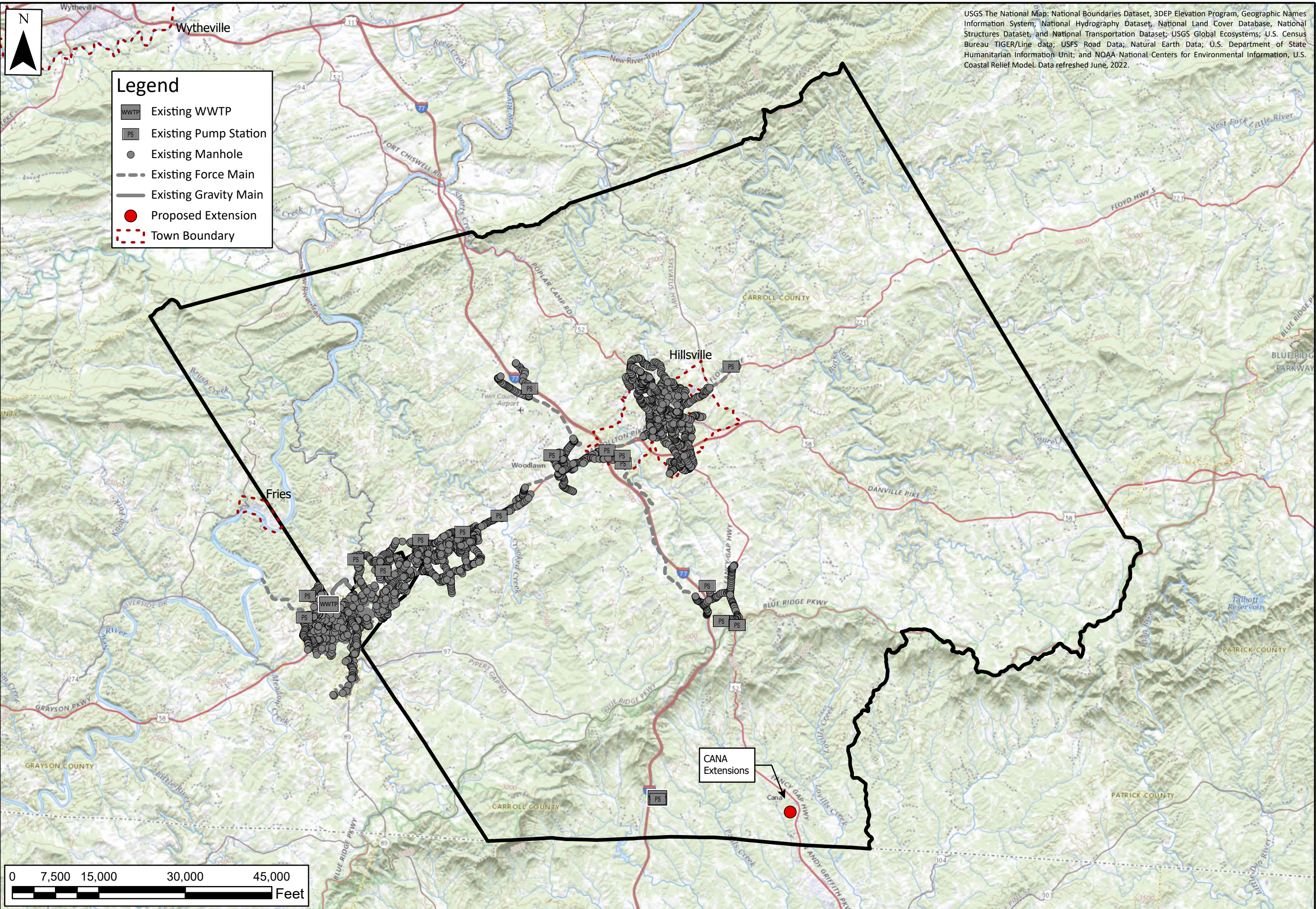
Project Name:	Bland Sewer System			
County:	Bland			
Planning District:	Mount Rogers			
Utility Provider:	Bland County Service Authority			
Served by Public Water (Y/N):	Yes			
Existing Conditions:	The project area is currently not served by a public sewage system.			
Proposed Project:	The project consists of approximately 50,000 linear feet of 8-inch gravity sewer and a 0.2 MGD treatment facility.			
Existing WWTP:	Name:	NA		
	Design Flow:	NA	MGD	
	Average Flow:	NA	MGD	
	Receiving Stream:		NA	
	Stream Classification:		NA	
	Impaired Stream (Y/N):		NA	
Watershed or Adjacent Stream:	Name:	Crab Orchard Creek	Impaired (Y/N):	No
Equivalent Customers Served:	Residential =	202	Commercial =	43
			Industrial =	0
Health Hazard:	Failing septic systems and high groundwater table.			
Construction Feasibility:	Moderate - The project will require the construction of a new treatment facility.			
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Moderate			
Total Project Cost:	\$17,538,625			
Present Worth Per Connection:	\$71,586			



## PROJECT DATA SHEET

Project Name:	Rocky Gap Sewer Extension		
County:	Bland		
Planning District:	Mount Rogers		
Utility Provider:	Bland County Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 10,500 linear feet of 8-inch gravity sewer, 18,800 linear feet of 4-inch force main and one pump station.		
Existing WWTP:	Name:	Bastian WWTP	
	Design Flow:	0.20	MGD
	Average Flow:	0.05	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Laurel Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	71	Commercial = 18 Industrial = 0
Health Hazard:	Failing septic systems.		
Construction Feasibility:	Very Feasible - The project connects to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Low		
Total Project Cost:	\$6,691,815		
Present Worth Per Connection:	\$75,189		

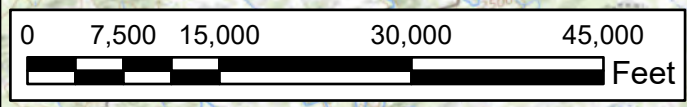




USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.

**Legend**

- Existing WWTP
- Existing Pump Station
- Existing Manhole
- Existing Force Main
- Existing Gravity Main
- Proposed Extension
- Town Boundary



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**CARROLL COUNTY -  
PROPOSED SEWER  
EXTENSIONS**



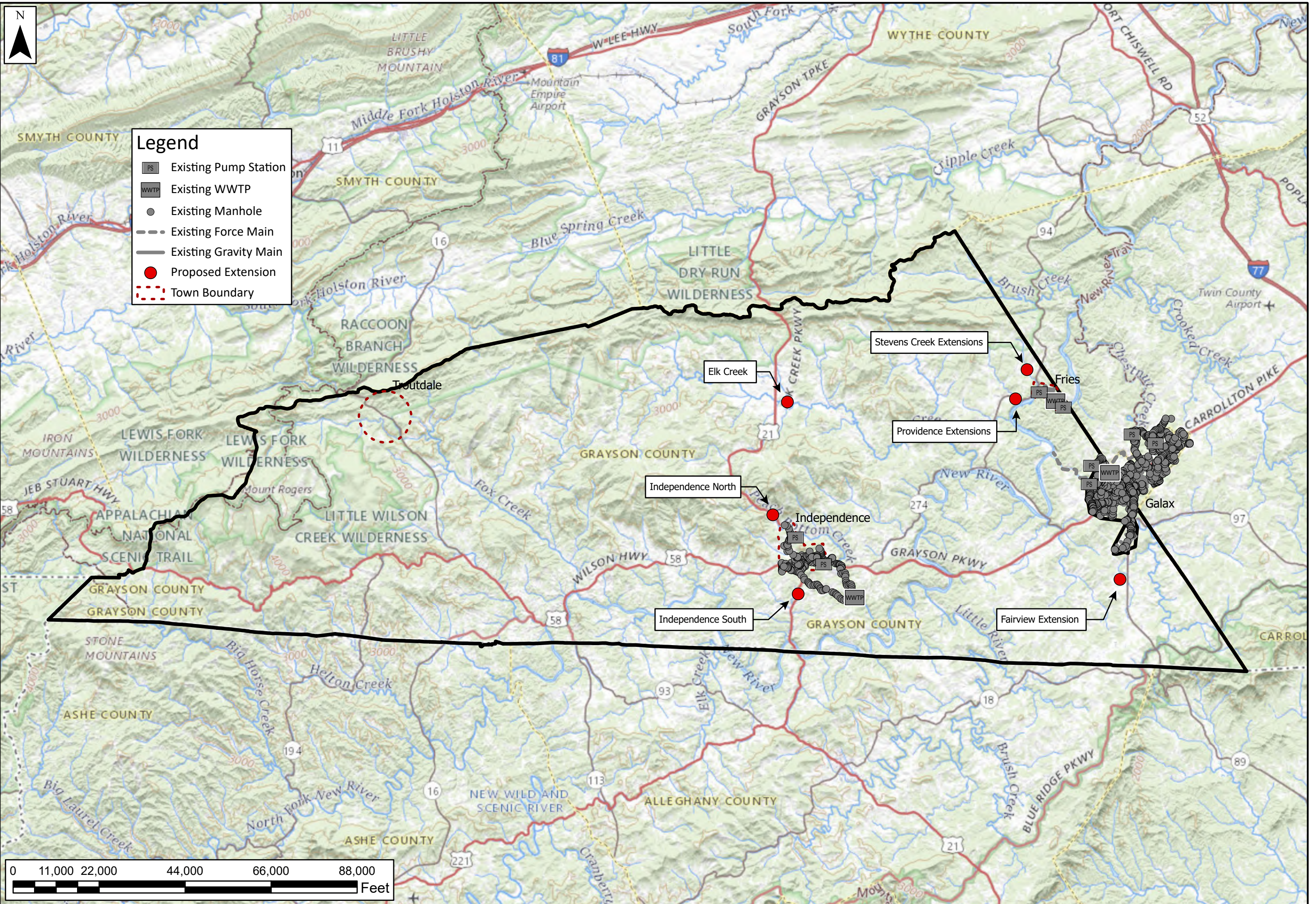
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PROJECT NO.:	2248
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## PROJECT DATA SHEET

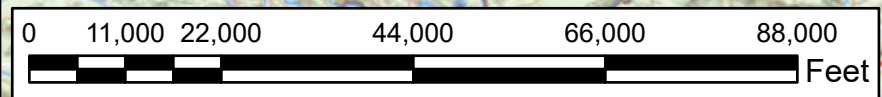
Project Name:	Cana/177 Sewer Extension		
County:	Carroll		
Planning District:	Mount Rogers		
Utility Provider:	Carroll County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 17,500 linear feet of 10-inch gravity sewer, 118,000 linear feet of 8-inch gravity sewer, 30,500 linear feet 4-inch force main and four pump stations.		
Existing WWTP:	Name:	Mt. Airy	
	Design Flow:		MGD
	Average Flow:		MGD
	Receiving Stream:		
	Stream Classification:		
	Impaired Stream (Y/N):		
Watershed or Adjacent Stream:	Name:	Brushy Fork Lovills Creek	Impaired (Y/N): No No
Equivalent Customers Served:	Residential =	310	Commercial = 50 Industrial = 0
Health Hazard:			
Construction Feasibility:	Moderate - The project connects to an existing system with adequate treatment capacity; however, an intermunicipal agreement will be required between the County and Mt. Airy.		
Growth Potential:	Residential - High Commercial - Moderate/High Industrial - Moderate/High		
Total Project Cost:	\$43,878,250		
Present Worth Per Connection:	\$121,884		





**Legend**

- Existing Pump Station
- Existing WWTP
- Existing Manhole
- Existing Force Main
- Existing Gravity Main
- Proposed Extension
- Town Boundary



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**GRAYSON COUNTY -  
PROPOSED SEWER  
EXTENSIONS**



DATE:	2/1/2023
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PROJECT NO.:	2248
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## PROJECT DATA SHEET

Project Name:	Elk Creek Sewer Extension		
County:	Grayson		
Planning District:	Mount Rogers		
Utility Provider:	Grayson County Board of Supervisors		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 36,400 linear feet of 8-inch gravity sewer and a 0.025 treatment facility.		
Existing WWTP:	Name:	NA	
	Design Flow:	NA	MGD
	Average Flow:	NA	MGD
	Receiving Stream:		NA
	Stream Classification:		NA
	Impaired Stream (Y/N):		NA
Watershed or Adjacent Stream:	Name:	Elk Creek	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	85	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Moderate - The project will require the construction of a new treatment facility.		
Growth Potential:	Residential - High Commercial - Moderate/High Industrial - Moderate		
Total Project Cost:	\$10,889,880		
Present Worth Per Connection:	\$128,116		



## PROJECT DATA SHEET

Project Name:	Fairview Sewer Extension		
County:	Grayson		
Planning District:	Mount Rogers		
Utility Provider:	Grayson County Board of Supervisors		
Served by Public Water (Y/N):	Yes, majority of service area		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 12,600 linear feet of 12-inch gravity sewer, 27,200 linear feet of 10-inch gravity sewer, 102,800 linear feet of 8-inch gravity sewer, 6,000 linear feet of 2-inch force main and one pump station.		
Existing WWTP:	Name:	Galax WWTP	
	Design Flow:	3.00	MGD
	Average Flow:	1.82	MGD
	Receiving Stream:	New River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Chestnut Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	331	Commercial = 4 Industrial =
Health Hazards:	High ground water table and located upstream of raw water supply		
Construction Feasibility:	Very Feasible - The proposed project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - High Commercial - Moderate/High Industrial - Moderate		
Total Project Cost:	\$42,060,460		
Present Worth Per Connection:	\$125,554		



## PROJECT DATA SHEET

Project Name:	Independence North/South Sewer Extension		
County:	Grayson		
Planning District:	Mount Rogers		
Utility Provider:	Grayson County Board of Supervisors		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 12,600 linear feet of 12-inch gravity sewer, 27,200 linear feet of 10-inch gravity sewer, 102,800 linear feet of 8-inch gravity sewer, 6,000 linear feet of 2-inch force main and one pump station.		
Existing WWTP:	Name:	Independence WWTP	
	Design Flow:	0.25	MGD
	Average Flow:	0.17	MGD
	Receiving Stream:	Peach Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Peach Bottom Creek Brush Creek	Impaired (Y/N): No No
Equivalent Customers Served:	Residential =	134	Commercial = 4 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The proposed project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - High Commercial - Moderate/High Industrial - Moderate/High		
Total Project Cost:	\$42,060,460		
Present Worth Per Connection:	\$304,786		



## PROJECT DATA SHEET

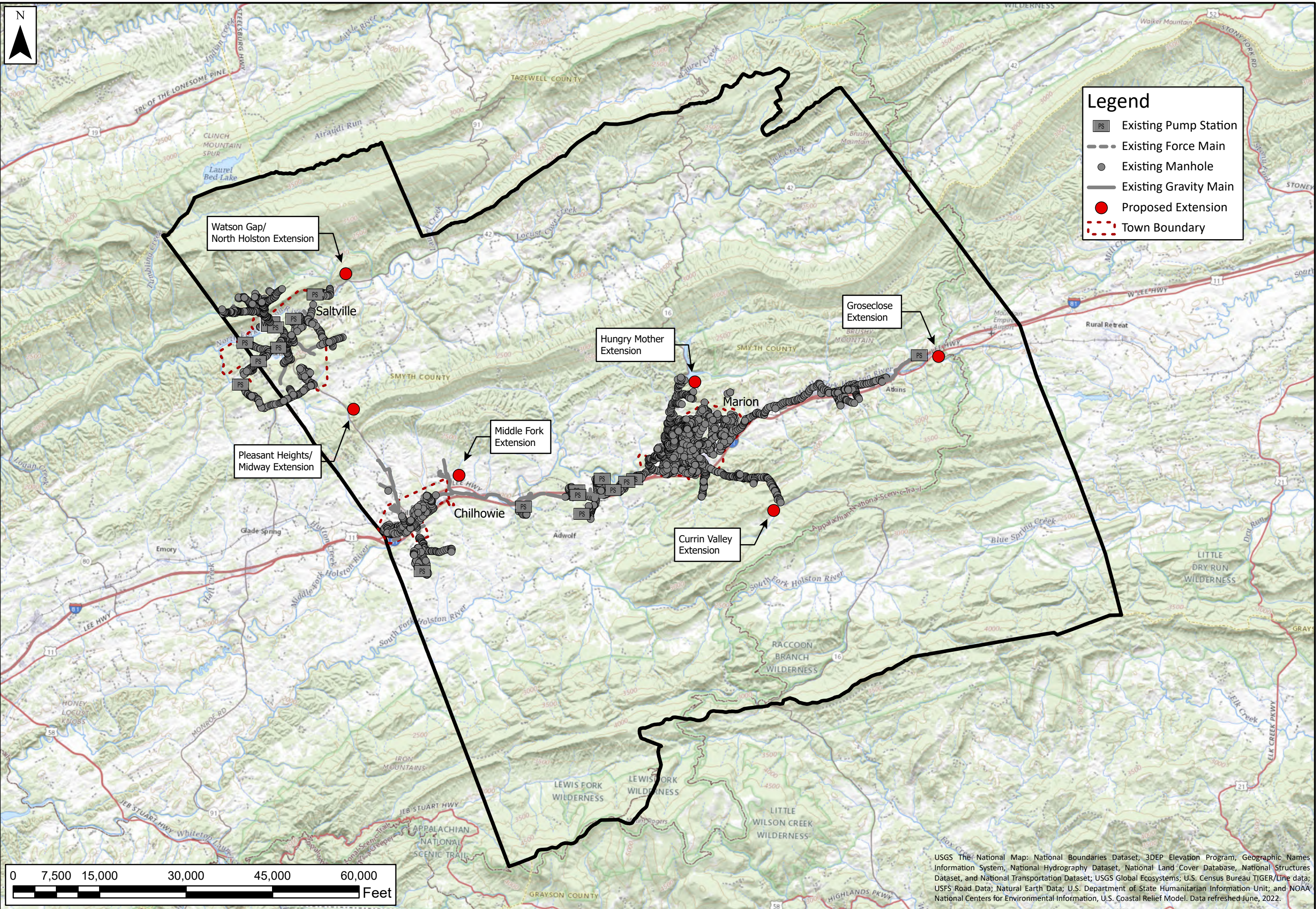
Project Name:	Providence Sewer Extension		
County:	Grayson		
Planning District:	Mount Rogers		
Utility Provider:	Grayson County Board of Supervisors		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 58,200 linear feet of 8-inch gravity sewer, 9,200 linear feet of 4-inch force main and 2 pump stations.		
Existing WWTP:	Name:	Fries WWTP	
	Design Flow:	0.22	MGD
	Average Flow:	0.09	MGD
	Receiving Stream:	New River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Stevens Creek	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	247	Commercial = 10 Industrial = 1
Health Hazards:	High groundwater table and failing septic systems		
Construction Feasibility:	Moderate - The proposed project will connect to an existing system with adequate treatment capacity; however, low public support is anticipated.		
Growth Potential:	Residential - Moderate/High Commercial - Moderate Industrial - Low		
Total Project Cost:	\$18,040,100		
Present Worth Per Connection:	\$69,923		



# PROJECT DATA SHEET

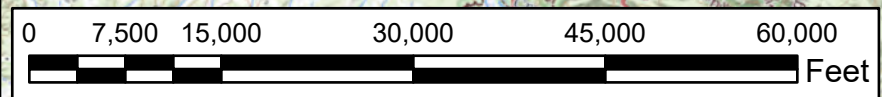
Project Name:	Stevens Creek/Eagles Bottom Sewer Extension		
County:	Grayson		
Planning District:	Mount Rogers		
Utility Provider:	Grayson County Board of Supervisors		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 40,800 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Fries WWTP	
	Design Flow:	0.22	MGD
	Average Flow:	0.09	MGD
	Receiving Stream:	New River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Eagle Bottom Creek	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	201	Commercial = 1 Industrial =
Health Hazards:	Failing septic systems and located upstream of raw water supply		
Construction Feasibility:	Very Feasible - The proposed project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$11,085,360		
Present Worth Per Connection:	\$54,878		





### Legend

- Existing Pump Station
- Existing Force Main
- Existing Manhole
- Existing Gravity Main
- Proposed Extension
- Town Boundary



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



**SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022**

**SMYTH COUNTY -  
PROPOSED SEWER  
EXTENSIONS**



DATE: 2/1/2023	
SHEET:	
DRAWN BY: JLR	CHECKED BY:
PROJECT NO.:	2248
THE LANE GROUP INC. © 2022	



# PROJECT DATA SHEET

Project Name: Currin Valley

County: Smyth

Planning District: Mt Rogers

Utility Provider: Smyth County Board of Supervisors

Served by Public Water? Yes

Existing Conditions  
There are several residences with straight pipe discharges and failing on site sewer systems as reported by the Health Department.

Proposed Project  
It is proposed that the sewerage problem be addressed by installing a centralized collection system for the small community of Currin Valley. Treatment can be provided at the Marion/Smyth County Regional POTW. All service connections are residential and can be served by 8" gravity sewer lines and manholes connected to existing gravity sewers on State Route 16.

Existing WWTP:  
Name = Marion/Smyth County Regional  
Design Flow = 3.4 MGD  
Average Flow = 1.9 MGD  
Receiving Stream = Middle Fork Holston River  
Stream Classification = IV  
Impaired Stream = Yes

Watershed or Adjacent Stream Name = Staley Creek Impaired= No

Equivalent Customers Served: Residential = 112 Commercial = 2 Industrial = 0

Health Hazard  
Failing septic systems expose public to raw sewage at ground surface.  
The watershed stream is adjacent to the town of Marion spring water source.

Construction Feasibility  
Numerous rock excavation is anticipated .

Growth Potential  
This area is bordered buy the Jefferson National Forest and significant future development is limit  
There is potential for sparse future developemnt on vacant lands off state roads

Total Project Cost \$ 4,234,039.00

Present Worth Per Connection \$37,141



## PROJECT DATA SHEET

Project Name:	Groseclose																		
County:	Smyth																		
Planning District:	Mt Rogers																		
Utility Provider:	Smyth County Board of Supervisors																		
Served by Public Water?	Yes																		
Existing Conditions	The existing on site sewer systems have failed numerous times. Although the failure locations are sporadic we suspect the problem is widespread with unseen ground water impacts. Businesses have been forced to close and others have been prevented from expanding																		
Proposed Project	It is proposed that the sewerage problem be addressed by installing a centralized collection system throughout the Groseclose community. Treatment can be provided at the Marion/Smyth County Regional POTW. All of the homes, business and industries can be served a gravity collection system. The collection system will consist of 12, 10, and 8-inch gravity lines with manho																		
Existing WWTP:	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">Name =</td> <td style="width: 35%;">Marion/Smyth County Regional</td> <td style="width: 50%;"></td> </tr> <tr> <td>Design Flow =</td> <td>3.4</td> <td>MGD</td> </tr> <tr> <td>Average Flow =</td> <td>1.9</td> <td>MGD</td> </tr> <tr> <td>Receiving Stream =</td> <td>Middle Fork Holston River</td> <td></td> </tr> <tr> <td>Stream Classification =</td> <td>IV</td> <td></td> </tr> <tr> <td>Impaired Stream</td> <td>Yes</td> <td></td> </tr> </table>	Name =	Marion/Smyth County Regional		Design Flow =	3.4	MGD	Average Flow =	1.9	MGD	Receiving Stream =	Middle Fork Holston River		Stream Classification =	IV		Impaired Stream	Yes	
Name =	Marion/Smyth County Regional																		
Design Flow =	3.4	MGD																	
Average Flow =	1.9	MGD																	
Receiving Stream =	Middle Fork Holston River																		
Stream Classification =	IV																		
Impaired Stream	Yes																		
Watershed or Adjacent Stream	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">Name =</td> <td style="width: 45%;">Middle Fork Holston River</td> <td style="width: 40%;">Impaired=</td> <td style="width: 10%;">Yes</td> </tr> </table>	Name =	Middle Fork Holston River	Impaired=	Yes														
Name =	Middle Fork Holston River	Impaired=	Yes																
Equivalent Customers Served:	<table border="0" style="width: 100%;"> <tr> <td style="width: 15%;">Residential =</td> <td style="width: 20%;">208</td> <td style="width: 15%;">Commercial =</td> <td style="width: 10%;">2</td> <td style="width: 15%;">Industrial =</td> <td style="width: 10%;">5</td> </tr> </table>	Residential =	208	Commercial =	2	Industrial =	5												
Residential =	208	Commercial =	2	Industrial =	5														
Health Hazard	Failing septic systems expose public to raw sewage at ground surface. The receiving stream has been identified as impaired from fecal coliform sources by DEQ																		
Construction Feasibility	The predominant soils are alluvial and should not pose a problem with excavation. The Middle Fork Holston River has been identified as habitat for endangered species. Several sewer pipe stream crossings will be needed but should not pose a problem to construction provided good construction practices are used to control erosion and sedimentation																		
Growth Potential	Due to the location along I-81 and US Rt 11 and the Mt Empire Airport we feel this area has a high growth potential if adequate sewer collection is provided.																		
Total Project Cost	\$ 9,733,248.00																		
Present Worth Per Connection	\$45,271																		



## PROJECT DATA SHEET

Project Name:	Hungry Mother
County:	Smyth
Planning District:	Mt Rogers
Utility Provider:	Smyth County Board of Supervisors
Served by Public Water?	Yes
Existing Conditions	There are several year round and seasonal occupied residences adjacent to the State Park that experience failing on site sewer septic systems.
Proposed Project	It is proposed that the sewerage problem be addressed by installing a centralized collection system for the small community adjacent to the state park. Treatment can be provided at the Marion County Regional POTW. All service connections are residential and can be served by 8" gravity sewer lines and manholes connected to the state park sewage pumping station.
Existing WWTP:	Name = Marion/Smyth County Regional Design Flow = 3.4 MGD Average Flow = 1.9 MGD Receiving Stream = Middle Fork Holston River Stream Classification = IV Impaired Stream = Yes
Watershed or Adjacent Stream	Name = Hungry Mother Lake Impaired= Yes
Equivalent Customers Served:	Residential = 48 Commercial = 0 Industrial = 0
Health Hazard	Failing septic systems expose public to raw sewage at ground surface. The receiving stream has been identified as impaired from fecal coliform sources by DEQ
Construction Feasibility	The predominant soils are alluvial and should not pose a problem with excavation some rock excavation is anticipated although. Most lines will be located on private property.
Growth Potential	This area is bordered buy the state park system and future development is limited We feel future growth will be limited to no more than a few households
Total Project Cost	\$ 2,245,534.00
Present Worth Per Connection	\$46,782



# PROJECT DATA SHEET

Project Name: Middle Fork

County: Smyth

Planning District: Mt Rogers

Utility Provider: Smyth County Board of Supervisors

Served by Public Water? Yes

Existing Conditions Residential area located north of Chilhowie. The County has received multiple citizen requests for sewer service - some due to existing septic system failures and/or unsuitable soils for conventional septic systems as well as some requests to enable new building site development

Proposed Project Gravity sewer extensions connecting to the Town of Chilhowie's collection and treatment system. Construction would include approximately 18,000 LF of 8" gravity sewer line and appurtenances serving 74 residential homes

Existing WWTP: Name = Chilhowie Regional  
Design Flow = 0.999 MGD  
Average Flow = 0.264 MGD  
Receiving Stream = Middle Fork Holston River  
Stream Classification = IV  
Impaired Stream No

Watershed or Adjacent Stream Name = Middle Fork Holston River Impaired= No

Equivalent Customers Served: Residential = 74 Commercial = 0 Industrial = 0

Health Hazard Sporadic occurrence of failing septic systems and soils unsuitable for conventional septic.

Construction Feasibility Service can be provided to this area by gravity sewer line extensions. Extensive bedrock is not anticipated. A number of small stream and secondary road crossings will be needed as well as one railroad crossing.

Growth Potential Project area is located in close proximity to the Town of Chilhowie. This area of Smyth County has seen positive residential growth

Total Project Cost \$5,299,450

Cost Per Connection \$71,614



# PROJECT DATA SHEET

Project Name: Pleasant Heights Midway

County: Smyth

Planning District: Mt Rogers

Utility Provider: Smyth County Board of Supervisors

Served by Public Water? Yes

Existing Conditions  
There are residences with straight pipe discharges and failing on site sewer systems.

Proposed Project  
It is proposed that the sewerage problem be addressed by installing a centralized collection system for the communities of Midway and Pleasant Heights Valley. Treatment can be provided Saltville Smyth County Regional POTW. All service connections are residential and can be served by 8" gravity sewer lines and manholes connected to existing gravity sewers on McHenry's Creek.

Existing WWTP:  
Name = Marion/Smyth County Regional  
Design Flow = 0.5 MGD  
Average Flow = 0.46 MGD  
Receiving Stream = North Fork Holston River  
Stream Classification = IV  
Impaired Stream Yes from Mercury contamination

Watershed or Adjacent Stream Name = North Fork Holston River Impaired= No

Equivalent Customers Served: Residential = 143 Commercial = 10 Industrial = 0

Health Hazard  
Failing septic systems expose public to raw sewage at ground surface.

Construction Feasibility  
Sporadic rock excavation is anticipated . I/I reductions will be needed within the town collection system. The existing treatment plant is currently under construction to expand capacity to 1.0 mgd with completion date 2005.

Growth Potential  
There are considerable vacant land areas that could experience future development.

Total Project Cost \$ 5,864,393.00

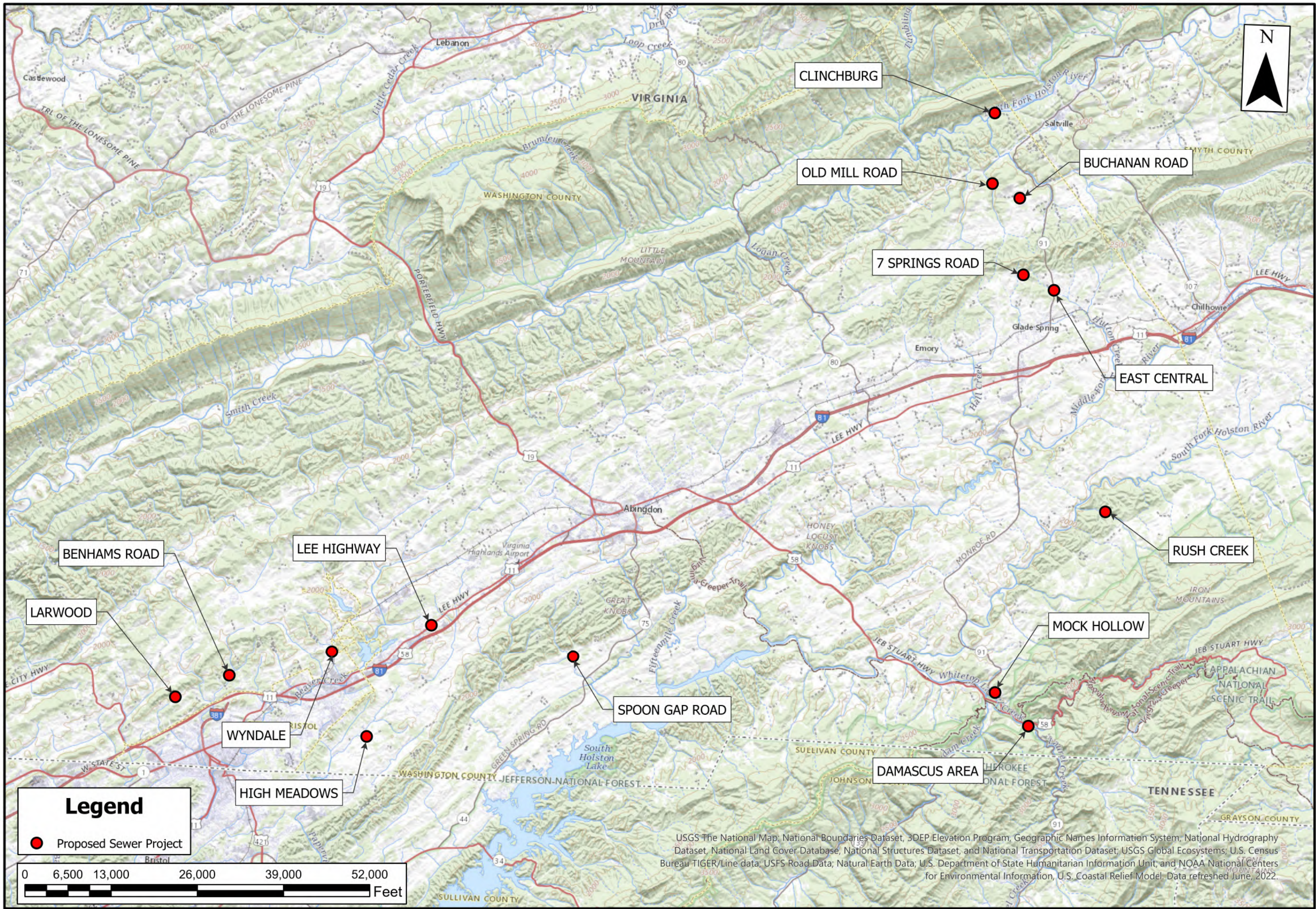
Present Worth Per Connection \$38,329



## PROJECT DATA SHEET

Project Name:	Watson Gap North Holston		
County:	Smyth		
Planning District:	Mt Rogers		
Utility Provider:	Smyth County Board of Supervisors		
Served by Public Water?	Yes		
Existing Conditions	There are residences with straight pipe discharges and failing on site sewer systems.		
Proposed Project	It is proposed that the sewerage problem be addressed by installing a centralized collection system for the communities of Watson Gap and North Holston. Treatment can be provided at Saltville Smyth County Regional POTW. Service connections are predominantly residential and can be served by 8" gravity sewer lines and manholes connected to existing gravity sewers on McHenry's Creek.		
Existing WWTP:	Name =	Town of Saltville	
	Design Flow =	0.5	MGD
	Average Flow =	0.46	MGD
	Receiving Stream =	North Fork Holston River	
	Stream Classification =	IV	
	Impaired Stream	Yes from Mercury contamination	
Watershed or Adjacent Stream	Name =	North Fork Holston River	Impaired= No
Equivalent Customers Served:	Residential =	183	Commercial = 10 Industrial = 0
Health Hazard	Failing septic systems expose public to raw sewage at ground surface.		
Construction Feasibility	Sporadic rock excavation is anticipated . I/I reductions will be needed within the town collection system. The existing treatment plant is currently under construction to expand capacity to 1.0 mgd with completion date 2005.		
Growth Potential	Future development in the North Holston community will be limited due to floodplain and steep topography. The Watson Gap area has potential for growth on current vacant lands.		
Total Project Cost	\$ 9,230,945.00		
Present Worth Per Connection	\$47,829		





SOUTHWEST VIRGINIA  
 COMPREHENSIVE REGIONAL  
 SEWER STUDY 2022

WASHINGTON  
 COUNTY SERVICE  
 AUTHORITY -  
 PROPOSED PROJECTS



DATE:	xx/xx/xxxx
SHEET:	
<b>SHEET</b>	
DRAWN BY:	CHECKED BY:
PROJECT NO.:	xxxx
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USGS The National Map, National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit, and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



## PROJECT DATA SHEET

Project Name: Benhams Road

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: The local health department identified the Benhams Road area with failing on-site sewer systems. This area of the county is experiencing growth and sewer service is needed for growth to continue.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection along Benhams Road. Treatment can be provided at the Bristol, TN POTW through connection to existing sewer main south I-81. All of the homes and businesses can be served by a gravity collection system consisting of 8-inch gravity lines with manholes. A pumping station will be needed to convey wastewater to the existing collector system from the northern section of Benhams Road.

Existing WWTP:

Name =	BVUB
Design Flow =	15 MGD
Average Flow =	10.7 MGD
Receiving Stream =	Boone Lake
Stream Classification =	IV
Impaired Stream	no

Watershed or Adjacent Stream: Name = Abrahams & Mumpower Creeks Impaired= no

Equivalent Customers Served: Residential = 325 Commercial = 5 Industrial = 0

Health Hazard: None documented.

Construction Feasibility: Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree. We do not anticipate excessive rock although some rock excavation may be encountered.

Growth Potential: This community is located in a rapidly growing area of Washington County. High residential growths are occurring in the area. Potential for new growth is high.

Total Project Cost: \$ 12,595,671

Present Worth Per Connection: \$38,169



# PROJECT DATA SHEET

Project Name: Buchanan Road

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: There are residences with straight pipe discharges and failing on-site sewer systems. Community is located in northwest section of county near Saltville.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection system for the Buchanan Road community. Treatment can be provided at Saltville/Smyth County Regional POTW. Service connections are predominantly residential and can be served by 8-inch gravity sewer lines and manholes connected to existing gravity sewers on McHenry's Creek and to the proposed Old Mill project at the western project boundary.

Existing WWTP: Name = Town of Saltville  
Design Flow = 0.5 MGD  
Average Flow = 0.46 MGD  
Receiving Stream = North Fork Holston River  
Stream Classification = IV  
Impaired Stream = yes, mercury contamination

Watershed or Adjacent Stream: Name = Keywood Branch Impaired= no

Equivalent Customers Served: Residential = 27 Commercial = 0 Industrial = 0

Health Hazard: Failing septic systems expose public to raw sewage at ground surface.

Construction Feasibility: Rock excavation is anticipated. I/I reductions will be needed within the town collection system. The existing treatment plant is currently under construction to expand capacity to 1.0 mgd with completion date 2005.

Growth Potential: Future development in the Buchanan Road community will be limited due to steep topography.

Total Project Cost: \$2,153,174

Present Worth Per Connection: \$79,747



## PROJECT DATA SHEET

Project Name: Clinchburg

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: There are residences with straight pipe discharges and failing on-site sewer systems.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection system for the Clinchburg community. Treatment can be provided at Saltville/ Smyth County Regional POTW. Service connections are predominantly residential and can be served by 8-inch gravity sewer lines and manholes connected to existing gravity sewers on McHenry's Creek. A sewer pump station will be needed to convey wastewater flows into the Saltville collection system.

Existing WWTP: Name = Town of Saltville  
Design Flow = 0.5 MGD  
Average Flow = 0.46 MGD  
Receiving Stream = North Fork Holston River  
Stream Classification = IV  
Impaired Stream = yes, mercury contamination

Watershed or Adjacent Stream: Name = Stonemill Creek Impaired= no

Equivalent Customers Served: Residential = 94 Commercial = 5 Industrial = 0

Health Hazard: Failing septic systems expose public to raw sewage at ground surface.

Construction Feasibility: Sporadic rock excavation is anticipated. I/I reductions will be needed within the town collection system. The existing treatment plant is currently under construction to expand capacity to 1.0 mgd with completion date 2005.

Growth Potential: Future development in the Clinchburg community will be limited due to floodplain and steep topography.

Total Project Cost: \$5,046,008

Present Worth Per Connection: \$50,970



# PROJECT DATA SHEET

Project Name: Damascus Area

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: The service area is located south and east of Damascus and is desired for future industrial development.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection from the existing sewer line along Routes 91 and 716. Treatment can be provided at the Damascus POTW. All future connections can be served by a gravity collection system consisting of 8-inch gravity lines with manholes.

Existing WWTP: Name = Damascus STP  
Design Flow = 0.25 MGD  
Average Flow = 0.3 MGD  
Receiving Stream = South Fork Holston River  
Stream Classification = IV  
Impaired Stream = yes

Watershed or Adjacent Stream: Name = Laurel Creek Impaired= no

Equivalent Customers Served: Residential = 14 Commercial = 0 Industrial = 0

Health Hazard: None documented.

Construction Feasibility: Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree. Rock excavation is anticipated.

Growth Potential: The primary purpose of the project is to serve future industrial park currently undeveloped.

Total Project Cost: \$ 1,047,559

Present Worth Per Connection: \$74,826



## PROJECT DATA SHEET

Project Name: Mock Hollow

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: The service area is located east of Damascus and is desired for existing residences with inadequate sewer treatment.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection from the existing sewer lines along Fourth Street. Treatment can be provided at the Damascus POTW. All future connections can be served by a gravity collection system consisting of 8-inch gravity lines with manholes.

Existing WWTP: Name = Damascus STP  
Design Flow = 0.25 MGD  
Average Flow = 0.3 MGD  
Receiving Stream = South Fork Holston River  
Stream Classification = IV  
Impaired Stream = yes

Watershed or Adjacent Stream: Name = Laurel Creek Impaired = no

Equivalent Customers Served: Residential = 21 Commercial = 0 Industrial = 0

Health Hazard: None documented.

Construction Feasibility: Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree. Rock excavation is anticipated. Excessive I/I problems at the Damascus STP will need to be addressed and are not included in total project costs.

Growth Potential: Future growth is limited due to topographical restraints.

Total Project Cost: \$ 686,520

Present Worth Per Connection: \$32,691



## PROJECT DATA SHEET

Project Name:	East Central		
County:	Washington		
Planning District:	Mt Rogers		
Utility Provider:	Washington County Service Authority		
Served by Public Water?	Yes		
Existing Conditions	The existing on-site sewer systems have failed numerous times within the service area. The existing area is located in central eastern Washington County in the communities of Greenway Creek, Cedar Creek, Blacksburg, Hwy. 91, and Exit 32.		
Proposed Project	<p>It is proposed that the sewerage problem be addressed by installing a centralized collection. Treatment can be provided at the Hall Creek POTW.</p> <p>All existing residences, businesses and industries can be served by a sewer collection system consisting of 8-inch gravity lines, manholes and 9 pump stations and sewer force mains. A series of pumping stations will be needed to convey wastewater to the existing collector system due to the steep elevation difference.</p>		
Existing WWTP:	Name =	Hall Creek	
	Design Flow =	0.6	MGD
	Average Flow =	0.42	MGD
	Receiving Stream =	Hall Creek	
	Stream Classification =	IV	
	Impaired Stream	yes, fecal coliform	
Watershed or Adjacent Stream	Name =	Hall Creek	Impaired= yes, fecal coliform
		Indian Run	no
		Tattle Branch	no
		Hutton Creek	yes, fecal coliform
		Cedar Creek	yes, fecal coliform
		Greenway Creek	no
Equivalent Customers Served:	Residential =	783	Commercial = 35 Industrial = 0
Health Hazard	Failing septic systems expose the public to raw sewage at ground surface. The receiving streams have been identified as impaired from fecal coliform sources by DEQ.		
Construction Feasibility	Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree. We do not anticipate excessive rock although some rock excavation may be encountered.		
Growth Potential	These communities are located in potential moderate growth areas and could experience high residential growths if adequate sewer service were available.		
Total Project Cost	\$	52,415,738	
Present Worth Per Connection		\$64,078	



# PROJECT DATA SHEET

Project Name: High Meadows

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: The existing on-site sewer systems have failed numerous times within the High Meadows Subdivision and nearby mobile home park. The community is located off Highpoint Road east of Bristol, VA in the southern portion of Washington County.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection system throughout the High Meadows community. Treatment can be provided at the Bristol Tenn POTW through connection to existing sewer main in Sinking Creek. All of the homes, businesses and industries can be served by a gravity collection system consisting of 8-inch gravity lines with manholes.

Existing WWTP: Name = BVUB  
Design Flow = 15 MGD  
Average Flow = 10.7 MGD  
Receiving Stream = Middle Fork Holston River  
Stream Classification = IV  
Impaired Stream = no

Watershed or Adjacent Stream: Name = Boone Lake Impaired= no

Equivalent Customers Served: Residential = 170 Commercial = 0 Industrial = 0

Health Hazard: Failing septic systems expose public to raw sewage at ground surface. The receiving stream has been identified as impaired from fecal coliform sources by DEQ.

Construction Feasibility: We feel the occurrence of rock to be low. New sewer main construction will be located along existing street rights of way and previously disturbed areas of subdivision construction.

Growth Potential: The community is located at the upper extremes of the drainage shed and although growth can occur in the area, future connections to this sewer system are limited.

Total Project Cost: \$6,933,150

Present Worth Per Connection: \$40,783



# PROJECT DATA SHEET

Project Name: Larwood

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: The community is located north of Bristol and is experiencing a number of septic system problems.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection from the subdivision development to an existing sewer line on Wagner Road. Treatment can be provided at the Bristol, TN POTW. All of the homes, businesses and industries can be served by a gravity collection system consisting of 8-inch gravity lines and manholes.

Existing WWTP: Name = BVUB  
Design Flow = 15 MGD  
Average Flow = 10.7 MGD  
Receiving Stream = Boone Lake  
Stream Classification = IV  
Impaired Stream = no

Watershed or Adjacent Stream: Name = Steel Creek Tributary Impaired= no

Equivalent Customers Served: Residential = 123 Commercial = 3 Industrial = 0

Health Hazard: Failing septic systems expose public to raw sewage at ground surface.

Construction Feasibility: Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree. We do not anticipate excessive rock although some rock excavation may be encountered.

Growth Potential: This community located just north of Bristol along I-81 is a rapidly growing area of Washington County. High residential growths are projected for the area.

Total Project Cost: \$ 4,952,343

Present Worth Per Connection: \$39,304



## PROJECT DATA SHEET

Project Name: Old Mill Road

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: There are residences with failing on-site sewer systems.  
The community is located in the northwest section of the county near Saltville.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection system for the Old Mill community. Treatment can be provided at Saltville/Smyth County Regional POTW. Service connections are predominantly residential and can be served by 8-inch gravity sewer lines and manholes connected to existing gravity sewers on McHenry's Creek and to the proposed Clinchburg project at the western project boundary.

Existing WWTP: Name = Town of Saltville  
Design Flow = 0.5 MGD  
Average Flow = 0.46 MGD  
Receiving Stream = North Fork Holston River  
Stream Classification = IV  
Impaired Stream = yes, mercury contamination

Watershed or Adjacent Stream: Name = Keyword Branch Impaired= no

Equivalent Customers Served: Residential = 27 Commercial = 0 Industrial = 0

Health Hazard: Failing septic systems expose public to raw sewage at ground surface.

Construction Feasibility: Rock excavation is anticipated. I/I reductions will be needed within the town collection system. The existing treatment plant is currently under construction to expand capacity to 1.0 mgd with completion date 2005.

Growth Potential: Future development in the Old Mill community will be limited due to floodplain and steep topography.

Total Project Cost: \$3,018,540

Present Worth Per Connection: \$111,798



## PROJECT DATA SHEET

Project Name:	Rush Creek																		
County:	Washington																		
Planning District:	Mt Rogers																		
Utility Provider:	Washington County Service Authority																		
Served by Public Water?	Yes																		
Existing Conditions	The existing on-site sewer systems have required repairs within the service area.																		
Proposed Project	<p>It is proposed that the sewerage problem be addressed by installing a centralized collection. Treatment can be provided at the Hall Creek POTW.</p> <p>All existing residences can be served by a sewer collection system consisting of 8-inch gravity lines, manholes and 3 pump stations and sewer force mains. A series of pumping stations will be needed to convey wastewater to the existing collector system due to the steep elevation difference.</p>																		
Existing WWTP:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Name =</td> <td style="width: 30%;">Hall Creek</td> <td style="width: 50%;"></td> </tr> <tr> <td>Design Flow =</td> <td>0.6 MGD</td> <td></td> </tr> <tr> <td>Average Flow =</td> <td>0.42 MGD</td> <td></td> </tr> <tr> <td>Receiving Stream =</td> <td>Hall Creek</td> <td></td> </tr> <tr> <td>Stream Classification =</td> <td>IV</td> <td></td> </tr> <tr> <td>Impaired Stream</td> <td>yes, fecal coliform</td> <td></td> </tr> </table>	Name =	Hall Creek		Design Flow =	0.6 MGD		Average Flow =	0.42 MGD		Receiving Stream =	Hall Creek		Stream Classification =	IV		Impaired Stream	yes, fecal coliform	
Name =	Hall Creek																		
Design Flow =	0.6 MGD																		
Average Flow =	0.42 MGD																		
Receiving Stream =	Hall Creek																		
Stream Classification =	IV																		
Impaired Stream	yes, fecal coliform																		
Watershed or Adjacent Stream	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Name =</td> <td style="width: 30%;">Rush Creek</td> <td style="width: 20%;">Impaired=</td> <td style="width: 30%;">no</td> </tr> </table>	Name =	Rush Creek	Impaired=	no														
Name =	Rush Creek	Impaired=	no																
Equivalent Customers Served:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Residential =</td> <td style="width: 10%;">28</td> <td style="width: 20%;">Commercial =</td> <td style="width: 10%;">0</td> <td style="width: 20%;">Industrial =</td> <td style="width: 10%;">0</td> </tr> </table>	Residential =	28	Commercial =	0	Industrial =	0												
Residential =	28	Commercial =	0	Industrial =	0														
Health Hazard	Failing septic systems expose the public to raw sewage at ground surface.																		
Construction Feasibility	Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree.																		
Growth Potential	The community is in a low growth potential area due to isolation																		
Total Project Cost	\$ 3,140,200																		
Present Worth Per Connection	\$112,150																		



## PROJECT DATA SHEET

Project Name: Seven Springs

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: The existing on-site sewer systems have failed numerous times within the service area. The existing area is located in the northeast area of the county near the Town of Glade Spring.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection. Treatment can be provided at the Hall Creek POTW.

All existing residences, businesses and industries can be served by a sewer collection system consisting of 8-inch gravity lines and manholes.

Existing WWTP: Name = Hall Creek WWTP  
Design Flow = 0.63 MGD  
Average Flow = 0.34 MGD  
Receiving Stream = Hall Creek  
Stream Classification = IV  
Impaired Stream = no

Watershed or Adjacent Stream: Name = Tributary to Hutton Creek Impaired= no

Equivalent Customers Served: Residential = 36 Commercial = 0 Industrial = 0

Health Hazard: Failing septic systems expose public to raw sewage at ground surface.

Construction Feasibility: Construction will be located along existing developed public rights of way.

Growth Potential: Growth potential is estimated low for this area of the county.

Total Project Cost: \$ 2,879,429

Present Worth Per Connection: \$79,984



## PROJECT DATA SHEET

Project Name: Spoon Gap Road

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: The existing on-site sewer systems have failed numerous times within the service area. The existing area is located south of Abingdon.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection. Treatment can be provided at the Abingdon/Washington County POTW.

All existing residences can be served by a sewer collection system consisting of 8-inch gravity lines and manholes, 3 pump stations and sewer force mains. A series of pumping stations will be needed to convey wastewater to the existing collector system due to the steep elevation difference.

Existing WWTP: Name = Wolf Creek Water Reclamation Facility  
Design Flow = 2.75 MGD  
Average Flow = 1.92 MGD  
Receiving Stream = Wolf Creek  
Stream Classification = IV  
Impaired Stream = yes, fecal coliform

Watershed or Adjacent Stream: Name = Spoon Gap Creek Impaired= no

Equivalent Customers Served: Residential = 25 Commercial = 0 Industrial = 0

Health Hazard: Failing septic systems expose public to raw sewage at ground surface.

Construction Feasibility: Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree. We do not anticipate excessive rock although some rock excavation may be encountered.

Growth Potential: This community is located in a rapidly growing area of Washington County. High residential growths are occurring in the area.

Total Project Cost: \$ 2,742,852

Present Worth Per Connection: \$109,714



## PROJECT DATA SHEET

Project Name: Wyndale

County: Washington

Planning District: Mt Rogers

Utility Provider: Washington County Service Authority

Served by Public Water? Yes

Existing Conditions: An extension of the existing sewer collection system is needed for future growth and service to existing residences along Clear Creek.

Proposed Project: It is proposed that the sewerage problem be addressed by installing a centralized collection along Clear Creek Road. Treatment can be provided at the Bristol, TN POTW through connection to existing sewer main in Sinking Creek. All of the homes, businesses and industries can be served by a gravity collection system consisting of 8-inch gravity lines with manholes. A series of pumping stations will be needed to convey wastewater to the existing collector system.

Existing WWTP:
 

Name =	BVUB
Design Flow =	15 MGD
Average Flow =	10.7 MGD
Receiving Stream =	Boone Lake
Stream Classification =	IV
Impaired Stream	no

Watershed or Adjacent Stream: Name = Clear Creek Impaired= no

Equivalent Customers Served: Residential = 48 Commercial = 0 Industrial = 0

Health Hazard: None documented.

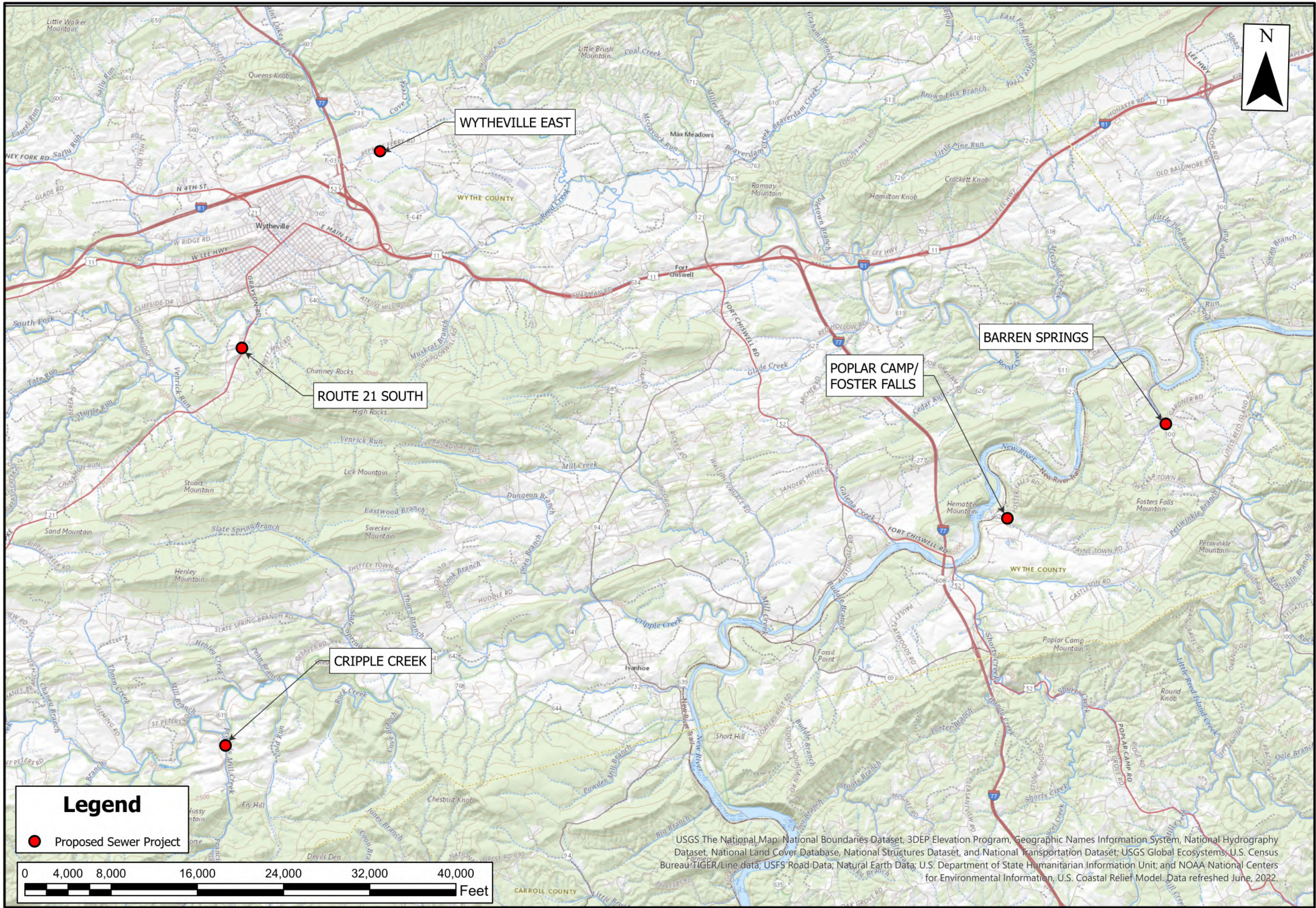
Construction Feasibility: Construction will be located along existing developed public rights of way. Existing underground utilities may conflict with future sewer line construction and hamper construction to a degree. We do not anticipate excessive rock although some rock excavation may be encountered.

Growth Potential: This community is located in a rapidly growing area of Washington County. High residential growths are occurring in the area. Potential for 138 new residences is planned at Wallace Meadow Estates.

Total Project Cost: \$ 1,935,056

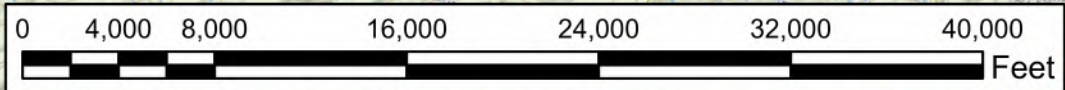
Present Worth Per Connection: \$40,314





**Legend**

● Proposed Sewer Project



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed June, 2022.



SOUTHWEST VIRGINIA  
COMPREHENSIVE REGIONAL  
SEWER STUDY 2022

WYTHE COUNTY  
PROPOSED  
PROJECTS



DATE:	xx/xx/xxxx
SHEET:	
<b>SHEET</b>	
DRAWN BY:	CHECKED BY:
PROJECT NO.:	xxxx
THE LANE GROUP INC. © 2022	



## PROJECT DATA SHEET

Project Name:	Barren Springs Sewer Extension		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Wythe County Board of Supervisors		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 28,000 linear feet of 8-inch gravity sewer, 5,600 linear feet of 6-inch force main, one pump station and a 0.08 MGD treatment facility.		
Existing WWTP:	Name:	NA	
	Design Flow:	NA	MGD
	Average Flow:	NA	MGD
	Receiving Stream:		NA
	Stream Classification:		NA
	Impaired Stream (Y/N):		NA
Watershed or Adjacent Stream:	Name:	New River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	185	Commercial = Industrial =
Health Hazards:			
Construction Feasibility:	Moderate - The proposed project will require the construction of a new treatment facility.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$11,642,605		
Present Worth Per Connection:	\$62,933		



## PROJECT DATA SHEET

Project Name:	Cripple Creek Sewer Extension		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Wythe County Board of Supervisors		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 21,000 linear feet of 8-inch gravity sewer and a 0.03 MGD treatment facility.		
Existing WWTP:	Name:	NA	
	Design Flow:	NA	MGD
	Average Flow:	NA	MGD
	Receiving Stream:		NA
	Stream Classification:		NA
	Impaired Stream (Y/N):		NA
Watershed or Adjacent Stream:	Name:	Cripple Creek	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	92	Commercial = Industrial =
Health Hazards:			
Construction Feasibility:	Moderate - The proposed project will require the construction of a new treatment facility.		
Growth Potential:	Residential - High Commercial - Moderate/High Industrial - Moderate/High		
Total Project Cost:	\$6,994,000		
Present Worth Per Connection:	\$76,022		



## PROJECT DATA SHEET

Project Name:	Poplar Camp/Foster Falls Sewer Extension		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Wythe County Board of Supervisors		
Served by Public Water (Y/N):	No		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 35,600 linear feet of 8-inch gravity sewer, 8,500 linear feet of 6-inch force main, one pump station and a 0.06 MGD treatment facility.		
Existing WWTP:	Name:	NA	
	Design Flow:	NA	MGD
	Average Flow:	NA	MGD
	Receiving Stream:		NA
	Stream Classification:		NA
	Impaired Stream (Y/N):		NA
Watershed or Adjacent Stream:	Name:	New River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	176	Commercial = Industrial =
Health Hazards:			
Construction Feasibility:	Moderate - The proposed project will require the construction of a new treatment facility.		
Growth Potential:	Residential - Low Commercial - Moderate Industrial - Low		
Total Project Cost:	\$13,818,220		
Present Worth Per Connection:	\$78,513		



## PROJECT DATA SHEET

Project Name:	Route 21 South Sewer Extension		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Wythe County Board of Supervisors		
Served by Public Water (Y/N):	Approximately 1/2 of project area		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 19,000 linear feet of 8-inch gravity sewer, 8,800 linear feet of 6-inch force main and one pump station		
Existing WWTP:	Name:	Wytheville WWTP	
	Design Flow:	4.00	MGD
	Average Flow:	1.72	MGD
	Receiving Stream:	Reed Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Venrick Run Reed Creek	Impaired (Y/N): No No
Equivalent Customers Served:	Residential =	94	Commercial = Industrial =
Health Hazards:			
Construction Feasibility:	Very Feasible - The proposed project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$7,741,890		
Present Worth Per Connection:	\$82,361		



## PROJECT DATA SHEET

Project Name:	Wytheville East Sewer Extension		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Wythe County Board of Supervisors		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The project area is currently not served by a public sewage system.		
Proposed Project:	The project consists of approximately 8,800 linear feet of 8-inch gravity sewer.		
Existing WWTP:	Name:	Wytheville WWTP	
	Design Flow:	4.00	MGD
	Average Flow:	1.72	MGD
	Receiving Stream:	Reed Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Reed Creek	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	21	Commercial = Industrial =
Health Hazards:			
Construction Feasibility:	Very Feasible - The proposed project will connect to an existing system with adequate treatment capacity.		
Growth Potential:	Residential - Low Commercial - Moderate Industrial - Low		
Total Project Cost:	\$2,506,985		
Present Worth Per Connection:	\$119,380		

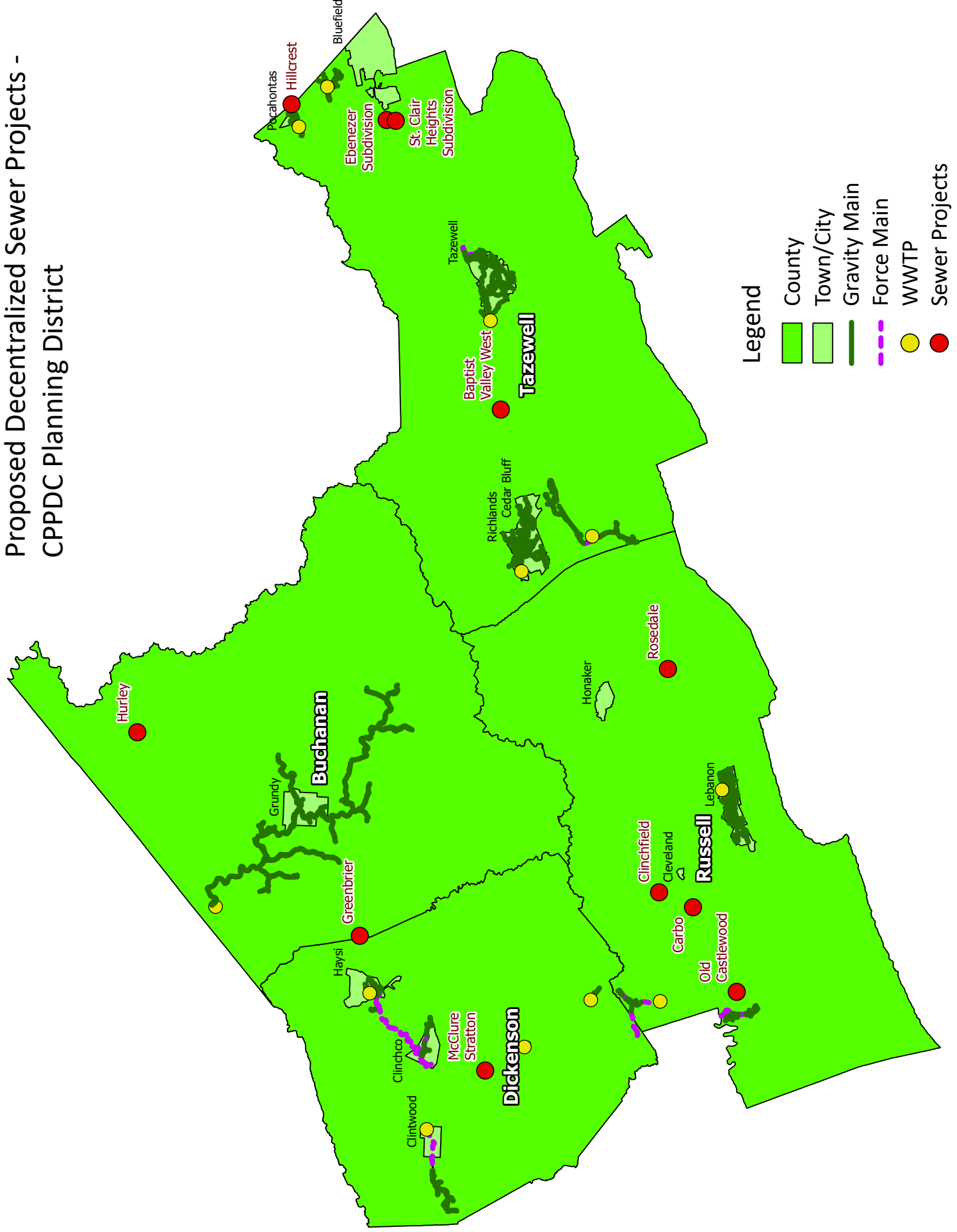


APPENDIX B

DECENTRALIZED PROJECTS



# Proposed Decentralized Sewer Projects - CPPDC Planning District



## Legend

- County
- Town/City
- Gravity Main
- Force Main
- WWTP
- Sewer Projects



# PROJECT DATA SHEET

Project Name:	Greenbrier
County:	Buchanan
Planning District:	Cumberland Plateau
Utility Provider:	Buchanan County PSA
Served by Public Water?	Yes
Existing Conditions	Older septic systems, small lots, steep slopes, poor soils.
Proposed Project	Effluent collection system (STEG and STEP) to three treatment plants, total treatment capacity 30,000 GPD. Inground disposal of treated effluent, or VPDES Permit,
Watershed or Adjacent Stream Name:	Greenbrier Creek
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 107 Commercial = 3 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$3,667,700
Present Worth Per Connection	\$42,120



## PROJECT DATA SHEET

Project Name:	Hurley
County:	Buchanan
Planning District:	Cumberland Plateau
Utility Provider:	Buchanan County PSA
Served by Public Water?	Yes
Existing Conditions	Older septic systems, steep slopes, some alternative and discharging systems, poor soils.
Proposed Project	Combined treatment system for two schools, 20,000 GPD with collection system serving surrounding areas. Effluent collection system (STEG and STEP) for remainder of project area with 40,000 GPD treatment plant in Hurley.
Watershed or Adjacent Stream Name:	Knox Creek
Stream Classification:	IV
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 180 Commercial = 10 Industrial = 0
Health Hazard	No
Construction Feasibility	Moderate, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$4,222,700
Present Worth Per Connection	\$31,010



## PROJECT DATA SHEET

Project Name:	McClure-Stratton
County:	Dickenson
Planning District:	Cumberland Plateau
Utility Provider:	Dickenson County PSA
Served by Public Water?	Yes
Existing Conditions	Failing septic systems, some straight pipe discharges to McClure River.
Proposed Project	Effluent collection system (STEG and STEP) to three treatment plants, total capacity 30,000 GPD, inground disposal of treated effluent, or VPDES Permit.
Watershed or Adjacent Stream Name:	McClure River
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 104 Commercial = 6 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$3,997,200
Present Worth Per Connection	\$41,740



# PROJECT DATA SHEET

Project Name:	Nora
County:	Dickenson
Planning District:	Cumberland Plateau
Utility Provider:	Dickenson County PSA
Served by Public Water?	Yes
Existing Conditions	Older septic systems, some straight pipe discharges to the McClure River.
Proposed Project	Effluent collection system (STEP) to 5,000 GPD treatment plant with inground disposal system.
Watershed or Adjacent Stream Name:	McClure River
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 14 Commercial = 1 Industrial = 0
Health Hazard	No
Construction Feasibility	Low, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$623,400
Present Worth Per Connection	\$46,970



## PROJECT DATA SHEET

Project Name:	Carbo
County:	Russell
Planning District:	Cumberland Plateau
Utility Provider:	Russell County PSA
Served by Public Water?	No
Existing Conditions	Older septic systems, small lots, very impervious clay soils.
Proposed Project	Effluent collection system (STEG and STEP) 50 5,000 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Clinch River
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 19 Commercial = 1 Industrial = 0
Health Hazard	No
Construction Feasibility	Moderate, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$511,900
Present Worth Per Connection	\$34,380



## PROJECT DATA SHEET

Project Name:	Clinchfield
County:	Russell
Planning District:	Cumberland Plateau
Utility Provider:	Russell County PSA
Served by Public Water?	No
Existing Conditions	Former coal camp with older septic systems, small lots, high water table.
Proposed Project	Effluent collection system (STEG and STEP) to 7,500 GPD treatment plant. Inground disposal of treated effluent, or VPDES Permit.
Watershed or Adjacent Stream Name:	Millstone Branch
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 29 Commercial = 1 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$1,033,000
Present Worth Per Connection	\$39,840



## PROJECT DATA SHEET

Project Name: Old Castlewood

County: Russell

Planning District: Cumberland Plateau

Utility Provider: Russell County PSA

Served by Public Water? Yes

Existing Conditions Small lots, approximately one-half of systems failing, unapproved, or on community straight pipe to river.

Proposed Project Effluent collection system (STEG and STEP) to 7,500 GPD treatment plant, with VPDES Permit.

Watershed or Adjacent Stream Name: Clinch River  
Stream Classification: IV  
Impaired Stream: Yes

Equivalent Customers Served: Residential = 24 Commercial = 1 Industrial = 0

Health Hazard No

Construction Feasibility Marginal, based on cost per connection.

Growth Potential Low

Total Project Cost \$773,100

Present Worth Per Connection \$39,700



# PROJECT DATA SHEET

Project Name:	Rosedale
County:	Russell
Planning District:	Cumberland Plateau
Utility Provider:	Russell County PSA
Served by Public Water?	Yes
Existing Conditions	Older septic systems, small lots, clay soils.
Proposed Project	Effluent collection system (STEG and STEP) to 40,000 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Elk Garden Creek
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 145 Commercial = 10 Industrial = 0
Health Hazard	No
Construction Feasibility	Moderate, based on cost per connection.
Growth Potential	Moderate
Total Project Cost	\$4,020,900
Present Worth Per Connection	\$34,720



## PROJECT DATA SHEET

Project Name:	Baptist Valley West
County:	Tazewell
Planning District:	Cumberland Plateau
Utility Provider:	Tazewell County PSA
Served by Public Water?	Yes
Existing Conditions	Problem sections in project area due to shallow soils to rock, high water table, and heavy clay soils.
Proposed Project	Project area includes 12 clusters of homes, 6 to 22 homes in each, served by effluent collection systems (STEG and STEP), each with a treatment plant and inground disposal of treated effluent.
Watershed or Adjacent Stream Name:	Tributary to Indian Creek
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 181 Commercial = 4 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Moderate
Total Project Cost	\$6,162,900
Present Worth Per Connection	\$38,720



# PROJECT DATA SHEET

Project Name:	Hillcrest
County:	Tazewell
Planning District:	Cumberland Plateau
Utility Provider:	Tazewell County PSA
Served by Public Water?	Yes
Existing Conditions	Homes are served by older septic systems that are failing, and there is a community straight pipe to Laurel Fork.
Proposed Project	Effluent collection system (STEG and STEP) to 7,500 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Laurel Fork
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 29 Commercial = 1 Industrial = 0
Health Hazard	No
Construction Feasibility	Moderate, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$795,200
Present Worth Per Connection	\$35,290



## PROJECT DATA SHEET

Project Name:	St. Clair Heights Subdivision
County:	Tazewell
Planning District:	Cumberland Plateau
Utility Provider:	Bluefield Sanitary Board
Served by Public Water?	No
Existing Conditions	Small lots, with septic systems nearing the end of their useful life, repair options are limited.
Proposed Project	Effluent collection system (STEG and STEP) to 12,000 GPD treatment plant, with inground disposal of effluent, serving 45 homes. Alternative to treatment plant is connect effluent collection system to Bluefield Sanitary Board sewer interceptor on US Route 460.
Watershed or Adjacent Stream Name:	Bluestone River
Stream Classification:	VI
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 45 Commercial = 0 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$1,518,400
Present Worth Per Connection	\$39,150

## PROJECT DATA SHEET

Project Name: Ebenezer Subdivision

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Bluefield Sanitary Board

Served by Public Water? No

Existing Conditions Small lots, with septic systems nearing the end of their useful life, repair options are limited.

Proposed Project Effluent collection system (STEG and STEP) to 10,000 GPD treatment plant, with inground disposal of effluent. Alternative to treatment plant is connect effluent collection system to Bluefield Sanitary Board sewer interceptor on US Route 460.

Watershed or Adjacent Stream Name: Bluestone River  
Stream Classification: VI  
Impaired Stream: Yes

Equivalent Customers Served: Residential = 40 Commercial = 0 Industrial = 0

Health Hazard No

Construction Feasibility Marginal, based on cost per connection.

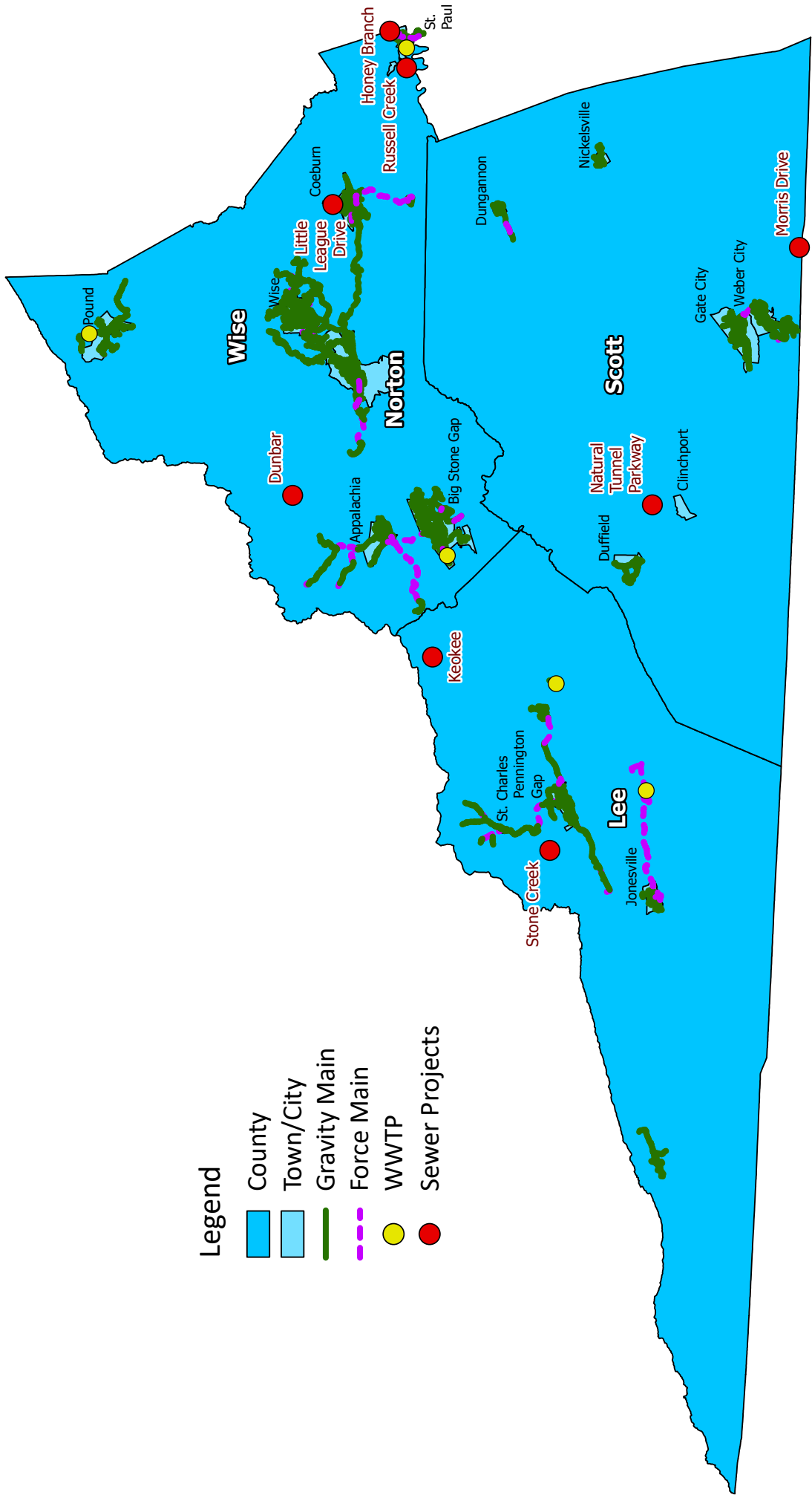
Growth Potential Low

Total Project Cost \$1,311,200

Present Worth Per Connection \$38,185



# Proposed Decentralized Sewer Projects - LENOWISCO Planning District



## PROJECT DATA SHEET

Project Name:	Keokee
County:	Lee
Planning District:	LENOWISCO
Utility Provider:	Lee County PSA
Served by Public Water?	Yes
Existing Conditions	Coal camp community with most homes and septic systems more than 50 years old. Small lots and shallow soils make repairs difficult.
Proposed Project	Effluent collection system (STEG and STEP) to 25,000 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Crab Orchard Creek
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 90 Commercial = 5 Industrial = 0
Health Hazard	No
Construction Feasibility	Low, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$3,559,100
Present Worth Per Connection	\$46,250



## PROJECT DATA SHEET

Project Name:	Stone Creek
County:	Lee
Planning District:	LENOWISCO
Utility Provider:	Lee County PSA
Served by Public Water?	No
Existing Conditions	Upper sections of Stone Creek are served by older septic systems and potentially straight pipes, as evidenced by elevated levels of E. coli.
Proposed Project	Effluent collection system (STEG and STEP) along US Highway 421 for approximately four miles, connecting to PSA sewer interceptor at St. Charles Road.
Watershed or Adjacent Stream Name:	Stone Creek
Stream Classification:	IV
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 58 Commercial = 2 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$1,774,500
Present Worth Per Connection	\$37,680

## PROJECT DATA SHEET

Project Name:	Natural Tunnell Parkway
County:	Scott
Planning District:	LENOWISCO
Utility Provider:	Scott County PSA
Served by Public Water?	Yes
Existing Conditions	Many homes in low-lying areas along Stock Creek, with septic systems over 30 years old. Soils are shallow to shale. Several alternative and discharging treatment systems in project area.
Proposed Project	Effluent collection system (STEG and STEP) to 5,000 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Stock Creek
Stream Classification:	IV
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 16 Commercial = 1 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$596,000
Present Worth Per Connection	\$43,840



# PROJECT DATA SHEET

Project Name:	Spring Valley Subdivision
County:	Scott
Planning District:	LENOWISCO
Utility Provider:	Bloomington Utility District
Served by Public Water?	Yes
Existing Conditions	An older subdivision with septic systems nearing the end of their effective life. Lots are small, and soils are very heavy clays. The primary problem section of the subdivision is the Morris Drive area.
Proposed Project	Effluent collection system (STEP) to 5,000 GPD treatment plant. Inground disposal of treated effluent, or VPDES Permit.
Watershed or Adjacent Stream Name:	Clark Branch
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 20 Commercial = 0 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$682,200
Present Worth Per Connection	\$39,510

## PROJECT DATA SHEET

Project Name:	Dunbar
County:	Wise
Planning District:	LENOWISCO
Utility Provider:	Wise County PSA
Served by Public Water?	Yes
Existing Conditions	Former coal camp community with older homes in low lying areas. Many greywater and straight pipe discharges. Community almost entirely in fill material.
Proposed Project	Effluent collection system (STEG) to 9,000 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Potcamp Fork
Stream Classification:	IV
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 35 Commercial = 0 Industrial = 0
Health Hazard	No
Construction Feasibility	Moderate, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$928,900
Present Worth Per Connection	\$35,320



## PROJECT DATA SHEET

Project Name:	Honey Branch
County:	Wise
Planning District:	LENOWISCO
Utility Provider:	Town of St. Paul
Served by Public Water?	Yes
Existing Conditions	Existing homes and septic systems more than 30 years old, limited area for repairs between steep slopes and stream. Stream is listed as impaired due to elevated levels of E. coli.
Proposed Project	Due to distance between homes, the proposed project is to identify homes in need of system repair or replacement, and make needed improvements. Estimate is approximately 50% or 35 of the 65 homes in project area need improvements.
Watershed or Adjacent Stream Name:	Honey Branch
Stream Classification:	IV
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 65 Commercial = 0 Industrial = 0
Health Hazard	No
Construction Feasibility	Moderate, based on cost per connection.
Growth Potential	Moderate
Total Project Cost	\$836,000
Present Worth Per Connection	\$29,290

# PROJECT DATA SHEET

Project Name:	Little League Road
County:	Wise
Planning District:	LENOWISCO
Utility Provider:	Town of Coeburn
Served by Public Water?	No
Existing Conditions	Homes are isolated from public water and sewer by creek and railroad. Soils are shallow to seasonal water table, resulting in several VPDES discharges. Toms Creek is impaired due to elevated levels of E. coli.
Proposed Project	Effluent collection system (STEG) to 4,000 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Toms Creek
Stream Classification:	IV
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 15 Commercial = 0 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$503,000
Present Worth Per Connection	\$42,310



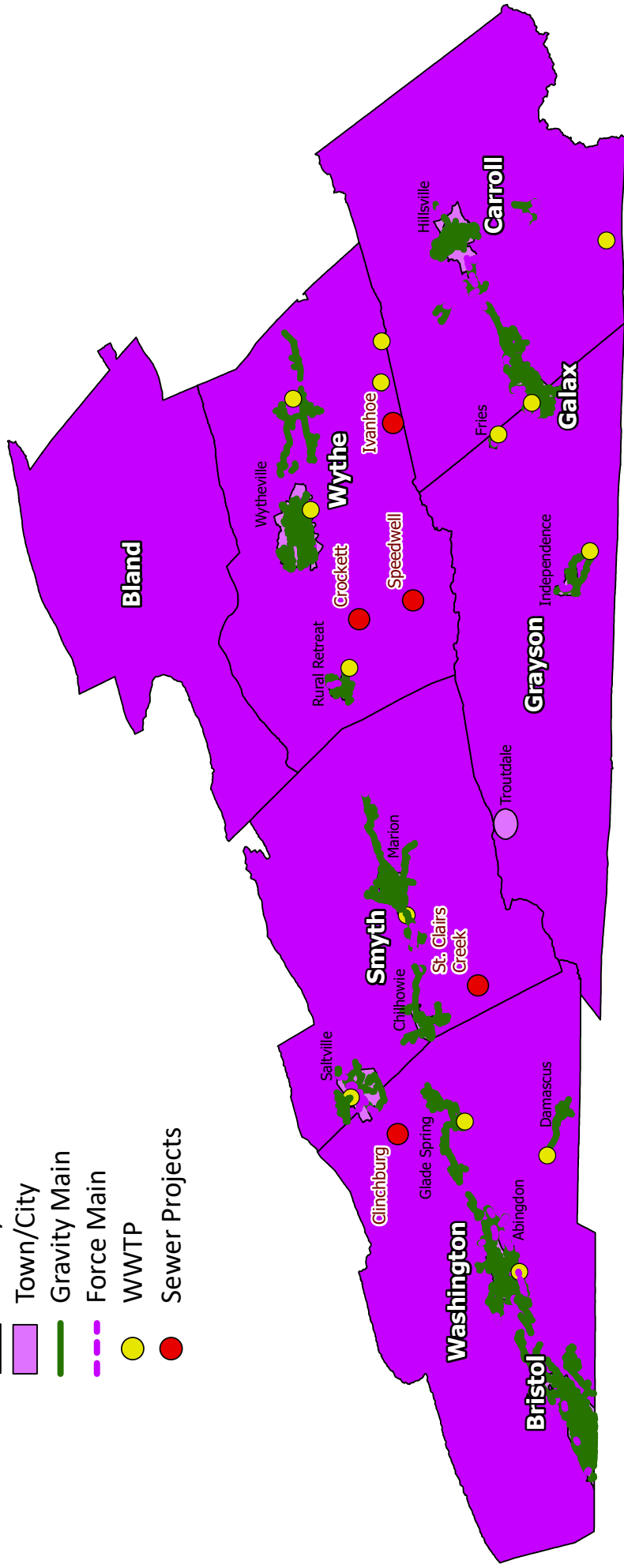
## PROJECT DATA SHEET

Project Name:	Russell Creek
County:	Wise
Planning District:	LENOWISCO
Utility Provider:	Wise County PSA
Served by Public Water?	Yes
Existing Conditions	Area includes former coal camp community (Virginia City), with older homes and septic systems, shallow soils, homes close to stream, several VPDES discharges.
Proposed Project	Due to distance between homes, the proposed project is to identify homes in need of system repair or replacement, and make needed improvements. Estimate is approximately 50% or 20 homes in the project area need improvement.
Watershed or Adjacent Stream Name:	Russell Creek
Stream Classification:	IV
Impaired Stream	Yes
Equivalent Customers Served:	Residential = 35 Commercial = 0 Industrial = 0
Health Hazard	No
Construction Feasibility	Moderate, due to cost per connection.
Growth Potential	Low
Total Project Cost	\$477,800
Present Worth Per Connection	\$29,290

# Proposed Decentralized Sewer Projects - MRPDC Planning District

## Legend

- County
- Town/City
- Gravity Main
- Force Main
- WWTP
- Sewer Projects





## PROJECT DATA SHEET

Project Name:	St. Clairs Creek
County:	Smyth
Planning District:	Mt. Rogers
Utility Provider:	Smyth County Water and Sewer
Served by Public Water?	Yes
Existing Conditions	Many homes built prior to 1980, septic systems at or nearing their useful life, repairs beginning to be needed, shallow to water table near creek, shallow to rock in the higher elevations.
Proposed Project	Effluent collection system (STEG and STEP) to two treatment plants: 40,000 GPD plant near Macedonia Baptist Church and 25,000 GPD plant near Country Lane, both with VPDES Permits.
Watershed or Adjacent Stream Name:	St. Clairs Creek
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 245 Commercial = 5 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Moderate
Total Project Cost	\$7,067,600
Present Worth Per Connection	\$37,050

# PROJECT DATA SHEET

Project Name:	Clinchburg
County:	Washington
Planning District:	Mt. Rogers
Utility Provider:	Washington County Service Authority
Served by Public Water?	Yes
Existing Conditions	Older homes, built 1920 to 1950, small lots (average 0.2 acre), failing septic systems, repairs are very difficult.
Proposed Project	Effluent collection system (STEG and STEP) to 15,000 GPD treatment plant, with inground disposal of effluent.
Watershed or Adjacent Stream Name:	Stonemill Creek
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 55 Commercial = 0 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost of connection.
Growth Potential	Low
Total Project Cost	\$1,844,800
Present Worth Per Connection	\$38,950



## PROJECT DATA SHEET

Project Name:	Crockett
County:	Wythe
Planning District:	Mt. Rogers
Utility Provider:	Wythe County Service Authority
Served by Public Water?	Yes
Existing Conditions	Older homes, most built between 1920 and 1970, small lots (less than 0.5 acre), shallow rock and seasonal water table make repairs difficult.
Proposed Project	Effluent collection system (STEG and STEP) to 12,500 GPD treatment plant, with inground disposal of effluent if disposal site is suitable. If not, a VPDES discharge.
Watershed or Adjacent Stream Name:	Tate Run
Stream Classification:	IV
Impaired Stream	No
Equivalent Customers Served:	Residential = 49 Commercial = 1 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$1,871,400
Present Worth Per Connection	\$42,830

## PROJECT DATA SHEET

Project Name: Ivanhoe

County: Wythe

Planning District: Mt. Rogers

Utility Provider: Wythe County Service Authority

Served by Public Water? Yes

Existing Conditions Older homes built between 1920 and 1980, septic systems at and beyond useful life and beginning to fail, small lots.

Proposed Project Effluent collection system (STEG and STEP) to 60,000 GPD treatment plant, with VPDES Permit.

Watershed or Adjacent Stream Name: New River  
Stream Classification: IV  
Impaired Stream: Yes

Equivalent Customers Served: Residential = 210 Commercial = 10 Industrial = 0

Health Hazard No

Construction Feasibility Marginal, based on cost per connection.

Growth Potential Moderate

Total Project Cost \$6,812,800

Present Worth Per Connection \$41,100



## PROJECT DATA SHEET

Project Name:	Speedwell
County:	Wythe
Planning District:	Mt. Rogers
Utility Provider:	Wythe County Service Authority
Served by Public Water?	Yes
Existing Conditions	Older homes, built between 1920 and 1970, septic systems beginning to fail, small lots make repairs difficult.
Proposed Project	Effluent collection system (STEG and STEP) to 30,000 GPD treatment plant, with VPDES Permit.
Watershed or Adjacent Stream Name:	Cripple Creek
Stream Classification:	VI
Impaired Stream	No
Equivalent Customers Served:	Residential = 114 Commercial = 6 Industrial = 0
Health Hazard	No
Construction Feasibility	Marginal, based on cost per connection.
Growth Potential	Low
Total Project Cost	\$3,364,700
Present Worth Per Connection	\$36,820

## APPENDIX C

### POTENTIAL EXISTING WASTEWATER SYSTEM UPGRADE PROJECTS

This Appendix includes descriptions of potential upgrade/rehabilitation projects identified for existing wastewater collection systems and/or treatment plants.



APPENDIX C

CUMBERLAND PLATEAU PLANNING DISTRICT  
EXISTING SYSTEMS UPGRADES

## PROJECT DATA SHEET

Project Name:	Buchanan County PSA - SSES		
County:	Buchanan		
Planning District:	Cumberland Plateau		
Utility Provider:	Buchanan County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Currently several areas of the BCPSA collection system experiences high I/I and have lead to elevated inflows to the existing BCPSA wastewater treatment plant.		
Proposed Project:	The project consists of Sewer line replacement, Manhole replacement, CCTV inspections, Sewer lateral replacement.		
Existing WWTP:	Name:	Conaway Water Reclamation Facility	
	Design Flow:	2.00	MGD
	Average Flow:	1.667	MGD
	Receiving Stream:	Levisa River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Levisa River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1205	Commercial = 38 Industrial = 155
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems current issues with I/I.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	5,065,000	
Cost Per Connection:	\$3,623		



## PROJECT DATA SHEET

Project Name: Buchanan County PSA - Wastewater Treatment Plant

County: Buchanan

Planning District: Cumberland Plateau

Utility Provider: Buchanan County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: Currently the existing BCPSA Conaway wastewater treatment plant is undersized to handle the systems I/I and results in occasional washouts during heavy rain events.

Proposed Project: The project consists of construction of a MBBR and ballasted sedimentation WWTP, construction of a WWTP operation building, construction of influent pump station and screening facilities, construction of aerobic digester, installation of UV system, installation of dewatering system, installation of pump station and WWTP generators.

Existing WWTP:
 

Name:	Conaway Water Reclamation Facility	
Design Flow:	2.00	MGD
Average Flow:	1.667	MGD
Receiving Stream:	Levisa River	
Stream Classification:	IV	
Impaired Stream (Y/N):	Yes	

Watershed or Adjacent Stream:
 

Name:	Levisa River	Impaired (Y/N):	Yes
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Equivalent Customers Served:
 

Residential =	1205	Commercial =	38	Industrial =	155
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Health Hazards:

Construction Feasibility: Very Feasible - The improvements to the wastewater treatment plant will address the systems current issues handling I/I.

Growth Potential: Residential - High  
Commercial - High  
Industrial - Moderate

Total Project Cost: \$ 29,437,946

Cost Per Connection: \$21,057

## PROJECT DATA SHEET

Project Name: Sewer Improvements Project

County: Tazewell

Planning District: Cumberland Plateau

Utility Provider: Town of Cedar Bluff

Served by Public Water (Y/N): Yes

Existing Conditions: Information not provided (INP).

Proposed Project: Information not provided (INP)

Existing WWTP: Name: \_\_\_\_\_  
 Design Flow: INP MGD  
 Average Flow: 0.16 MGD  
 Receiving Stream: \_\_\_\_\_  
 Stream Classification: \_\_\_\_\_  
 Impaired Stream (Y/N): \_\_\_\_\_

Watershed or Adjacent Stream: Name: Clinch River, Coal Creek, & Middle Creek Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 265 Commercial = \_\_\_\_\_ Industrial = \_\_\_\_\_

Health Hazards: \_\_\_\_\_

Construction Feasibility: Information not provided.

Growth Potential: Residential - INP  
 Commercial - INP  
 Industrial - INP

Total Project Cost: \$ 1,987,500

Present Worth Per Connection: \$7,500



## PROJECT DATA SHEET

Project Name:	Waste Water Treatment Expansion Project		
County:	Russell		
Planning District:	Cumberland Plateau		
Utility Provider:	Town of Cleveland		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Information not provided (INP).		
Proposed Project:	Expand existing WWTP treatment capacity from 40,000 GPD to 80,000 GPD.		
Existing WWTP:	Name:	Cleveland Waste Water Treatment Plant	
	Design Flow:		MGD
	Average Flow:	0.04	MGD
	Receiving Stream:	Clinch River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	67	Commercial = Industrial =
Health Hazards:			
Construction Feasibility:	Information not provided.		
Growth Potential:	Residential - INP Commercial - INP Industrial - INP		
Total Project Cost:	\$	1,000,000	
Present Worth Per Connection:		\$14,925	

## PROJECT DATA SHEET

Project Name:	Haysi Sewer Replacement		
County:	Dickenson		
Planning District:	Cumberland Plateau		
Utility Provider:	Dickenson County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing gravity sewer system consists of ductile iron pipe that has deteriorated and is causing backups in the system which has resulted in overflows into the Russell Fork River.		
Proposed Project:	The project consists of the replacement of approximately 3,100 linear feet of 10-inch gravity sewer and 13 manholes.		
Existing WWTP:	Name:	Haysi Wastewater Treatment Plant	
	Design Flow:	0.20	MGD
	Average Flow:	0.196	MGD
	Receiving Stream:	Russell Fork River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Russell Fork River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	188	Commercial = 145 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems current issues with I/I.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	1,910,094	
Cost Per Connection:		\$5,736	



## PROJECT DATA SHEET

Project Name:	SSES Rehabilitation					
County:	Russell					
Planning District:	Cumberland Plateau					
Utility Provider:	Town of Honaker					
Served by Public Water (Y/N):	Yes					
Existing Conditions:	Information not provided (INP). SSES being completed.					
Proposed Project:	Information not provided (INP). Cost estimated based upon using \$7,500/connection for entire system.					
Existing WWTP:	Name:	Honaker Waste Water Treatment Plant				
	Design Flow:	INP	MGD			
	Average Flow:	INP	MGD			
	Receiving Stream:	Lewis Creek				
	Stream Classification:	IV				
	Impaired Stream (Y/N):	Yes				
Watershed or Adjacent Stream:	Name:	Lewis Creek	Impaired (Y/N):	Yes		
Equivalent Customers Served:	Residential =	630	Commercial =		Industrial =	
Health Hazards:						
Construction Feasibility:	Information not provided.					
Growth Potential:	Residential - INP Commercial - INP Industrial - INP					
Total Project Cost:	\$ 4,725,000					
Present Worth Per Connection:	\$7,500					

## PROJECT DATA SHEET

Project Name:	Waste Water Treatment Plant Improvements Project		
County:	Russell		
Planning District:	Cumberland Plateau		
Utility Provider:	Town of Honaker		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Information not provided (INP).		
Proposed Project:	Information not provided (INP)		
Existing WWTP:	Name:	Honaker Waste Water Treatment Plant	
	Design Flow:	INP	MGD
	Average Flow:	INP	MGD
	Receiving Stream:	Lewis Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Lewis Creek	Impaired (Y/N): <span style="background-color: yellow;">Yes</span>
Equivalent Customers Served:	Residential =	630	Commercial = <span style="background-color: yellow;"></span> Industrial = <span style="background-color: yellow;"></span>
Health Hazards:			
Construction Feasibility:	Information not provided.		
Growth Potential:	Residential - INP Commercial - INP Industrial - INP		
Total Project Cost:	\$	2,612,704	
Present Worth Per Connection:		\$4,147	



## PROJECT DATA SHEET

Project Name:	System-Wide Sewer Improvements Project		
County:	Russell		
Planning District:	Cumberland Plateau		
Utility Provider:	Town of Lebanon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Approximately half of the existing gravity sewer system was constructed more than 30 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the WWTP.		
Proposed Project:	The project consists of CIPP lining approximately 16,300 linear feet of gravity sewer line and approximately 110 manholes throughout the conveyance system.		
Existing WWTP:	Name:	Lebanon Sewer Filtering Plant	
	Design Flow:	1.00	MGD
	Average Flow:	0.619	MGD
	Receiving Stream:	Little Cedar Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Big Cedar Creek, Burgess Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1569	Commercial = 80 Industrial = 6
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer conveyance will significantly reduce I/I, thus increasing capacity for the area, reduce SSO's, and decreasing flows into the WWTP.		
Growth Potential:	Residential - Moderate Commercial - High Industrial - High		
Total Project Cost:	\$	2,921,700	
Present Worth Per Connection:		\$1,765	

## PROJECT DATA SHEET

Project Name:	Tazewell County PSA - Falls Mills SSES		
County:	Tazewell		
Planning District:	Cumberland Plateau		
Utility Provider:	Tazewell County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing collection system and wastewater treatment plant is nearing it's useful life and is in need of replacement.		
Proposed Project:	The project consists of replacement of force main, rehabilitation of manholes, repair of manholes, rehabilitation of pump stations, waterproofing manhole frame and replacing covers, replacement of gravity lines, point repair of gravity lines, service connection reinstatement.		
Existing WWTP:	Name:	Falls Mills Wastewater Treatment Plant	
	Design Flow:	0.108	MGD
	Average Flow:	0.104	MGD
	Receiving Stream:	Bluestone River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Bluestone River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	171	Commercial = 9 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems aging infrastructure.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	19,708,054	
Cost Per Connection:		\$109,489	



## PROJECT DATA SHEET

Project Name:	Town of Richlands - 4.0 MGD WWTP Upgrades and Improvements		
County:	Tazewell		
Planning District:	Cumberland Plateau		
Utility Provider:	Town of Richlands		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The current system experiences high amounts of I/I and has a wastewater treatment plant that is nearing its useful life and is in need of equipment replacement and rehabilitation.		
Proposed Project:	<p>The project consists Influent pump station rehabilitation including influent and sludge pumps &amp; VFDs, valve replacements, new walkway, monorail &amp; electric hoist, painting, replacement windows &amp; doors, LED lighting and HVAC Upgrades, Pretreatment building including demolition and replacement of existing pre-engineered metal building, mechanical screen and compactor, grit classifier/cyclone, grit system diffused air system, pumps, blowers and VFDs, belt conveyor, valve and gate replacements, New septage receiving station, Primary clarifiers mechanism rehabilitation, valve replacements and primary sludge pumps and VFDs, Secondary Clarifiers mechanism rehabilitation, valve replacements, RAS/WAS Pumps, and sluice gate replacements in influent box, Aeration basins, VFSs and controls for aerators, 2 replacement aerator motors &amp; gearboxes, mud valve replacements and sluice gate replacements in influent box; UV disinfection system replacement, Effluent and non-potable water system rehabilitation with replacement post-aeration blowers, effluent pumps &amp; VFDs, non-potable pumps and diffused air system &amp; valves, Gravity thickeners including thickener mechanism rehabilitation and telescopic valve replacement, Anaerobic digesters: new digester mixing system, replacement of digester safety vents, valve replacements, sludge transfer &amp; recirculation rumps and cleaning of the digesters, including removal and disposal of sludge &amp; grit and power washing tank interiors; Dewatering/shop building improvements including replacement of belt Press, new sludge cake conveyor, replacing processed sludge pumps, valve replacements, Instrumentation including DO, ORP and pH Meters (9 each), replacement of plant flow meters and pressure gauges, and new laboratory equipment, Rehabilitation/upgrade of Raven Doran lift station including new pumps, VFDs, valves, second wetwell, and bypass piping, Including miscellaneous replacement of sump pumps, yard piping, automatic samplers, provision of bypass pumping during construction, electrical &amp; controls, SCADA Update (software, interfaces, PLCs), replacement of 8 ft. chain link fence with barbed wire, 1.5-inch pavement overlay of access road &amp; parking lot, chain link fence swing gate replacement and associated items.</p>		
Existing WWTP:	Name:	Richlands Regional Wastewater Treatment Facility	
	Design Flow:	4.00	MGD
	Average Flow:	2.182	MGD
	Receiving Stream:	Clinch River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N):
			Yes
Equivalent Customers Served:	Residential =	2154	Commercial =
			271
	Industrial =	0	
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems aging infrastructure.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	11,298,906	
Cost Per Connection:		\$4,659	

## PROJECT DATA SHEET

Project Name:	Town of Richlands SSES		
County:	Tazewell		
Planning District:	Cumberland Plateau		
Utility Provider:	Town of Richlands		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The current system experiences high amounts of I/I and has a wastewater treatment plant that is nearing its useful life and is in need of equipment replacement and rehabilitation.		
Proposed Project:	The following work was proposed in the Town of Richlands SSES and will be broken down into 9 phases Rehabilitation of approximately 1,824 vertical feet of manholes, Repair of 304 manhole inverts and benches, Waterproofing of 304 manhole frames and cover replacement, Rehabilitation of 39,594 Linear Feet (L.F.) of 8- inch sewer main, Replacement of 13,198 L.F. of 8-inch sewer main, Rehabilitation of 1,506 L.F. of 10-inch sewer main, Replacement of 502 L.F. of 10-inch sewer main, Rehabilitation of 835 L.F. of 12-inch sewer main, Replacement of 278 L.F. of 12-inch sewer main, Service connection reinstatement of approximately 517 connections.		
Existing WWTP:	Name:	Richlands Regional Wastewater Treatment Facility	
	Design Flow:	4.00	MGD
	Average Flow:	2.182	MGD
	Receiving Stream:	Clinch River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	2154	Commercial = 271 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems aging infrastructure.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	12,795,213	
Cost Per Connection:	\$5,276		



## PROJECT DATA SHEET

Project Name:	Town of Tazewell SSES		
County:	Tazewell		
Planning District:	Cumberland Plateau		
Utility Provider:	Town of Tazewell		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The current system experiences high amounts of I/I and has a wastewater treatment plant that is nearing its useful life and is in need of equipment replacement and rehabilitation.		
Proposed Project:	The proposed improvements include Rehabilitation of approximately 5,298 vertical feet of manholes, Repair of 883 manhole inverts and benches, Waterproofing of 883 manhole frames and cover replacement, Rehabilitation of 73,047 Linear Feet (L.F.) of 8-inch sewer main, Replacement of 23,439 L.F. of 8-inch sewer main, Rehabilitation of 1,971 L.F. of 6-inch sewer main, Replacement of 658 L.F. of 6-inch sewer main, Service connection reinstatement of approximately 1,050 connections.		
Existing WWTP:	Name:	Tazewell Wastewater Treatment Plant	
	Design Flow:	2.00	MGD
	Average Flow:	0.893	MGD
	Receiving Stream:	Clinch River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1655	Commercial = 207 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems aging infrastructure.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	22,891,448	
Cost Per Connection:		\$12,294	

## PROJECT DATA SHEET

Project Name:	Tazewell Regional Wastewater Treatment Plant Improvements		
County:	Tazewell		
Planning District:	Cumberland Plateau		
Utility Provider:	Town of Tazewell		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The current system experiences high amounts of I/I and has a wastewater treatment plant that is nearing its useful life and is in need of equipment replacement and rehabilitation.		
Proposed Project:	The proposed improvements project generally consists of the following construction of a new wetwell/drywell influent pump station with a mechanical screen system; a new induced vortex grit removal system at the existing grit building; and a building addition to the existing pre-engineered metal building housing the sludge dewatering system, replacement of primary sludge, secondary recycle sludge, waste sludge, digested sludge, non-potable and various other pumps; of clarifier mechanisms at two primary clarifiers and two secondary clarifiers; of air diffuser, mixing systems and associated blowers for a dual train MLE; activated sludge secondary treatment system; of the existing channel UV system; and of air diffuser systems and associated blowers for two aerobic digesters, replacement of the existing stand-by generator and automatic transfer switch; and miscellaneous process piping, valves, gates, and meters; existing controls and SCADA throughout the plant, rehabilitation of an existing dual traveling bridge tertiary filtration system, installation of an MLE MLSS recycle pump system; of a new belt press, of a new belt conveyor for dewatered cake; and of new process instrumentation including DO, pH and ORP meters, demolition of existing glass greenhouse building and construction of new open-walled structure at dewatered cake storage area, ventilation and heat replacement/improvements at three buildings; roof replacement at two buildings; electrical upgrades; and miscellaneous demolition throughout the plant to allow for installation of new equipment.		
Existing WWTP:	Name:	Tazewell Wastewater Treatment Plant	
	Design Flow:	2.00	MGD
	Average Flow:	0.893	MGD
	Receiving Stream:	Clinch River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1655	Commercial = 207 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems aging infrastructure.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$ 11,838,994		
Cost Per Connection:	\$6,358		



APPENDIX C

LENOWISCO PLANNING DISTRICT  
EXISTING SYSTEMS UPGRADES

## PROJECT DATA SHEET

Project Name: Rose Hill Sewer SSES Improvement Project

County: Lee

Planning District: Lenowisco

Utility Provider: Lee County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximatley 21.8% accountable.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	Rose Hill	
	Design Flow:	0.06	MGD
	Average Flow:	0.06	MGD
	Receiving Stream:		Martin's Creek
	Stream Classification:		V
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Martin's Creek	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be minor repair to existing manholes and sewerlines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$172,700

Present Worth Per Connection: #DIV/0!



# PROJECT DATA SHEET

Project Name: Dryden Sewer SSES Improvement Project

County: Lee

Planning District: Lenowisco

Utility Provider: Lee County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximatley 48.2% accountable.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP: Name: Pennington Gap  
Design Flow: 0.60 MGD  
Average Flow: 0.287 MGD  
Receiving Stream: Powell River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Powell River Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 0 Commercial = 0 Industrial = 0

Health Hazards:

Construction Feasibility: Very Feasible - The project will be minor repair to existing manholes and sewerlines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$570,000

Present Worth Per Connection: #DIV/0!

## PROJECT DATA SHEET

Project Name: Rose Hill Sewer WWTP Improvement Project

County: Lee

Planning District: Lenowisco

Utility Provider: Lee County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximately 28 years old and the metal surfaces and piping are starting to deteriorate in condition. Also replacement parts are not available for much of the equipment.

Proposed Project: The project will provide equipment replacement, replace piping system and repair any metal surfaces.

Existing WWTP:	Name:	Rose Hill	
	Design Flow:	0.06	MGD
	Average Flow:	0.06	MGD
	Receiving Stream:		Martin's Creek
	Stream Classification:		V
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Martin's Creek	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be rehabilitation of the existing facilities.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$1,500,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name:	Pennington Gap Sewer WWTP Improvement Project		
County:	Lee		
Planning District:	Lenowisco		
Utility Provider:	Town of Pennington Gap		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing system has not had any major repairs in 30 years.		
Proposed Project:	The project will provide the rehabilitation of the Pump Station, Generators, equipment, aeration system and miscellaneous piping.		
Existing WWTP:	Name:	Pennington Gap	
	Design Flow:	0.60	MGD
	Average Flow:	0.287	MGD
	Receiving Stream:	Powell River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be rehabilitation of the existing facilities.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$3,994,500		
Present Worth Per Connection:	#DIV/0!		

## PROJECT DATA SHEET

Project Name: Town of Pennington Gap Sewer SSES Improvement Project

County: Lee

Planning District: Lenowisco

Utility Provider: Town of Pennington Gap

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system experiences high levels of I/I.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	Pennington Gap	
	Design Flow:	0.60	MGD
	Average Flow:	0.287	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be minor repair to existing manholes and sewerlines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$1,500,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name:	Town of Jonesville I&I Improvement Project		
County:	Lee		
Planning District:	Lenowisco		
Utility Provider:	Town of Jonesville		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing system experiences high levels of I/I.		
Proposed Project:	The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.		
Existing WWTP:	Name:	Hickory Flats	
	Design Flow:	0.80	MGD
	Average Flow:	0.28	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Town Branch	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be minor repairs/replacement to existing manholes and sewerlines.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$2,500,000		
Present Worth Per Connection:	#DIV/0!		

## PROJECT DATA SHEET

Project Name: Duffield I&I Improvement Project

County: Scott

Planning District: Lenowisco

Utility Provider: Scott County PSA

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximately 49.1% accountable.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	Duffield	
	Design Flow:	0.40	MGD
	Average Flow:	0.2	MGD
	Receiving Stream:		Cinch River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Cinch River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be minor repairs/replacement to existing manholes and sewer lines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$2,000,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name:	Weber City I&I Improvement Project		
County:	Scott		
Planning District:	Lenowisco		
Utility Provider:	Scott County PSA		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing system is approximately 62.3% accountable.		
Proposed Project:	The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.		
Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:	Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Holston River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be minor repairs/replacement to existing manholes and sewer lines.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$2,500,000		
Present Worth Per Connection:	#DIV/0!		

## PROJECT DATA SHEET

Project Name: Gate City I&I Improvement Project

County: Scott

Planning District: Lenowisco

Utility Provider: Town of Gate City

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximately 35.3% accountable.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:		Holston River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Moccasin Creek	Impaired (Y/N):	No
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be minor repairs/replacement to existing manholes and sewer lines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$2,500,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name: Nickelsville I&I Improvement Project

County: Scott

Planning District: Lenowisco

Utility Provider: Scott County PSA

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximately 60.1% accountable.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	Nickelsville	
	Design Flow:	0.07	MGD
	Average Flow:	0.036	MGD
	Receiving Stream:		Cooper Creek
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Copper Creek	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be minor repairs/replacement to existing manholes and sewer lines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$1,000,000

Present Worth Per Connection: #DIV/0!

## PROJECT DATA SHEET

Project Name: Dungannon I&I Improvement Project

County: Scott

Planning District: Lenowisco

Utility Provider: Town of Dungannon

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximately 82.6% accountable.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:

Name:	Dungannon	
Design Flow:	0.0399	MGD
Average Flow:	0.0199	MGD
Receiving Stream:		Clinch River
Stream Classification:		IV
Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream: Name: Clinch River Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 0 Commercial = 0 Industrial = 0

Health Hazards:  

Construction Feasibility: Very Feasible - The project will be minor repairs/replacement to existing manholes and sewer lines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$500,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name:	Duffield WWTP Improvement Project		
County:	Scott		
Planning District:	Lenowisco		
Utility Provider:	Scott County PSA		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The system has experienced two major upgrades projects over the last 5 years.		
Proposed Project:	The project will included minor pump station improvements and rehabilitation of the sludge drying beds.		
Existing WWTP:	Name:	Duffield	
	Design Flow:	0.40	MGD
	Average Flow:	0.2	MGD
	Receiving Stream:		Cinch River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be rehabilitation of the existing facilities.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$1,200,000		
Present Worth Per Connection:	#DIV/0!		

## PROJECT DATA SHEET

Project Name:	Holston WWTP Improvement Project		
County:	Scott		
Planning District:	Lenowisco		
Utility Provider:	Scott County PSA		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The WWTP received upgrades in the late 2000's. Minor improvements are needed.		
Proposed Project:	The project will included the installation of a equalization basin, on site pump and valve replacement, expansion of drying beds and roof replacement.		
Existing WWTP:	Name:	Holston	
	Design Flow:	1.25	MGD
	Average Flow:	0.143	MGD
	Receiving Stream:		Holston River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Holston River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be rehabilitation of the existing facilities.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$2,500,000		
Present Worth Per Connection:	#DIV/0!		



## PROJECT DATA SHEET

Project Name: Nickelsville WWTP Improvement Project

County: Scott

Planning District: Lenowisco

Utility Provider: Scott County PSA

Served by Public Water (Y/N): Yes

Existing Conditions: The Nickelsville WWTP is currently in the process of upgrades.

Proposed Project: The project will included upgrades to the pump station throughout the collection system.

Existing WWTP:	Name:	Nickelsville	
	Design Flow:	0.07	MGD
	Average Flow:	0.036	MGD
	Receiving Stream:		Cooper Creek
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes

Watershed or Adjacent Stream:	Name:	Copper Creek	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be rehabilitation of the existing facilities.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$500,000

Present Worth Per Connection: #DIV/0!

## PROJECT DATA SHEET

Project Name:	Dungannon WWTP Improvement Project		
County:	Scott		
Planning District:	Lenowisco		
Utility Provider:	Town of Dungannon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing treatment plant is in good condition.		
Proposed Project:	The project will included minor improvements to the WWTP facility.		
Existing WWTP:	Name:	Dungannon	
	Design Flow:	0.0399	MGD
	Average Flow:	0.0199	MGD
	Receiving Stream:		Clinch River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be rehabilitation of the existing facilities.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$500,000		
Present Worth Per Connection:	#DIV/0!		



## PROJECT DATA SHEET

Project Name: Appalachia Elementary School WWTP to Forcemain Project

County: Wise

Planning District: Lenowisco

Utility Provider: Wise County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The existing Appalachia Elementary School Wastewater Treatment Plant is over 40 years old and is experiencing severe deterioration of the existing treatment systems.

Proposed Project: The project will remove the current discharge at Appalachia Elementary and pump the sewer to the Town of Appalachia.

Existing WWTP:	Name:	Big Stone Gap	
	Design Flow:	4.00	MGD
	Average Flow:	1.575	MGD
	Receiving Stream:		Powell River
	Stream Classification:		IV
	Impaired Stream (Y/N):		No

Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will connect to an existing system with adequate treatment capacity.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Moderate

Total Project Cost: \$1,600,000

Present Worth Per Connection: #DIV/0!

## PROJECT DATA SHEET

Project Name:	Town of Coeburn I&I Improvement Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Town of Coeburn		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing system is approximately 16.3% accountable.		
Proposed Project:	The project will consist of major manhole and sewer line improvements to reduce potential I/I sources.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:		Guest River
	Stream Classification:		IV
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be major repairs/replacement to existing manholes and sewer lines.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$7,000,000		
Present Worth Per Connection:	#DIV/0!		



## PROJECT DATA SHEET

Project Name:	St. Paul SSES Improvements Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Town of St. Paul		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing system is approximately 59.2% accountable.		
Proposed Project:	The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.		
Existing WWTP:	Name:	St. Paul	
	Design Flow:	0.50	MGD
	Average Flow:	0.081	MGD
	Receiving Stream:	Clinch River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Clinch River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be minor repairs/replacement to existing manholes and sewer lines.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$2,500,000		
Present Worth Per Connection:	#DIV/0!		

## PROJECT DATA SHEET

Project Name: Town of Pound I&I Improvement Project

County: Wise

Planning District: Lenowisco

Utility Provider: Wise County Public Service Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximately 10.1% accountable.

Proposed Project: The project will consist of major manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP: Name: Pound  
Design Flow: 0.50 MGD  
Average Flow: 1.053 MGD  
Receiving Stream: Pound River  
Stream Classification: V  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: North Fork Pound Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 0 Commercial = 0 Industrial = 0

Health Hazards:

Construction Feasibility: Very Feasible - The project will be major repairs/replacement to existing manholes and sewer lines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$15,000,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name:	City of Norton SSES Improvements Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	City of Norton		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing system is approximately 13.1% accountable.		
Proposed Project:	The project will consist of major manhole and sewer line improvements to reduce potential I/I sources.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be major repairs/replacement to existing manholes and sewer lines.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$8,000,000		
Present Worth Per Connection:	#DIV/0!		

## PROJECT DATA SHEET

Project Name: Town of Appalachia I&I Improvement Project

County: Wise

Planning District: Lenowisco

Utility Provider: Town of Appalachia

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system experiences high levels of I/I.

Proposed Project: The project will consist of major manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	Big Stone Gap	
	Design Flow:	4.00	MGD
	Average Flow:	1.575	MGD
	Receiving Stream:	Powell River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	

Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be major repairs/replacement to existing manholes and sewer lines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$4,000,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name: Town of Big Stone Gap SSES Improvement Project Project

County: Wise

Planning District: Lenowisco

Utility Provider: Town of Big Stone Gap

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system is approximatley 29.2% accountable.

Proposed Project: The project will consist of major manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	Big Stone Gap	
	Design Flow:	4.00	MGD
	Average Flow:	1.575	MGD
	Receiving Stream:	Powell River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	

Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be major repairs/replacement to existing manholes and sewerlines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$25,000,000

Present Worth Per Connection: #DIV/0!

## PROJECT DATA SHEET

Project Name: CNW I&I Improvement Project

County: Wise

Planning District: Lenowisco

Utility Provider: CNW Authority

Served by Public Water (Y/N): Yes

Existing Conditions: The existing system experiences high levels of I/I.

Proposed Project: The project will consist of minor manhole and sewer line improvements to reduce potential I/I sources.

Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	

Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N):	Yes
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Equivalent Customers Served:	Residential =	0	Commercial =	0	Industrial =	0
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Health Hazards:

Construction Feasibility: Very Feasible - The project will be minor repairs/replacement to existing manholes and sewer lines.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$3,000,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name:	Pound WWTP Improvement Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Wise County Public Service Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The existing system has deteriorated and needs major upgrades to operate.		
Proposed Project:	The project will replace/rehab the entire WWTP.		
Existing WWTP:	Name:	Pound	
	Design Flow:	0.50	MGD
	Average Flow:	1.053	MGD
	Receiving Stream:		Pound River
	Stream Classification:		V
	Impaired Stream (Y/N):		Yes
Watershed or Adjacent Stream:	Name:	North Fork Pound	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be rehabilitation of the existing facilities.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$8,000,000		
Present Worth Per Connection:	#DIV/0!		

# PROJECT DATA SHEET

Project Name: St Paul WWTP Improvement Project

County: Wise

Planning District: Lenowisco

Utility Provider: Town of St. Paul

Served by Public Water (Y/N): Yes

Existing Conditions: The plant completed an upgrade in the last 5 years.

Proposed Project: The plant will need minor improvements.

Existing WWTP: Name: St. Paul  
Design Flow: 0.50 MGD  
Average Flow: 0.081 MGD  
Receiving Stream: Clinch River  
Stream Classification: IV  
Impaired Stream (Y/N): Yes

Watershed or Adjacent Stream: Name: Clinch River Impaired (Y/N): Yes

Equivalent Customers Served: Residential = 0 Commercial = 0 Industrial = 0

Health Hazards:

Construction Feasibility: Very Feasible - The project will be rehabilitation of the existing facilities.

Growth Potential: Residential - Low  
Commercial - Low  
Industrial - Low

Total Project Cost: \$2,000,000

Present Worth Per Connection: #DIV/0!



## PROJECT DATA SHEET

Project Name:	Big Stone Gap WWTP Improvement Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	Town of Big Stone Gap		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The plant completed an upgrade in the mid 2000's but many items are original to the plant upgrade completed over 30 years ago.		
Proposed Project:	The project will include the following upgrade/replacements, headworks, equalization basin modifications, oxidation ditch channel etc.		
Existing WWTP:	Name:	Big Stone Gap	
	Design Flow:	4.00	MGD
	Average Flow:	1.575	MGD
	Receiving Stream:	Powell River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Powell River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be rehabilitation of the existing facilities.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$6,000,000		
Present Worth Per Connection:	#DIV/0!		

## PROJECT DATA SHEET

Project Name:	CNW WWTP Improvement Project		
County:	Wise		
Planning District:	Lenowisco		
Utility Provider:	CNW Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The plant completed an upgrade in the mid 2000's but many items are orginial to the plant completed over 30 years ago.		
Proposed Project:	The plant will need minor improvements.		
Existing WWTP:	Name:	CNW	
	Design Flow:	6.50	MGD
	Average Flow:	3.7	MGD
	Receiving Stream:	Guest River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Guest River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	0	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The project will be rehabilitation of the existing facilities.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$3,000,000		
Present Worth Per Connection:	#DIV/0!		



APPENDIX C

MOUNT ROGERS PLANNING DISTRICT  
EXISTING SYSTEMS UPGRADES

## PROJECT DATA SHEET

Project Name:	Phase 1 Sewer Improvements Project		
County:	Washington		
Planning District:	Mount Rogers		
Utility Provider:	Town of Abingdon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The gravity sewer system was constructed more than 50 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the Wolf Creek Water Reclamation Facility.		
Proposed Project:	The project consists of relining approximately 2,300 linear feet and the replacement of approximately 3,850 linear feet of 18-inch and smaller gravity sewer and rehabilitating approximately 25 manholes in the Whites Mill and Walden Road area.		
Existing WWTP:	Name:	Wolf Creek Water Reclamation Facility	
	Design Flow:	4.95	MGD
	Average Flow:	2.54	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Wolf Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	370	Commercial = 60 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer conveyance will significantly reduce I/I, thus increasing capacity for the area, and reduce SSO's.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	3,314,000	9502000
Present Worth Per Connection:	\$7,707		



## PROJECT DATA SHEET

Project Name:	Walden Road Sewer Improvements Project		
County:	Washington		
Planning District:	Mount Rogers		
Utility Provider:	Town of Abingdon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The gravity sewer system was constructed more than 50 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the Wolf Creek Water Reclamation Facility.		
Proposed Project:	The project consists of replacing approximately 4,500 linear feet and approximately 15 manholes.		
Existing WWTP:	Name:	Wolf Creek Water Reclamation Facility	
	Design Flow:	4.95	MGD
	Average Flow:	2.54	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Wolf Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	370	Commercial = 60 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements on the interceptor will significantly reduce I/I, thus increasing capacity for the area, and reduce SSO's.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	2,663,000	
Present Worth Per Connection:		\$6,193	

## PROJECT DATA SHEET

Project Name:	Phase 2 Sewer Improvements Project		
County:	Washington		
Planning District:	Mount Rogers		
Utility Provider:	Town of Abingdon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The gravity sewer system was constructed more than 50 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the Wolf Creek Water Reclamation Facility.		
Proposed Project:	The project consists of relining approximately 2,300 linear feet and the replacement of approximately 3,850 linear feet of 18-inch and smaller gravity sewer and rehabilitating approximately 25 manholes.		
Existing WWTP:	Name:	Wolf Creek Water Reclamation Facility	
	Design Flow:	4.95	MGD
	Average Flow:	2.54	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Wolf Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	206	Commercial = 309 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer conveyance will significantly reduce I/I, thus increasing capacity for the area, and reduce SSO's.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	9,502,000	
Present Worth Per Connection:	\$18,450		



## PROJECT DATA SHEET

Project Name:	Phase 3 Sewer Improvements Project		
County:	Washington		
Planning District:	Mount Rogers		
Utility Provider:	Town of Abingdon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The gravity sewer system was constructed more than 50 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the Wolf Creek Water Reclamation Facility.		
Proposed Project:	This project is currently in the SSES phase, and a full project description has not been developed at this time. Given the previous SSES work, and given flow data from the Porterfiled Hwy and the Cummings Heights area, it is anticipated that portions of the system will require improvements.		
Existing WWTP:	Name:	Wolf Creek Water Reclamation Facility	
	Design Flow:	4.95	MGD
	Average Flow:	2.54	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Wolf Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	533	Commercial = 80 Industrial = 7
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer conveyance will significantly reduce I/I, thus increasing capacity for the area, and reduce SSO's.		
Growth Potential:	Residential - High Commercial - High Industrial - High		
Total Project Cost:	\$	5,000,000	
Present Worth Per Connection:		\$8,065	

## PROJECT DATA SHEET

Project Name:	Phase 4 Sewer Improvements Project		
County:	Washington		
Planning District:	Mount Rogers		
Utility Provider:	Town of Abingdon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The gravity sewer system was constructed more than 50 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the Wolf Creek Water Reclamation Facility.		
Proposed Project:	The Town has a place holder to perform an SSES in the Lee Hwy and Hillman Hwy areas on the east side of Town later in 2024. Therefore, a full project description has not been developed at this time. Given the previous SSES work, and the condition of the those areas already assessed it is anticipated that a portion of this area of the system will require improvements.		
Existing WWTP:	Name:	Wolf Creek Water Reclamation Facility	
	Design Flow:	4.95	MGD
	Average Flow:	2.54	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Wolf Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	886	Commercial = 130 Industrial = 14
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer conveyance will significantly reduce I/I, thus increasing capacity for the area, and reduce SSO's.		
Growth Potential:	Residential - High Commercial - High Industrial - High		
Total Project Cost:	\$	5,000,000	
Present Worth Per Connection:		\$4,854	



## PROJECT DATA SHEET

Project Name:	Phase 5 Sewer Improvements Project		
County:	Washington		
Planning District:	Mount Rogers		
Utility Provider:	Town of Abingdon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The gravity sewer system was constructed more than 50 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the Wolf Creek Water Reclamation Facility.		
Proposed Project:	The Town has a place holder to perform an SSES in the Vances Mill and Stonemill areas on the south and west side of Town later in 2025. Therefore, a full project description has not been developed at this time. Given the previous SSES work, and the condition of the those areas already assessed it is anticipated that a portion of this area of the system will require improvements.		
Existing WWTP:	Name:	Wolf Creek Water Reclamation Facility	
	Design Flow:	4.95	MGD
	Average Flow:	2.54	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Wolf Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1772	Commercial = 250 Industrial = 38
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer conveyance system will significantly reduce I/I, thus increasing capacity for the area, and reduce SSO's.		
Growth Potential:	Residential - High Commercial - High Industrial - High		
Total Project Cost:	\$	10,000,000	
Present Worth Per Connection:		\$4,854	

## PROJECT DATA SHEET

Project Name: **Wolf Creek Water Reclamation Facility Improvements**

County: **Washington**

Planning District: **Mount Rogers**

Utility Provider: **Town of Abingdon**

Served by Public Water (Y/N): **Yes**

Existing Conditions: **The Water Reclamation Facility was originally built in 1978, and thought there have been several improvements made to the facility (the last one being in 2011), several treatment components are no longer working or functioning properly. Those that are working have exceeded their life expectancy and are in desparate need of replacement.**

Proposed Project: **The proposed project would include the replacement of VFD's, UV Disinfection Unit, Electrical work throughout the facility, replacement of aeration dissolved oxygen controllers, installation of a trash pump, replacement of the digester feed pump gearbox, replacement of pumps and motors, and the replacement of primary sludge tank.**

Existing WWTP: **Name: Wolf Creek Water Reclamation Facility**  
**Design Flow: 4.95 MGD**  
**Average Flow: 2.54 MGD**  
**Receiving Stream: Wolf Creek**  
**Stream Classification: IV**  
**Impaired Stream (Y/N): Yes**

Watershed or Adjacent Stream: **Name: Wolf Creek** **Impaired (Y/N): Yes**

Equivalent Customers Served: **Residential = 4430 Commercial = 690 Industrial = 31**

Health Hazards:

Construction Feasibility: **Very Feasible - The improvements to the Water Reclamation Facility will improve operability, reduce O&M costs, and improve the water quality of the effluent discharge into Wolf Creek.**

Growth Potential: **Residential - High  
Commercial - High  
Industrial - High**

Total Project Cost: **\$ 5,000,000**

Present Worth Per Connection: **\$971**



## PROJECT DATA SHEET

Project Name:	System-Wide Sewer Lift Station Improvements Project		
County:	Washington		
Planning District:	Mount Rogers		
Utility Provider:	Town of Abingdon		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The gravity sewer system was constructed more than 50 years ago and has deteriorated significantly. The Town has six (6) sewer lift stations throughout the conveyance system that were installed between 1984 and 2007. The older lift stations and wetwells have exceeded their life expectancy and need to be replaced.		
Proposed Project:	The proposed project includes the removal of one lift station and the installation of 1,000 linear feet of 12-inch gravity sewer line, the replacement and relocation of a lift station and wet well, and upgrades to the pumps, controls, and wet wells at the remaining three (3) locations.		
Existing WWTP:	Name:	Wolf Creek Water Reclamation Facility	
	Design Flow:	4.95	MGD
	Average Flow:	2.54	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Wolf Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	4430	Commercial = 690 Industrial = 31
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer lift stations throughout the conveyance system will improve system operability, increase capacity, reducing O&M costs, and aid in reducing SSO's. Further, the removal of one of the lift stations will reduce electrical costs and improve system operations in that area.		
Growth Potential:	Residential - High Commercial - High Industrial - High		
Total Project Cost:	\$	3,000,000	
Present Worth Per Connection:	\$582		

## PROJECT DATA SHEET

Project Name:	Bastian SSES Rehabilitation		
County:	Bland		
Planning District:	Mount Rogers		
Utility Provider:	Bland County		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Information not provided (INP). SSES has been completed.		
Proposed Project:	Information not provided (INP). Cost estimated based upon DEQ funding amount requested following the SSES completion		
Existing WWTP:	Name:	Bastian Wastewater Treatment Plant	
	Design Flow:	0.20	MGD
	Average Flow:	0.098	MGD
	Receiving Stream:	Wolf Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Upper New River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	411	Commercial = Industrial =
Health Hazards:	Reduce I/I and the resultant likelihood of system overflows.		
Construction Feasibility:	Information not provided. SSES report has been completed and the resulting recommended improvements were estimated to cost \$810,000.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$	810,000	
Present Worth Per Connection:		\$1,971	



## PROJECT DATA SHEET

Project Name:	Beaver Creek Interceptor Rehabilitation Project		
County:	Washington	(City of Bristol)	
Planning District:	Mount Rogers		
Utility Provider:	BVU Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The interceptor is the main conveyance line in the Beaver Creek Sewer Shed. It was constructed more than 50 years ago and has deteriorated significantly.		
Proposed Project:	The project consists of relining approximately 19,000 linear feet of 32-inch and smaller gravity sewer and rehabilitating approximately 96 manholes.		
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP	
	Design Flow:	15.00	MGD
	Average Flow:	9	MGD
	Receiving Stream:	Beaver Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Beaver Creek (Tennessee & Big Sandy River Basins)	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1653	Commercial = 247 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements on the interceptor will significantly reduce I/I, thus increase capacity for the area.		
Growth Potential:	Residential - High Commercial - High Industrial - High		
Total Project Cost:	\$	9,532,000	
Present Worth Per Connection:	\$5,017		

## PROJECT DATA SHEET

Project Name:	Beaver Creek Interceptor EQ Basin			
County:	Washington	(City of Bristol)		
Planning District:	Mount Rogers			
Utility Provider:	BVU Authority			
Served by Public Water (Y/N):	Yes			
Existing Conditions:	The capacity of the Beaver Creek interceptor becomes greatly reduced during wet weather events resulting in multiple overflows. Accordingly, installing a 2-million gallon EQ Basin will help minimize these overflows.			
Proposed Project:	The project consists of constructing a 2-million gallon Equalization Basin and the replacement of approximately 1,660 linear feet of undersized gravity sewer main.			
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP		
	Design Flow:	15.00	MGD	
	Average Flow:	9	MGD	
	Receiving Stream:	Beaver Creek		
	Stream Classification:	IV		
	Impaired Stream (Y/N):	Yes		
Watershed or Adjacent Stream:	Name:	Beaver Creek	Impaired (Y/N):	Yes
		(Tennessee & Big Sandy River Basins)		
Equivalent Customers Served:	Residential =	2670	Commercial =	400
			Industrial =	0
Health Hazards:				
Construction Feasibility:	Very Feasible - The installation of the EQ Basin and the replacement of undersized gravity sewer main will minimize the number and magnitude of SSO's in the Beaver Creek Sewer Shed.			
Growth Potential:	Residential - High Commercial - High Industrial - High			
Total Project Cost:	\$7,294,000			
Present Worth Per Connection:	\$2,376			



## PROJECT DATA SHEET

Project Name:	BC-1568 Rehabilitation Project		
County:	Washington	(City of Bristol)	
Planning District:	Mount Rogers		
Utility Provider:	BVU Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The BC-1568 project is in the southern area of the Beaver Creek Sewer Shed and conveys leachate flows from the City of Bristol, VA landfill. Nearly 50% of this sub-basin was installed more than 50 years ago and has deteriorated significantly.		
Proposed Project:	The project consists of relining approximately 6,000 LF, pipe bursting approximately 4,400 LF, and the replacement of 4,350 LF of gravity sewer and rehabilitating and replacement of approximately 50 manholes.		
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP	
	Design Flow:	15.00	MGD
	Average Flow:	9	MGD
	Receiving Stream:	Beaver Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Beaver Creek (Tennessee & Big Sandy River Basins)	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	534	Commercial = 76 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements in this area will increase the capacity of the system via I/I removal, thus reducing the number and magnitude of SSO's. Given that this sub-basin conveys leachate from the City's landfill, preventing SSO's will make a significant environmental impact.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Moderate		
Total Project Cost:	\$5,253,543		
Present Worth Per Connection:	\$8,612		

## PROJECT DATA SHEET

Project Name:	BC-1301 Rehabilitation Project		
County:	Washington	(City of Bristol)	
Planning District:	Mount Rogers		
Utility Provider:	BVU Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The BC-1301 project is in the downtown area of the City of Bristol in the Beaver Creek Sewer Shed. Most of the sewer system in this sub-basin was installed more than 50 years ago and has deteriorated significantly.		
Proposed Project:	The project consists of relining and replacement of approximately 8,000 LF, and rehabilitating and replacement of approximately 30 manholes.		
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP	
	Design Flow:	15.00	MGD
	Average Flow:	9	MGD
	Receiving Stream:	Beaver Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Beaver Creek (Tennessee & Big Sandy River Basins)	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	267	Commercial = 38 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements in this area will increase the capacity of the system via I/I removal, thus reducing the number and magnitude of SSO's.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Moderate		
Total Project Cost:	\$2,867,800		
Present Worth Per Connection:	\$9,403		



## PROJECT DATA SHEET

Project Name:	Beaver Creek Interceptor Rehabilitation Project - Phase 2			
County:	Washington	(City of Bristol)		
Planning District:	Mount Rogers			
Utility Provider:	BVU Authority			
Served by Public Water (Y/N):	Yes			
Existing Conditions:	The interceptor is the main conveyance line in the Beaver Creek Sewer Shed. It was constructed more than 50 years ago and has deteriorated significantly.			
Proposed Project:	The project consists of replacing approximately 3,600 linear feet of 32-inch and smaller gravity sewer and replacing approximately 30 manholes.			
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP		
	Design Flow:	15.00	MGD	
	Average Flow:	9	MGD	
	Receiving Stream:	Beaver Creek		
	Stream Classification:	IV		
	Impaired Stream (Y/N):	Yes		
Watershed or Adjacent Stream:	Name:	Beaver Creek	Impaired (Y/N):	Yes
		(Tennessee & Big Sandy River Basins)		
Equivalent Customers Served:	Residential =	4000	Commercial =	600
			Industrial =	0
Health Hazards:				
Construction Feasibility:	Very Feasible - The improvements on the interceptor will significantly reduce I/I, increase capacity for the area, and minimize SSO's			
Growth Potential:	Residential - High Commercial - High Industrial - High			
Total Project Cost:	\$15,000,000			
Present Worth Per Connection:	\$3,261			

## PROJECT DATA SHEET

Project Name:	Sinking Creek Rehabilitation Project		
County:	Washington	(City of Bristol)	
Planning District:	Mount Rogers		
Utility Provider:	BVU Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The Sinking Creek Sewer Shed is on the Southeast side of BVU's system and conveys sewer from residential and industrial customers to the City of Bristol, TN. Portions of this system was installed 30-40 years ago and nearly 50% has deteriorated significantly.		
Proposed Project:	The project consists of relining and replacement of approximately 25,650 LF of 15-inch and smaller gravity sewer line.		
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP	
	Design Flow:	15.00	MGD
	Average Flow:	9	MGD
	Receiving Stream:	Beaver Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Beaver Creek (Tennessee & Big Sandy River Basins)	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	670	Commercial = Industrial =
			100 3
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements in this area will increase the capacity of the system via I/I removal, thus reducing the number and magnitude of SSO's.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Moderate		
Total Project Cost:	\$2,867,800		
Present Worth Per Connection:	\$3,710		



## PROJECT DATA SHEET

Project Name:	Gate City Highway Rehabilitation Project		
County:	Washington	(City of Bristol)	
Planning District:	Mount Rogers		
Utility Provider:	BVU Authority		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The Gate City Highway Sewer Shed is the western most sewer shed of BVU's system and conveys sewer from residential and commercial customers to the City of Bristol, TN. Portions of this system was installed 30-40 years ago and nearly 50% has deteriorated significantly.		
Proposed Project:	The project consists of relining and replacement of approximately 6,000 LF of 12-inch and smaller gravity sewer line.		
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP	
	Design Flow:	15.00	MGD
	Average Flow:	9	MGD
	Receiving Stream:	Beaver Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Beaver Creek (Tennessee & Big Sandy River Basins)	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	335	Commercial = 50 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements in this area will increase the capacity of the system via I/I removal, thus reducing the number and magnitude of SSO's.		
Growth Potential:	Residential - High Commercial - High Industrial - High		
Total Project Cost:	\$1,526,850		
Present Worth Per Connection:	\$3,966		

## PROJECT DATA SHEET

Project Name:	Little Creek Interceptor Rehabilitation Project			
County:	Washington	(City of Bristol)		
Planning District:	Mount Rogers			
Utility Provider:	BVU Authority			
Served by Public Water (Y/N):	Yes			
Existing Conditions:	The interceptor is the main conveyance line in the Little Creek Sewer Shed. It was constructed more than 50 years ago and has deteriorated significantly.			
Proposed Project:	The project consists of replacing and/or relining approximately 5,000 linear feet of 24-inch and smaller gravity sewer.			
Existing WWTP:	Name:	City of Bristol, Tennessee WWTP		
	Design Flow:	15.00	MGD	
	Average Flow:	9	MGD	
	Receiving Stream:	Beaver Creek		
	Stream Classification:	IV		
	Impaired Stream (Y/N):	Yes		
Watershed or Adjacent Stream:	Name:	Beaver Creek	Impaired (Y/N):	Yes
		(Tennessee & Big Sandy River Basins)		
Equivalent Customers Served:	Residential =	1653	Commercial =	247
			Industrial =	0
Health Hazards:				
Construction Feasibility:	Very Feasible - The improvements on the interceptor will significantly reduce I/I, thus increase capacity for the area.			
Growth Potential:	Residential - High Commercial - High Industrial - Moderate			
Total Project Cost:	\$3,250,000			
Present Worth Per Connection:	\$1,711			



## PROJECT DATA SHEET

Project Name:	I-77 Exit 1 Wastewater System Improvements Project		
County:	Carroll		
Planning District:	Mount Rogers		
Utility Provider:	Carroll County PSA		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Existing 20,000 GPD packaged WWTP has experienced numerous effluent violations resulting in DEQ Enforcement actions.		
Proposed Project:	The proposed project would involve constructing a pump station and force main connecting to a planned sewer extension from the NCDOT I-77 Welcome Center to the City of Mount Airy's collection system. Once connected to the Mount Airy system, the CCPSA's Exit 1 WWTP would be closed and taken out of service. Likewise, two other packaged WWTPs serving the NCDOT and VDOT Welcome Centers would be closed - eliminating three permitted WWTP discharges.		
Existing WWTP:	Name:	I-77 Exit 1 Wastewater Treatment Plant	
	Design Flow:	0.02	MGD
	Average Flow:	0.009	MGD
	Receiving Stream:	Stony Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Yadkin - Pee Dee	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	0	Commercial = 3 Industrial = 0
Health Hazards:			
Construction Feasibility:	Regional project with participation by the Carroll County PSA, VDOT, NCDOT, and the City of Mount Airy.		
Growth Potential:	Residential - low Commercial - High Industrial - Low		
Total Project Cost:	\$ 2,632,033		
Present Worth Per Connection:	\$877,344		

## PROJECT DATA SHEET

Project Name:	System-Wide Sewer Improvements Project		
County:	Smyth		
Planning District:	Mount Rogers		
Utility Provider:	Town of Chilhowie		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Approximately half of the existing gravity sewer system was constructed more than 30 years ago and has deteriorated significantly, resulting in significant I/I flows. Thus the Town's system experiences SSO's during wet weather events and increased flows in the the WWTP.		
Proposed Project:	The project consists of improving gravity sewer lines and manholes throughout the system, where system improvements remain to be completed.		
Existing WWTP:	Name:	Chilhowie Regional Water Treatment Plant	
	Design Flow:	1.00	MGD
	Average Flow:	0.248	MGD
	Receiving Stream:	Middle Fork of the Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Middle Fork Holston River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1039	Commercial = 130 Industrial = 6
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the sewer conveyance will significantly reduce I/I, thus increasing capacity for the area, and reduce SSO's.		
Growth Potential:	Residential - Moderate Commercial - High Industrial - High		
Total Project Cost:	\$	3,200,000	
Present Worth Per Connection:	\$2,723		



## PROJECT DATA SHEET

Project Name:	Fort Chiswell Wastewater Treatment Plant Expansion Project		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Wythe County		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Existing WWTP planned to increase treatment capacity in order to accommodate industrial growth.		
Proposed Project:	The proposed project would involve doubling the WWTP capacity from 1.25 MGD up to 2.5 MGD.		
Existing WWTP:	Name:	Fort Chiswell Wastewater Treatment Plant	
	Design Flow:	1.25	MGD
	Average Flow:	0.419	MGD
	Receiving Stream:	Reed Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Upper New River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	674	Commercial = Industrial =
Health Hazards:			
Construction Feasibility:	PER completed for the project and Wythe County is proceeding with efforts to expand the WWTP due primarily due to industrial growth at Progress Park.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - High		
Total Project Cost:	\$	8,185,000	
Present Worth Per Connection:		\$12,144	

## PROJECT DATA SHEET

Project Name:	Fries Wastewater Treatment Plant Improvements Project		
County:	Grayson		
Planning District:	Mount Rogers		
Utility Provider:	Town of Fries		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Several treatment components are no longer working or functioning properly. Those that are working have exceeded their life expectancy and are in desperate need of replacement.		
Proposed Project:	The proposed project would include the replacement of influent pumps and controls, replacement of aerators, clarifier drives, and additional miscellaneous improvements.		
Existing WWTP:	Name:	Fries Wastewater Treatment Plant	
	Design Flow:	0.22	MGD
	Average Flow:	0.085	MGD
	Receiving Stream:	New River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Upper New River	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	300	Commercial = 10 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the WWTP will help to alleviate the risk of WWTP due to numerous components that are out of service		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$	1,471,000	
Present Worth Per Connection:		\$4,745	



## PROJECT DATA SHEET

Project Name:	Galax Sewer System I&I Improvements		
County:	City of Galax		
Planning District:	Mount Rogers		
Utility Provider:	City of galax		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Information not provided (INP). SSES has not yet been completed.		
Proposed Project:	Information not provided (INP). Cost estimated based upon using \$7,500/connection for entire system.		
Existing WWTP:	Name:	City of Galax Wastewater Treatment Plant	
	Design Flow:	3.00	MGD
	Average Flow:	1.678	MGD
	Receiving Stream:	New River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	No	
Watershed or Adjacent Stream:	Name:	Upper New River	Impaired (Y/N): No
Equivalent Customers Served:	Residential =	2400	Commercial = 460 Industrial = 40
Health Hazards:	Reduce I/I and the resultant likelihood of system overflows.		
Construction Feasibility:	Information not provided. SSES has not been completed. City completed several system improvements projects in recent years. Cost of I/I improvements estimated using \$7,500/connection and approximated to cover roughly half of the system's customer base.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Moderate		
Total Project Cost:	\$ 10,875,000		
Present Worth Per Connection:	\$3,750		

## PROJECT DATA SHEET

Project Name:	Town of Hillsville SSES		
County:	Carroll		
Planning District:	Mount Rogers		
Utility Provider:	Town of Hillsville		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The current system has areas that are in need of rehab due to their age.		
Proposed Project:	The project consists of lining of sewer main, cementitious lining of 32 manholes, CCTV of sewer main, lining of additional manholes.		
Existing WWTP:	Name:	Town of Hillsville Wastewater Treatment Plant	
	Design Flow:	1.25	MGD
	Average Flow:	0.375	MGD
	Receiving Stream:	Little Reed Island Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Little Reed Island Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1050	Commercial = 180 Industrial = 4
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the wastewater system will address the systems aging infrastructure.		
Growth Potential:	Residential - High Commercial - High Industrial - Moderate		
Total Project Cost:	\$	5,600,000	
Cost Per Connection:	\$4,538		



## PROJECT DATA SHEET

Project Name:	Sewer Line CIPP-Lining (North Independence Avenue) & Manhole Rehabilitation		
County:	Grayson		
Planning District:	Mount Rogers		
Utility Provider:	Town of Independence		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	The northernmost section of the Town's gravity sewer system was installed several decades ago. Accordingly, several lines in this area have deteriorated, allowing I/I into the system resulting in system SSO's and increased flows at the Town's WWTP.		
Proposed Project:	The project consists of relining approximately 5,600 linear feet of 10-inch and smaller gravity sewer and rehabilitating approximately 30 manholes.		
Existing WWTP:	Name:	Independence Sewage Treatment Plant	
	Design Flow:	0.47	MGD
	Average Flow:	0.298	MGD
	Receiving Stream:	Peach Bottom Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Peach Bottom Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	110	Commercial = 0 Industrial = 0
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements on the main gravity line in this area will significantly reduce I/I, thus increase capacity for the area, reduce SSO's, and reduce the total amount of flows to the WWTP during wet weather periods.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Moderate		
Total Project Cost:	\$	1,010,840	
Present Worth Per Connection:	\$9,189		

## PROJECT DATA SHEET

Project Name:	Marion SSES Rehabilitation		
County:	Smyth		
Planning District:	Mount Rogers		
Utility Provider:	Town of Marion		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	SSES has been completed for a portion of the collection system.		
Proposed Project:	Various segments of sewer line replacement, CIPP repairs, manhole rehabilitation and other related work. Cost estimate based upon DEQ funding amount requested following the SSES completion		
Existing WWTP:	Name:	Marion Regional Wastewater Treatment Plant	
	Design Flow:	3.40	MGD
	Average Flow:	1.383	MGD
	Receiving Stream:	Middle Fork Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Staley Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	1830	Commercial = 1126 Industrial = 0
Health Hazards:	Reduce I/I and the resultant likelihood of system overflows.		
Construction Feasibility:	SSES report has been completed and the resulting recommended improvements were estimated to cost \$1,300,488.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$	1,300,488	
Present Worth Per Connection:		\$440	



## PROJECT DATA SHEET

Project Name:	Max Meadows SSES Rehabilitation		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Wythe County		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Information not provided (INP). SSES has been completed.		
Proposed Project:	Information not provided (INP). Cost estimated based upon DEQ funding amount requested following the SSES completion		
Existing WWTP:	Name:	Fort Chiswell Wastewater Treatment Plant	
	Design Flow:	1.25	MGD
	Average Flow:	0.419	MGD
	Receiving Stream:	Reed Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Upper New River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	674	Commercial = Industrial =
Health Hazards:	Reduce I/I and the resultant likelihood of system overflows.		
Construction Feasibility:	Information not provided. SSES report has been completed and the resulting recommended improvements were estimated to cost \$1,967,137.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$	1,209,000	
Present Worth Per Connection:		\$1,794	

## PROJECT DATA SHEET

Project Name:	Rural Retreat Wastewater Treatment Plant Improvements Project		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Town of Rural Retreat		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Existing WWTP's average daily flow during 2021 was about 93% of permitted capacity		
Proposed Project:	The proposed project would include the replacement of the grit collector and installation of a screen at the influent pump station, replacement and relocation of aerators, replacement of UV disinfection system, and additional miscellaneous improvements.		
Existing WWTP:	Name:	Rural Retreat Wastewater Treatment Plant	
	Design Flow:	0.25	MGD
	Average Flow:	0.233	MGD
	Receiving Stream:	Reed Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Upper New River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	674	Commercial = 59 Industrial = 5
Health Hazards:			
Construction Feasibility:	Unknown at this time - PER not yet completed. The cost of WWTP expansion from 0.25 MGD to 0.5 MGD has been approximated using a general cost value of \$10/gallon/day of additional capacity.		
Growth Potential:	Residential - Moderate Commercial - Moderate Industrial - Moderate		
Total Project Cost:	\$ 2,500,000		
Present Worth Per Connection:	\$3,388		



## PROJECT DATA SHEET

Project Name:	Saltville Phase 2 SSES Rehabilitation		
County:	Smyth		
Planning District:	Mount Rogers		
Utility Provider:	Town of Saltville		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	SSES has been completed for a second area of the collection system.		
Proposed Project:	Various segments of sewer line replacement, CIPP repairs, manhole rehabilitation and other related work. Cost estimate based upon DEQ funding amount requested following the SSES completion		
Existing WWTP:	Name:	Saltville Wastewater Treatment Plant	
	Design Flow:	0.99	MGD
	Average Flow:	0.331	MGD
	Receiving Stream:	North Fork Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	North Fork Holston River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	880	Commercial = 61 Industrial = 2
Health Hazards:	Reduce I/I and the resultant likelihood of system overflows.		
Construction Feasibility:	SSES report has been completed and the resulting recommended improvements were estimated to cost \$1,476,000.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$	1,476,000	
Present Worth Per Connection:	\$1,565		

## PROJECT DATA SHEET

Project Name:	Saltville Wastewater Treatment Plant Improvements Project		
County:	Smyth		
Planning District:	Mount Rogers		
Utility Provider:	Town of Saltville		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Several treatment components are no longer working or functioning properly. Those that are working have exceeded their life expectancy and are in desperate need of replacement.		
Proposed Project:	The proposed project would include the replacement of the grit collector and installation of a screen at the influent pump station, replacement and relocation of aerators, replacement of UV disinfection system, and additional miscellaneous improvements.		
Existing WWTP:	Name:	Saltville Wastewater Treatment Plant	
	Design Flow:	0.99	MGD
	Average Flow:	0.331	MGD
	Receiving Stream:	North Fork Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	North Fork Holston River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	880	Commercial = 61 Industrial = 2
Health Hazards:			
Construction Feasibility:	Very Feasible - The improvements to the WWTP will help to alleviate the risk of WWTP failure due to numerous components that are at risk of failure.		
Growth Potential:	Residential - Moderate Commercial - Low Industrial - Low		
Total Project Cost:	\$ 2,500,000		
Present Worth Per Connection:	\$2,651		



## PROJECT DATA SHEET

Project Name:	Staley Creek SSES Rehabilitation		
County:	Smyth		
Planning District:	Mount Rogers		
Utility Provider:	Smyth County		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Information not provided (INP). SSES has been completed.		
Proposed Project:	Information not provided (INP). Cost estimated based upon DEQ funding amount requested following the SSES completion		
Existing WWTP:	Name:	Marion Regional Wastewater Treatment Plant	
	Design Flow:	3.40	MGD
	Average Flow:	1.383	MGD
	Receiving Stream:	Middle Fork Holston River	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Staley Creek	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	82	Commercial = 0 Industrial = 0
Health Hazards:	Reduce I/I and the resultant likelihood of system overflows.		
Construction Feasibility:	Information not provided. SSES report has been completed and the resulting recommended improvements were estimated to cost \$500,000.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$	500,000	
Present Worth Per Connection:		\$6,098	

## PROJECT DATA SHEET

Project Name:	Wytheville SSES Rehabilitation		
County:	Wythe		
Planning District:	Mount Rogers		
Utility Provider:	Town of Wytheville		
Served by Public Water (Y/N):	Yes		
Existing Conditions:	Information not provided (INP). SSES has been completed.		
Proposed Project:	Information not provided (INP). Cost estimated based upon DEQ funding amount requested following the SSES completion		
Existing WWTP:	Name:	Wytheville Wastewater Treatment Plant	
	Design Flow:	4.00	MGD
	Average Flow:	2.07	MGD
	Receiving Stream:	Reed Creek	
	Stream Classification:	IV	
	Impaired Stream (Y/N):	Yes	
Watershed or Adjacent Stream:	Name:	Upper New River	Impaired (Y/N): Yes
Equivalent Customers Served:	Residential =	2754	Commercial = 426 Industrial = 26
Health Hazards:	Reduce I/I and the resultant likelihood of system overflows.		
Construction Feasibility:	Information not provided. SSES report has been completed and the resulting recommended improvements were estimated to cost \$1,967,137.		
Growth Potential:	Residential - Low Commercial - Low Industrial - Low		
Total Project Cost:	\$	1,967,137	
Present Worth Per Connection:		\$614	



## APPENDIX D

### UNIFORM COST ESTIMATING SUPPORT DATA

In development of construction cost estimates for potential sewer line extensions, generalized unit cost estimates were prepared in all locations where a previous PER or CIP was not available. The unit costs were established using averages of recent bid results.

## UNIT COSTS - CONSTRUCTION

<b>SANITARY SEWER CONNECTION TO GRAVITY SEWER</b>							

1 EA. Wye and saddle @	\$250 /EA.	\$250
1 EA. Cleanout @	\$750 /EA.	\$750
50 L.F. 4-inch Service Lateral @	\$65 /L.F.	\$3,250
		<hr/>

**Gravity Sewer Connection, EA.**

**\$4,250**

<b>SANITARY SEWER CONNECTION TO FORCE MAIN</b>							

1 EA. Grinder Pump Station @	\$22,000 /EA.	\$22,000
40 L.F. 1 1/4-inch Service Lateral @	\$25 /L.F.	\$1,000
10 L.F. 4-inch Service Lateral @	\$65 /L.F.	\$650
		<hr/>

**Force Main Connection, EA.**

**\$23,650**

<b>15-INCH GRAVITY SEWER</b>							

10,000 L.F. 15-inch Gravity Sewer @	\$295 /L.F.	\$2,950,000
34 EA. Manholes @	\$5,000 /EA.	\$170,000
1 EA. Road Crossing @	\$70,000 /EA.	\$70,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
50 Tons Miscellaneous Aggregate @	\$40 /Ton	\$2,000
25 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$7,500
		<hr/>

Total

\$3,212,250

**15-inch Gravity Sewer Cost, L.F.**

**\$321**



## **UNIT COSTS - CONSTRUCTION**

<b>12-INCH GRAVITY SEWER</b>			
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10,000 L.F. 12-inch Gravity Sewer @	\$250 /L.F.	\$2,500,000
34 EA. Manholes @	\$5,000 /EA.	\$170,000
1 EA. Road Crossing @	\$60,000 /EA.	\$60,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
50 Tons Miscellaneous Aggregate @	\$40 /Ton	\$2,000
25 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$7,500

Total \$2,752,250

**12-inch Gravity Sewer Cost, L.F.**

**\$275**

<b>10-INCH GRAVITY SEWER</b>			
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10,000 L.F. 10-inch Gravity Sewer @	\$215 /L.F.	\$2,150,000
34 EA. Manholes @	\$5,000 /EA.	\$170,000
1 EA. Road Crossing @	\$55,000 /EA.	\$55,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
50 Tons Miscellaneous Aggregate @	\$40 /Ton	\$2,000
25 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$7,500

Total \$2,397,250

**10-inch Gravity Sewer Cost, L.F.**

**\$240**

<b>8-INCH GRAVITY SEWER</b>			
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10,000 L.F. 8-inch Gravity Sewer @	\$185 /L.F.	\$1,850,000
34 EA. Manholes @	\$5,000 /EA.	\$170,000
1 EA. Road Crossing @	\$50,000 /EA.	\$50,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
50 Tons Miscellaneous Aggregate @	\$45 /Ton	\$2,250
25 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$7,500

Total \$2,092,500

**8-inch Gravity Sewer Cost, L.F.**

**\$209**

## UNIT COSTS - CONSTRUCTION

<b>6-INCH GRAVITY SEWER</b>								

10,000 L.F. 6-inch Gravity Sewer @	\$130 /L.F.	\$1,300,000
34 EA. Manholes @	\$5,000 /EA.	\$170,000
1 EA. Road Crossing @	\$45,000 /EA.	\$45,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
50 Tons Miscellaneous Aggregate @	\$45 /Ton	\$2,250
25 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$7,500

Total \$1,537,500

**6-inch Gravity Sewer Cost, L.F.**

**\$154**

<b>8-INCH FORCE MAIN SEWER</b>								

10,000 L.F. 8-inch Force Main Sewer @	\$140 /L.F.	\$1,400,000
20 EA. Force Main Cleanout @	\$6,000 /EA.	\$120,000
3 EA. Air Release/Vacuum Valve @	\$7,500 /EA.	\$22,500
1 EA. Road Crossing @	\$50,000 /EA.	\$50,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
30 Tons Miscellaneous Aggregate @	\$45 /Ton	\$1,350
15 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$4,500

Total \$1,611,100

**8-inch Force Main Sewer Cost, L.F.**

**\$161**

<b>6-INCH FORCE MAIN SEWER</b>								

10,000 L.F. 6-inch Force Main Sewer @	\$125 /L.F.	\$1,250,000
20 EA. Force Main Cleanout @	\$6,000 /EA.	\$120,000
3 EA. Air Release/Vacuum Valve @	\$7,500 /EA.	\$22,500
1 EA. Road Crossing @	\$50,000 /EA.	\$50,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
30 Tons Miscellaneous Aggregate @	\$45 /Ton	\$1,350
15 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$4,500

Total \$1,461,100

**6-inch Force Main Sewer Cost, L.F.**

**\$146**



## UNIT COSTS - CONSTRUCTION

<b>4-INCH FORCE MAIN SEWER</b>								

10,000 L.F. 4-inch Force Main Sewer @	\$100 /L.F.	\$1,000,000
20 EA. Force Main Cleanout @	\$6,000 /EA.	\$120,000
3 EA. Air Release/Vacuum Valve @	\$7,500 /EA.	\$22,500
1 EA. Road Crossing @	\$50,000 /EA.	\$50,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
30 Tons Miscellaneous Aggregate @	\$45 /Ton	\$1,350
15 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$4,500

Total \$1,211,100

**4-inch Force Main Sewer Cost, L.F.**

**\$121**

<b>2-INCH FORCE MAIN SEWER</b>								

10,000 L.F. 2-inch Force Main Sewer @	\$75 /L.F.	\$750,000
20 EA. Force Main Cleanout @	\$6,000 /EA.	\$120,000
3 EA. Air Release/Vacuum Valve @	\$7,500 /EA.	\$22,500
1 EA. Road Crossing @	\$50,000 /EA.	\$50,000
1 EA. Stream Crossing @	\$12,750 /EA.	\$12,750
30 Tons Miscellaneous Aggregate @	\$45 /Ton	\$1,350
15 C.Y. Miscellaneous Concrete @	\$300 /C.Y.	\$4,500

Total \$961,100

**2-inch Force Main Sewer Cost, L.F.**

**\$96**

## UNIT COSTS - CONSTRUCTION

<b>SEWAGE PUMP STATION</b>								
<b>Sewage Pump Station, EA.</b>								<b>\$300,000</b>

<b>GRINDER PUMP STATION</b>								
<b>Grinder Pump Station, EA.</b>								<b>\$95,000</b>

### **PLANT EXPANSION / I & I REMEDIATION**

<b>Plant Expansion / I &amp; I Remediation, Per Connection, EA.</b>	<b>\$7,500</b>
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<b>NEW TREATMENT FACILITIES</b>								
<b>0 - 25,000 Gallons/Day (GPD)</b>								<b>\$25/GPD</b>
<b>25,001 - 50,000 GPD</b>								<b>\$20/GPD</b>
<b>50,001 - 100,000 GPD</b>								<b>\$15/GPD</b>
<b>100,001 - 300,000 GPD</b>								<b>\$10/GPD</b>

### **RAILROAD CROSSINGS**

<b>Railroad Crossings, EA</b>	<b>\$100,000</b>
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## UNIT COSTS - OPERATION AND MAINTENANCE

### GRAVITY SEWER

Gravity Sewer, L.F.

\$0.85

### FORCE MAIN

Force Main, L.F.

\$0.85

### SEWAGE PUMP STATION

Sewage Pump Station, EA.

\$7,500

### GRINDER PUMP STATION

Grinder Pump Station, EA.

\$4,500

## APPENDIX E

### VDH LETTERS

This Appendix includes letters provided by the respective Health Districts, discussing known problematic areas in need of sewer service.



**Buchanan County**  
P.O. Box 618  
1051 Rosebud Road  
Grundy, VA 24614  
Phone: 276-935-4591  
Fax: 276-935-4537

**Dickenson County**  
P.O. Box 768  
334 Brush Creek Road  
Clintwood, VA 24228  
Phone: 276-926-4979  
Fax: 276-926-4426



**Russell County**  
P.O. Box 2347  
133 Highland Drive,  
Suite A  
Lebanon, VA 24266  
Phone: 276-889-7621  
Fax: 276-889-7699

**Tazewell County**  
P.O. Box 350  
253 Chamber Drive  
Tazewell, VA 24651  
Phone: 276-988-5585  
Fax: 276-988-5471

## COMMONWEALTH OF VIRGINIA

VIRGINIA DEPARTMENT OF HEALTH

*Cumberland Plateau Health District*  
*133 Highland Drive, Suite A*  
*Lebanon, VA 24266*

Noelle Bissell, MD – Interim Director  
Reisa L. Sloce, Chief Operations Officer

Stewards for Optimum  
Community Health

**“CPHD: Protecting You and Your Environment – Better Health, Better Home, Better Horizons!”**

November 2, 2022

Jim Baldwin, CEO  
Cumberland Plateau Planning District Commission  
224 Clydesway Drive  
Lebanon, VA 24266

RE: Southwest Virginia Regional Wastewater Study 2022  
Counties of Buchanan, Dickenson, Russell, and Tazewell

Dear Mr. Baldwin:

Thank you for the opportunity to participate in the 2022 update to the Southwest Virginia Regional Wastewater Study (Study). Since the original 2005 Study, approved wastewater collection and treatment systems have been provided to several communities identified in the 2005 Study; however, there are still communities identified in the 2005 Study that have not been addressed. The Cumberland Plateau Health District (CPHD) would like to continue to draw attention to these communities identified in the 2005 Study that remain to be provided with approved wastewater collection and treatment systems and also draw attention to other communities identified since the 2005 Study. Areas of concern identified in the 2005 Study below are not further elaborated upon unless noted and additional areas of concern identified are noted below.

### **Buchanan County**

Leemaster/Lovers Gap Sewer Extension – This area is identified in the 2005 Study. Public sewer extension along state route 83 to Lovers Gap would allow for proposed future development of the Poplar Gap area.

Lower Mill Branch/Elkins Branch Sewer Extension – This area is identified in the 2005 Study.

Lynn Camp/Looney Creek Sewer Extension – This area is identified in the 2005 Study.

Hurley Community – This area is identified in the 2005 Study.

Greenbrier Community – This area is identified in the 2005 Study.

Harman/Belchers Fork Sewer Line Extension – Public sewer service has been extended up Harman to the old Harman School; however, public sewer service is still needed to be extended to the foot of Bull Mountain and up Belchers Fork. Most residents in the area rely upon older onsite sewage disposal systems which have reached the end of their lifespan. The homes in this area are mostly located on small lots along floodplain terraces on footslopes which prevent conventional onsite repair options due high water tables and lack of available area. The CPHD has issued several repair permits in this area which mostly consist of alternative onsite systems to alternative discharging systems.

Kents Branch/Woods Fork Sewer Line Extension - Most residents in the area rely upon older onsite sewage disposal systems which have reached the end of their lifespan. The homes in this area are mostly located on small lots along floodplain terraces on footslopes which prevent conventional onsite repair options due high water tables and lack of available area.

Hobbs Branch Sewer Line Extension – Most residents in the area rely upon older onsite sewage disposal systems which have reached the end of their lifespan. The homes in this area are mostly located on small lots along floodplain terraces on footslopes which prevent conventional onsite repair options due high water tables and lack of available area.

#### Other areas of concern in Buchanan County

Currently, the Buchanan County Public Service Authority is under a Consent Order to address I&I in their collection system serving the Conaway wastewater treatment facility. The collection system is located in the Levisa River which causes extensive wastewater overflows during rain events which can cause a serious public health threat. The Buchanan County Service Authority have spent a large amount of money trying to make repairs and maintain the collection system but reoccurring rain events often causes damage to these repairs or cause additional damages.

#### Dickenson County

Birchleaf Sewer Extension – This area is identified in the 2005 Study. A PER was completed which recommended this area be switched to the decentralized project list due to cost and lack of service connections from the Town of Haysi to Birchleaf. Also, the USACE school project will require Sandlick Elementary School to be demolished which



may open up utilization of the existing wastewater treatment system currently serving the school to be utilized to serve this community.

Lockard Flats Sewer Extension - This area is identified in the 2005 Study.

McClure/Stratton Sewer Project - This area is identified in the 2005 Study.

Nora Sewer Project - This area is identified in the 2005 Study. This project has been half completed utilizing mitigation funds from the Ridgeview School Project; however, additional funds are required to complete the project.

Route 83 West/Baker Ridge Sewer Extension – This area is located from the Town of Clintwood along state route 83 west to Baker Ridge. Most residents in the area rely upon older onsite sewage disposal systems which have reached the end of their lifespan. The soil in the area mostly consists of very restrictive to impervious clays which prevent proper function of onsite sewage systems. The CPHD has issued several repair permits in this area which mostly consist of alternative onsite systems to alternative discharging systems.

#### Other areas of concern in Dickenson County

The Dickenson County Public Service Authority was under a Consent Order to address I&I and odor issues in their collection system serving the Haysi wastewater treatment facility in the Bartley Street area of the Town of Haysi which has been repaired. The collection system serving the wastewater treatment facility is located in the Russell Fork River which can cause extensive wastewater overflows during large rain events which can cause a serious public health threat. The Dickenson County Service Authority is currently seeking funding sources to identify issues and make repairs on the collection system.

#### Russell County

Castlewood Sewer Extension - This area is identified in the 2005 Study and has been half way completed. The Russell County Public Service Authority is currently conducting a PER and seeking funding for further public sewer service extension along Mew Road to address multiple onsite sewage public health threats identified by the CPHD. Also, public sewer service extension is further needed to extend service eastward from Castlewood to the Old Castlewood community to address onsite issues with older system located on clustered small lots in very karst areas of Russell County. Notably, there is a proposed Clinch River public access boat launch ramp proposed adjacent to a clustered discharge pipe serving homes located in the Old Castlewood community where onsite repair options have been determined to be limited.

Hansonville Sewer Extension - This area is identified in the 2005 Study.

Drill Mountain Sewer Extension - This area is identified in the 2005 Study.

Swords Creek Sewer Extension - This area is identified in the 2005 Study.

Rosedale Sewer Project - This area is identified in the 2005 Study.

Dante to St. Paul Sewer Project – This project will address sewer issues with the Wastewater Treatment Plant serving the community of Dante and further address sewer issues in the Sun, Gravel Lick, and Hanging Rock communities where multiple issues and violations have been identified by the CPHD.

Wysor Valley Sewer Extension – This area has the same issues noted in the proposed Swords Creek and Drill projects and would be an extension of those projects.

Clinchfield Community – This area consists of an old coal camp which relies upon very old onsite systems located on footslopes and very small lots where onsite repair options are limited due to lot sizes with high water table issues.

Carbo Community – This area is served by very old onsite sewer systems which are at the end of their lifespan. The area consist mostly of very impervious clays which has a specific USDA soil series name of “Carbo” which is shrink swell clays. Onsite repair options in this community have been difficult to impossible to develop and often the only repair options that may exist is to install a discharging system for residents that may have access to an all-weather stream.

#### Other areas of concern in Russell County

The town of Cleveland operates a wastewater treatment facility serving the Town of Cleveland. During a recent issued with the treatment facility that has been corrected it was found that the portions of the collection system located in the Clinch River is damaged causing I&I issues and potential sewage overflows during large rain events.

#### **Tazewell County**

Abbs Valley Sewer Extension - This area is identified in the 2005 Study.

Baptist Valley West Sewer Extension - This area is identified in the 2005 Study. An extensive PER has been completed and the extension of public sewer service has been deemed to not be feasible. Additional alternatives to public sewer line extension such as a decentralized approach is needed to address pockets of problematic areas.



Bishop Sewer Extension - This area is identified in the 2005 Study.

Forest Hills Sewer Extension – This area is identified in the 2005 Study.

Greens Chapel Sewer Extension – This area is identified in the 2005 Study.

Jewell Ridge Sewer Extension – This area is identified in the 2005 Study.

Kents Ridge North Sewer Extension – This area is identified in the 2005 Study.

Kents Ridge South Sewer Extension – This area is identified in the 2005 Study.

Mill Creek Sewer Extension – This area is identified in the 2005 Study.

Road Ridge Sewer Extension – This area is identified in the 2005 Study.

Route 639 (Clifford to Baptist Valley) Sewer Extension – This area is identified in the 2005 Study.

Route 637 Sewer Extension – This area is identified in the 2005 Study.

Route 699 Sewer Extension – This area is identified in the 2005 Study.

Bluefield to Divides Sewer Extension Phase II/III – This area is identified in the 2005 Study. This project is half completed and sewer service has been installed to the Bluestone Industrial Park and further extension to Divides along US 460 is needed.

Gratton Sewer Extension – This area is identified in the 2005 Study.

Red Ash Sewer Extension – This area is identified in the 2005 Study.

Tazewell to Claypool Hill Sewer Extension Alt I – This area is identified in the 2005 Study.

Tazewell to Divides Sewer Extension – This area is identified in the 2005 Study. This project has been completed in 2015; however, additional sewer line extension is needed in the south bound lane of US 460.

Wrights Valley/Tiptop to St Clare's Crossing Sewer Extension – This area is identified in the 2005 Study.

Wrights Valley/Wittens Mill to Tiptop Sewer Extension – This area is identified in the 2005 Study.

Wardell Sewer Extension – This area is identified in the 2005 Study.

Willow Springs Sewer Extension Phase 2 – This area is identified in the 2005 Study.

Willow Springs Sewer Extension Phase 3 – This area is identified in the 2005 Study.

Witten Valley (Bundy Chapel – Tazewell) Sewer Extension – This area is identified in the 2005 Study.

Witten Valley (Bundy Chapel – Liberty) Sewer Extension – This area is identified in the 2005 Study.

Witten Valley (Bundy Chapel – Wardell) Sewer Extension – This area is identified in the 2005 Study.

Hillcrest Community Sewer Project – This area is located adjacent to the Town of Pocahontas which consists of approximately 29 residential homes. These homes are served by old onsite sewage system that have failed and there is a community discharge pipe that discharges directly to the stream at the community. A PER was conducted several years ago with an estimated cost of \$1,564,706 to collect the wastewater and pump it to the Wastewater Treatment Plant in the Town of Pocahontas operated by the Tazewell County Public Service Authority.

St. Clair Heights Subdivision Sewer and Water Project – This project would serve approximately 80 homes with public sewer and water service. The onsite sewage disposal systems are at the end of their lifespan and repair options are limited in this area.

Ebenezer Subdivision Sewer and Water Project - This project would serve approximately 50 homes with public sewer and water service. The onsite sewage disposal systems are at the end of their lifespan and repair options are limited in this area.

#### Other areas of concern in Tazewell County

The Tazewell County Public Service Authority has identified I&I issues with the collection system serving the Falls Mills wastewater treatment facility and issues requiring upgrades to the Falls Mills wastewater treatment facility and is currently seeking funding sources to address upgrades to address these issues. The Tazewell County Public Service Authority has also identified considerable issues with I&I of the collection system serving the Pocahontas wastewater treatment facility and is currently seeking funding sources to address the issues. The Tazewell County Public Service



Authority is seeking funding sources to address accountability water loss issues to replace the public water distribution lines in the Pocahontas/West Virginia area.

### In Summary

As Mr. Travis Holt, Environmental Health Manager with the Mount Rogers Health District mentioned in his summary to Joe Blevins, Project Manager with the Mount Rogers Planning District Commission, “onsite sewage disposal systems do not last forever. The website EPA.gov says the lifespan of a septic system depends on the material it is made of, the design, installation, service and exposure conditions, and maintenance of the system. If your septic system is more than 25 – 30 years old, start planning for an upgrade before you are in an emergency situation. It is likely your system is close to its useful lifespan.”

Areas mentioned above as with most areas in Southwest Virginia were mostly developed more than 30 years ago under much less stringent regulations and before a 50% reserve area for repairs was required by Virginia’s Sewage Handling and Disposal Regulations. Limited repair areas, if any at all, often require expensive alternative onsite repairs that require pre-treatment and ongoing operation and maintenance costs to homeowners who often lack the funds to pay for these expensive repairs and ongoing costs to maintain their system by licensed operators.

The thought that a conventional onsite sewage disposal system does not have to be maintained needs to be addressed. Quite often, homeowners do not contact a pumper to pump their septic tank until the system is either backing up into the home or surfacing onto the ground. It is recommended that a septic tank be pumped when it is 1/3 full of solids to prevent solids from entering the dispersal trenches to prevent clogging of the drainfield area and causing an early failure and provide adequate treatment to protect public health and groundwater resources. Areas of the Commonwealth in the Chesapeake Bay watershed require pumping of conventional systems and to report this maintenance to the local health department on a 3 year frequency. This can prolong the life of a system and prevent premature failure. Areas without this requirement often ignore the situation until there is a community-wide sewer problem and then ask for funding to run public sewer service to an area which can be extremely expensive. In addition, wastewater treatment plants in our area lack the capacity or means to accept sewage pumped by sewage pumpers thus creating a larger expense for homeowners to pay the pumper to haul the sewage to a facility that can accommodate the sewage pumped.

Technology now exists in the onsite septic world which allows sites to be developed that once was denied. These systems often require pretreatment above what that can be provided by a standard septic tank and then the sewage effluent is often dispersed into shallow trenches or via other means such as a pump to shallow placed drip tubing, low pressure trenches, etc. These systems are called Alternative Onsite Sewage Disposal

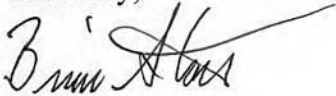
Jim Baldwin  
November 2, 2022  
Page 8 of 8

Systems and VDH's regulations do require these system to be operated and maintained by a licensed Master Alternative Operator and the results of the maintenance and testing submitted to the local health department. The far Southwestern region of Virginia lacks an adequate number of licensed operators to perform this service long term. Actually, there is currently only 1 provider in the area who is providing this service. As time goes on, the local health departments have concerns that owners of these alternative systems will not have adequate access to licensed operators to operate and maintain their systems and meet regulatory requirements.

Providing public sewer or decentralized sewer service to the areas mentioned above would alleviate existing and potential health hazards due to failing or substandard onsite sewage disposal systems. Also, evaluating how to maintain existing onsite systems weather they are a conventional or alternative onsite systems on a regional bases would help alleviate future problems before they may arise.

Thank you for the opportunity to comment on the update to the Study. If you have any questions, please feel free to contact me at (276) 415-3370 or via email at [Brian.Stanley@vdh.virginia.gov](mailto:Brian.Stanley@vdh.virginia.gov).

Sincerely,



Brian Stanley  
Environmental Health Manager, Senior  
Cumberland Plateau Health District



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Wise County and the  
City of Norton  
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Wise, VA 24293  
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**COMMONWEALTH OF VIRGINIA**  
**LENOWISCO HEALTH DISTRICT**

Noelle Bissell, MD – Interim Director  
Reisa L. Sloce, Chief Operations Officer

134 Roberts Avenue, SW  
WISE, VIRGINIA 24293

Stewards for Optimum  
Community Health

October 14, 2022

The Lane Group  
Attn: Kevin Heath, PE  
119 North Main St.  
Galax, VA 24333

Dear Mr. Heath:

The LENOWISCO Health District appreciates the opportunity to participate in planning for a new/updated Southwest Virginia Regional Wastewater Study. Looking back on the original document, it is exciting to see the progress made since 2005, and that progress gives great hope of seeing other projects completed in the future. Listed below are areas within the LENOWISCO Health District with known and/or identified issues of failing/aging sewage disposal systems, straight piping, and/or poor soil conditions for onsite sewage disposal.

Lee County

Woodway community – The area of most concern in Woodway is south of the Powell River along State Route 421. This area is characterized by Karst topography with many sink holes, caves, and limestone outcrops. In the past, homes have been found to be discharging sewage directly into caves. Since 2002, 19 repair applications have been processed in this area and three applications for new systems have been denied due to site and soil conditions. There are three alternative onsite sewage disposal systems (AOSS) in the area.

Keokee community – Keokee is a coal camp community. Many of the homes in the community are more than 50 years old and are served by septic systems similar in age. Soils are typically shallow to sandstone or shale and the lots are small in size. The old Keokee High School gym is served by an alternative discharging system.

Dr. Thomas Walker Highway – The area of concern is the section bordering Indian Creek. In 2021, a home was found with an overflow to the stream. Given the landscape position of many homes between the stream and highway, it is likely that this scenario is occurring in other places as well.

St. Charles area – Areas outside of the St. Charles sewage collection system are served by septic systems or, potentially, straight pipes. The vast majority of these septic systems are more than 30 years old. The entire Stone Creek watershed is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *Escherichia coli* (*E. coli*). Given this area lacks any agricultural activity, human sources are likely the primary cause for this impairment.

Scott County

Hiltons – The area of greatest concern is from the Wadlow Gap Road intersection to the immediate vicinity of Hilton Elementary School. Soils are typically very shallow to shale and many homes are located in low-lying areas near the stream. Since 2002, 14 repairs or systems have been installed, 12 applications have been denied and there are three alternative discharging systems (ADS) and one AOSS in the community. Hilton Creek is listed as having an impairment due to elevated levels of *E. coli*.



Natural Tunnel Parkway – Soils in this area are often shallow to shale. Many existing homes are in low-lying areas near the stream and many of the sewage disposal systems are more than 30 years old. Since 2002, three repair systems have been installed and six applications have been denied. There are five ADS and four AOSS in the area. One of the ADS serves a trailer court. Stock Creek is listed as impaired for *E. coli* on DEQ's 303d list.

Morris Drive – Morris Drive is a small subdivision in the East Carters Valley area on the Tennessee line. The subdivision was developed in the 1970's. The soils are very heavy clays and the lots are small. There is one ADS in the subdivision that was installed as a repair. Other homes in the vicinity appear to have small lots and similar soil conditions.

Duffield – Unsewered areas around Duffield are generally shallow to shale. This includes Duff Patt Highway, Pattonsville Road, and Duffield Depot Lane. Since 2002, nine applications have been denied and two repairs have been installed. The North Fork of the Clinch River is listed as impaired for *E. coli* on DEQ's 303d list.

### Wise County

Dunbar – Dunbar is a coal camp community containing 35 homes. Of these homes, a 2002 survey showed that one has a privy, one has a cesspool, five have gray water discharges, and eight have straight pipes. No information available for the remaining homes. The soils are almost entirely fill material and most of the homes are in low-lying areas.

Cracker's Neck – I am defining Cracker's Neck in the same manner as was done in the earlier wastewater study. Site and soil conditions vary with sections typified by Karst topography, having very shallow depths of soil to limestone, and other sections are low-lying alluvial soils. Many of the homes in this area are served by septic systems that are older than 30 years old. Since 2002, five applications have been denied and three repairs have been installed. There is one AOSS and one ADS in this area. The South Fork of the Powell River is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *E. coli*.

Hix Orchard Subdivision – Hix Orchard is a subdivision consisting of 37 homes, most of which were built in the 1970's. The soils are shallow to shale and seasonal water table. Two AOSS have been installed as repairs. Three additional AOSS have been installed for homes bordering the subdivision. Hix Orchard is off Pole Bridge Road and would have been included in the Coeburn Mountain Road project mentioned in the first wastewater study. It is located in the Bear Creek Reservoir watershed which serves as the water source for the Town of Wise.

Crane's Nest – The Crane's Nest community is located along Route 72 north of Coeburn. Soils are often shallow to seasonal water table and many of the homes are located near the stream. Since 2002, two repairs have been installed and eleven applications have been denied. There are five ADS in the area. Toms Creek is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *E. coli*.

Little League Road – This area just north of Coeburn has 17 homes that are cut off from public water and sewer by a railroad track. When the initial 16 homes were installed, they straight piped to the stream. Most of the soils are shallow to seasonal water table. Now there are five ADS and the rest of the homes have septic systems. This area is also part of the Tom's Creek watershed.

Bruce Straight – This area is located along Norton Coeburn Road west of Coeburn's town limit. Soils are often shallow to sandstone, seasonal water table, and sometimes water table. Many of the homes are located along the toe slope north of the road. Since 2022, eight repairs have been installed and seven applications have been denied. There is one ADS and one AOSS in the area. The stretch of the Guest River that parallels this road is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *E. coli*.

Crab Orchard – This area encompasses the entire Crab Orchard Branch watershed. Crab Orchard Branch is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *E. coli*. Since 2002, five repairs have been installed and eight applications have been denied. Many of the homes in the watershed are served by septic systems that are more than thirty years old. Some of the older homes are located in low-lying areas near the stream. There are two AOSS in the area.

Tacoma (north of Highway 58) – Tacoma south of Highway 58 has been sewered. The area north of the highway has worse soils and small lots. Soils are shallow to seasonal water table. Almost all the homes have septic system more than 30 years old and some of the lower elevation homes have issues with slow flush when the soil is saturated leading to seasonal failures.

Hardy Hollow – Hardy Hollow Road intersects Highway 58 just west of St. Paul. The lower portion of the road is a narrow hollow with homes wedged between the hillside and the road/creek. The soils are colluvial or alluvial and shallow to sandstone.



There are two ADS along the road and a now vacant home that once straight piped. This would seem a relatively easy extension of St. Paul sewer service.

Russell Creek – Russell Creek flows from Virginia City (an old coal camp community), under Highway 58 to the Clinch River. Soils are shallow to rock and many existing home are close to the stream. There are six ADS in the watershed serving seven homes.

Honey Branch – Honey Branch includes portions of Wise County and portions of Russell County. The portion of the watershed in Wise County typically has homes wedged between a steep slope and the stream. Soils are generally alluvial and sandy. Most septic systems are over 30 years old. There are three ADS in the watershed. Honey Branch is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *E. coli*. There is little agriculture in the watershed, so human sources are the most likely issue.

Killen Hollow – Killen Hollow Road is just south of Pound town limits. A small branch to Indian Creek runs parallel to the road. The soils are generally shallow to shale and many of the homes are located close to the stream and where the water tables are shallow. There are four ADS in the area. The intersection with Indian Creek Road is close to a public sewer line. The lower segment of Indian Creek is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *E. coli*.

South Fork Road/Dewey Road – This area encompasses the entire South Fork of the Pound River watershed. Many homes in this area are located close to the stream and have septic systems older than 30 years. A significant portion of the watershed's land area is reclaimed surface mines and fill material cannot be used for onsite sewage disposal systems. Since 2002, 12 applications have been denied and seven repair systems have been installed. There are four ADS and one AOSS in the watershed. The South Fork of the Pound River is listed on the Department of Environmental Quality's 303d List of Impaired Waters (DEQ's 303d list) as having an impairment due to elevated levels of *E. coli*.

Thank you again for seeking the input of the LENOWISCO Health District on the new/revised Southwest Virginia Regional Wastewater Study. Please let me know if you have questions regarding these areas of need.

Sincerely,



Bradley Stallard  
Environmental Health Manager, Sr.

CC: William Skeen, Onsite Systems Engineering  
Jimmy Adkins, LENOWISCO Planning District Commission



## COMMONWEALTH of VIRGINIA

### *Mount Rogers Health District*

*201 Francis Marion Lane*

*Marion, VA 25354*

September 30, 2022

Joe Blevins, Project Manager  
Mount Rogers Planning District Commission  
1021 Terrace Drive  
Marion, VA 24354

RE: Southwest Virginia Regional Wastewater Study 2022  
Washington County and Smyth County

Dear Mr. Blevins,

Thank you for the opportunity to participate in the Southwest Virginia Regional Wastewater Study. The Mount Rogers Health District would like to draw attention to several communities in Washington County and Smyth County that could benefit greatly from public sewer service or a community based sewage disposal system. Those include High Meadows Subdivision, Lowry Hills Subdivision, Larwood Acres Subdivision, Greenfield Mobile Home Park, and the Clinchburg community in Washington County. In Smyth County, it includes the corridor of Lee Hwy in Atkins to Exit 54 of Interstate 81.

#### High Meadows Subdivision

High Meadows Subdivision is located near High Point Elementary School in the Bristol area of Washington County. There are approximately 132 homes in the subdivision and 163 lots. Most of the homes in this subdivision were built between 1969 and 1980. Lot size averages about 0.3 – 0.4 acre. The Washington County Health Department has issued approximately 40 septic repair permits for this subdivision. Two lots were denied for new sewage disposal systems due to insufficient area and slow rates of soil absorption. The soils in this subdivision tend to be silty clay loam texture. Sewer appears to be available on nearby Sinking Creek Road.

#### Lowry Hills Subdivision

Lowry Hills Subdivision is located between exit 7 and exit 10 of Interstate 81. It is located on the South side of the interstate and is accessed off of Lee Hwy by an interstate underpass. There are approximately 211 homes in the subdivision and about 258 lots. Most of the homes were constructed in the 1960's to through the 1980's. Lot size averages about 0.4 acre. The Washington County Health Department has issued approximately 66 repair permits since 1984



for this subdivision. Five lots have been denied for new sewage disposal systems due to insufficient area, inadequate soils, and/or challenging contours. Of those five lots that were denied, two of them were combined to accommodate the sewage disposal for one home. The other three still have not been developed. Soils in this subdivision tend to be silty clay loam or clay in texture. Sewer appears to be available North of the subdivision on Lee Hwy and South of the subdivision on Virginia Trail.

#### Larwood Acres Subdivision

Larwood Acres Subdivision is located in the Bristol area of Washington County on the North side of Interstate 81 off of Cunningham Road. There are approximately 109 homes in the subdivision and about 126 lots. Most of the homes were built between the late 1960's and early 1970's. Lot size averages about 0.3 acre. The Washington County Health Department has received approximately 41 applications for sewage disposal system repairs in Larwood Acres since 1984. The closest public sewer line is owned by Bristol Virginia Utilities and is located across I81.

#### Greenfield Mobile Home Park

Greenfield Mobile Home Park is located near exit 10 of Interstate 81 on the North side of the interstate and Lee Hwy. The Washington County Health Department has fielded numerous complaints of sewage backing up into homes and coming to the surface of the ground in this mobile home park over the years. Environmental Health staff found most of those complaints to be valid and required corrections. Four repair permits have been issued by the Washington County Health Department. Many of the sewage violations were corrected through sewage system maintenance; however, the violations continue to occur periodically. There are about 80 mobile homes in the park. The majority of sewage disposal systems are 30+ years old and most systems serve two homes. It appears that public sewer is available on the South side of Lee Hwy just across from the mobile home park.

#### Clinchburg Community

Clinchburg is located in the Meadowview area of Washington County near the intersection of Old Saltworks Road and Clinchburg Road. Most of the homes were built between the 1920's and 1950's. The lots are very small. Most are about 0.2 acre. There are about 50 homes in this general area. The Washington County Health Department has issued at least 4 repair permits, two of which were to install sewage disposal systems to replace privies. The existing sewage disposal systems are very old and due to the very small lots repairs are almost impossible. Public water is available to this community, but there are still old wells that have to be taken into consideration when repairing septic systems. Public sewer is nowhere near this area, so a system to serve the community would be the best option.

#### Lee Hwy Corridor through Atkins to Exit 54 of I81

Certain site conditions exist along the Lee Highway corridor from 6373 Lee Highway in Atkins to exit 54 of Interstate 81 that make the installation or repair of conventional or alternative onsite sewage systems challenging or even impossible. Some examples would be limited area, unfavorable landscape positions, shallow water table, shallow bedrock, existing private wells, springs, or surface waters. For example, the intersection of Lee Highway and Windsor Road near exit 54 is home to several businesses including a hotel, two restaurants, and two convenience

stores / gas stations. However, the landscape near this intersection, particularly the northwest corner, is low lying and the seasonal water table is shallow. Any repairs to the onsite sewage disposal systems serving these businesses would be difficult, costly, and could potentially even impact the businesses' ability to operate.

The lack of public sewer along this section of Lee Highway also limits business opportunities. Onsite sewage disposal systems to serve commercial businesses with high wastewater flows such as restaurants or hotels take up a very large area of land. Having access to public utilities is vital to finding a good location for such commercial facilities. For example, 7412 Lee Hwy has been a restaurant, but seating capacity is limited due to the capacity of the onsite sewage system. Multiple people have inquired about possibilities at this location, but have been discouraged by the limitations of the onsite sewage disposal system. Expanding the system to allow for more business opportunities would require a large investment to bring the system into compliance with current regulations.

Approximately 50% of the residential properties that abut Lee Highway between 6373 Lee Highway and exit 54 are over 50 years old. The vast majority of those homes are still served by the original onsite sewage disposal systems that were installed at the time the homes were built. As the lifespan of these systems comes to an end, connection to public sewer would be the best option due to limited area and challenging site conditions.

#### In Summary

Onsite sewage disposal systems do not last forever. The website EPA.gov says "The lifespan of a septic system depends on the material it is made of, the design, installation, service and exposure conditions, and maintenance of the system. If your septic system is more than 25 – 30 years old, start planning for an upgrade before you are in an emergency situation. It is likely your system is close to its useful lifespan."

All of the locations mentioned above are plagued with aging sewage disposal systems and onsite system failures are becoming more common. The vast majority of lots referenced here were developed before a 50% reserve area for repairs was required by Virginia's Sewage Handling and Disposal Regulations. No reserve areas and small lot sizes have made repairs very difficult. Several lots are undevelopable due to limited area and unfavorable soil conditions or contours. Often a property owner's only option to repair a failing sewage disposal system or develop a lot is to invest in an alternative onsite sewage disposal system. These systems are very costly and require annual maintenance.

The high cost to repair an onsite sewage disposal system may cause homeowners to postpone repairs. Sometimes, a homeowner may even be motivated to "repair" their system in a way that isn't compliant with regulations. This creates a greater risk to public health and the environment. Sinking Creek, which is located near High Meadows Subdivision, has been placed on DEQ's 303(d) list of impaired waters due to high pathogen counts (E. coli). Residential use was identified and one of the potential causes.

Providing public sewer or community sewage disposal systems to the areas listed above would alleviate existing and potential health hazards due to failing onsite sewage disposal systems



and/or discharges of untreated wastewater into streams or ditches in the community. It would also provide options to develop vacant lots and enhance business opportunities.

Thank you again for the opportunity to comment. Please feel free to contact me if you have questions or our office may be of further assistance.

Sincerely,

A handwritten signature in blue ink that reads "Travis Holt". The signature is written in a cursive, slightly slanted style.

Travis Holt  
Environmental Health Manager

LOCAL HEALTH DEPARTMENTS  
SERVING THE PEOPLE OF

Bland  
Wythe  
Carroll  
Galax  
Grayson  
Smyth  
Washington  
Bristol



Noelle Bissell, MD, Acting Director  
Phone: 276-781-7450  
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## COMMONWEALTH of VIRGINIA

*Mount Rogers Health District*  
201 Francis Marion Lane  
Marion, VA 25354

December 19, 2022

Joe Blevins  
Mount Rogers Planning District Commission  
1021 Terrace Drive  
Marion, VA 24354

RE: Southwest Virginia Regional Wastewater Study 2022  
Wythe, Grayson and Carroll Counties

Dear Mr. Blevins,

Thank you for the opportunity to participate in the Southwest Virginia Regional Wastewater Study. The Mount Rogers Health District would like to draw attention to several communities in Wythe, Grayson and Carroll Counties that could benefit greatly from public sewer service or a community-based sewage disposal system. Those include the Ivanhoe community, Crockett community and Speedwell community in Wythe County. In Grayson and Carroll Counties it includes the Fries community.

### Ivanhoe Community

Ivanhoe is located in the southcentral area of Wythe County, boarding the New River and Carroll County. Hwy 94 / Ivanhoe Road dissects the Ivanhoe Community and runs from Fries in Grayson County to Fort Chiswell in Wythe County. The Ivanhoe Community was once a mining and quarry-based community. Both the quarry and mining has ceased. There are approximately 200 homes in the Ivanhoe Community in and around Hwy 94. The majority of the homes were built between 1920 and 1980. Lot sizes are typically small around 0.5 acres or less. Several onsite sewage repairs have been permitted and installed in the Ivanhoe community. With public sewer being several miles away the most likely improvement for wastewater infrastructure in the Ivanhoe community would be decentralized or cluster-based community sewage disposal systems.

### Crockett Community

The Crockett community is located south of I-81 between Rural Retreat and Wytheville. Crockett is situated on the Norfolk Southern railway. There are approximately 50 homes in the Crockett community with most being built between 1920 and 1970. Most lots are 0.5 acres or less. Small lots combined with shallow rock and shallow seasonal water table can make onsite sewage system repairs difficult. Similar to the Ivanhoe Community, public sewer is several miles away and the most likely



improvement for wastewater infrastructure would be decentralized or cluster-based community sewage disposal systems.

#### Speedwell Community

Speedwell is located in the southwestern portion of Wythe County. Hwy 21 / Grayson Turnpike traverses the Speedwell Community and runs from Elk Creek in Grayson County to Wytheville in Wythe County. The Speedwell Community consists of an elementary school, a few small businesses and residential housing. The majority of the homes are located on small lots and were built between 1920 and 1970. Similar to Ivanhoe and Crockett, Speedwell is several miles from public sewer and would be best served by decentralized or cluster-based community sewage disposal systems.

#### Fries Community

The Fries Community is located in both Grayson County and Carroll County. The Town of Fries is currently served by public sewer. However, there are several areas just outside the Town of Fries that could benefit from public sewer extensions in Grayson and Carroll Counties. Clusters of homes (~100 to 150) along Hwy 94 and Tabernacle Road are within 1 mile of the heart of the Town of Fries. These homes are on small lots and were built between 1920 and 1960.

#### In Summary

Onsite sewage disposal systems do not last forever. The website EPA.gov says "The lifespan of a septic system depends on the material it is made of, the design, installation, service and exposure conditions, and maintenance of the system. If your septic system is more than 25-30 years old, start planning for an upgrade before you are in an emergency situation. It is likely your system is close to its useful lifespan."

The locations mentioned above have aging sewage disposal systems and failures will become more common. The vast majority of the communities referenced here were developed before a 50% reserve are for repairs was required by VA's Sewage Handling and Disposal Regulations. No reserve areas and small lot sizes have made repairs difficult. This often leads to failing systems not being corrected or much more costly alternative onsite sewage disposal systems being needed.

Providing public sewer or community sewage disposal systems to the areas listed above would alleviate existing and potential health hazards due to failing onsite sewage disposal systems and or discharges of untreated wastewater into streams or ditches in the community.

Thank you again for the opportunity to comment. Please feel free to contact me if you have questions or our office may be of further assistance.

Sincerely,



Travis Holt

Environmental Health Manager

# EXHIBIT I TO ATTACHMENT I

MOUNT ROGERS HEALTH DISTRICT  
WASHINGTON COUNTY HEALTH DEPARTMENT  
WASHINGTON COUNTY ENVIRONMENTAL HEALTH  
15068 LEE HIGHWAY, SUITE 1000  
BRISTOL, VIRGINIA 24202

276/645-0947  
276/676-5604  
276/676-5474  
FAX 276/645-1994  
FAX 276/669-2097

July 20, 2022

Robbie Cornett, General Manager, WCSA  
25122 Regal Drive  
Abingdon, VA 24211

RE: Washington County Service Authority  
Lee Highway Sewer Line Extension Project

Dear Mr. Cornett,

The Washington County Health Department supports the Washington County Service Authority's (WCSA) application requesting funding to extend public sewer services to Lee Highway and surrounding areas. The project would serve residential homes, churches, and businesses. The proposed project will 1. Extend public sewer service along Lee Highway in those locations presently not served between Oak Park Center for Business & Industry and Exit 10 and other surrounding areas, while making service available to approximately 140 new residential/commercial customers. And 2. Provide redirection of existing WCSA sewer systems in this area that are currently being treated by BVUA to the Town of Abingdon for treatment (Greenbriar, Lee Highway, and King Mill Pike / Sinking Creek).

This project will also prove beneficial to enable future sewer line extensions to aging subdivisions such as High Meadows, Lowry Hills, Evergreen Hills, Celia Heights, Greenbriar Estates, Highlander Subdivision, Woodstone Estates, Preston Hills and others. These subdivisions are maturing and reaching the point that onsite failures are more common. Repairs have proven difficult due to small lot size and no designated reserve areas. Also, many of these subdivisions include lots that are not developable due to size and soil restrictions such as rock and shallow water table. Often, property owners only option to repair a failing system or develop a lot is to invest in an alternative onsite sewage disposal system. These systems are very costly and require at a minimum yearly maintenance. The project also looks to bring future public sewer to Braeland Meadows and Old Jonesboro Colony developments. These established subdivisions are not as old, but have larger homes that would greatly benefit from the availability of public sewer.

Onsite sewage disposal systems typically have a lifespan of 30 to 35 years. The majority of homes and businesses in the project area have or will soon exceed this lifespan. This office has processed 73 repair applications in this area since 2004. Of the 73 repair applications only 45 were actually issued permits and installed and approved. The remaining 28 repair applications



were either denied due to limited area or unsuitable soils, withdrawn, or a permit was issued but was never installed and expired. Typically when applicants withdraw a repair application it is because they cannot afford to fix the problem. Repair permits expire when the applicant cannot afford to install the system and the failure continues. For example, an alternative onsite sewage system was designed to replace a failing drainfield in an existing subdivision. The repair involved a secondary treatment unit and drip dispersal. The installation cost would be \$20,000 to \$30,000. The repair was never installed. This office has also denied 4 lots due to insufficient area and rock. The developer's only option was to consider an alternative system that proved to be too costly. There have also been proposed commercial developments that have moved on due to lack of public sewer being available and onsite systems not being an option.

The project area includes Sinking Creek that was placed on DEQ's 303 (d) list of impaired waters. Sinking Creek's recreational use was listed as impaired due to high pathogen counts (E. coli). Residential use was identified as one of the potential causes of high pathogen counts in Sinking Creek. This further emphasizes the need for public sewer in this project area as high pathogen counts likely indicate straight pipe discharges and failing sewage disposal systems. This further indicates that there are many problems the health department is unaware of due to people's fear of self-reporting failures and straight pipe discharges.

This means that several residences are not in compliance with the Commonwealth of Virginia's *Sewage Handling and Disposal Regulations* Section 12 VAC 5-610-80 which states:

- A. The discharge of untreated sewage onto the land or into the waters of the Commonwealth is prohibited.
  
- B. No owner, person, or occupant shall discharge treated or untreated sewage onto the land, into the soil or into the waters of the Commonwealth without a valid permit from the commissioner or, as appropriate, a certificate issued by the Department of Environmental Quality in accordance with Title 62.1 of the Code of Virginia.
  
- C. All buildings, residences, and structures designed for human occupancy, employment or habitation and other places where humans congregate shall be served by an approved sewerage system and/or treatment works. An approved sewerage system or treatment works is a system for which a certificate to operate has been issued jointly by the department and the Department of Environmental Quality or a system which has been issued a separate permit by the commissioner.

The proposed sewer line extensions will alleviate existing and potential health hazards that exist due to failing septic systems and/or discharges of untreated wastewater into streams and ditches in the community. The sewer line extension will also provide additional options to vacant lots that would otherwise be unsuitable for development. I can envision cleaner streams, healthier communities and thriving businesses as a result of this sewer line extension project.

If you have any questions or concerns please contact Travis Holt, Environmental Health Manager, at your earliest convenience at the Washington County Health Department 276-676-5474.

Sincerely,

A handwritten signature in blue ink that reads "Travis Holt". The signature is written in a cursive style with a large initial "T" and a stylized "H".

Travis Holt  
EH Manager, Mount Rogers Health District

Cc: William W. King, PE Senior Project Manager, Thompson & Litton  
100 Fifth Street  
Bristol, TN 37620



## APPENDIX F

### VPDES GENERAL PERMITS

This Appendix includes a listing provided by the Health Department and DEQ for existing VPDES General Discharge Permitted facilities located within the three Planning District study areas. These are facilities which were not permitted for a conventional septic system and instead utilize a treatment system with a permitted discharge of less than 1,000 gallons/day to a stream or dry ditch.

Permit No	Returns	Maintenanc	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400031		O & M	CP	N	1	Dickenson	Breaks Interstate Park (2) STP	State Route 80	Breaks
VAG400035		O & M	CP	N	1	Tazewell	Busthead Inc.	3850 Indian Creek Rd	Cedar Bluff
VAG400036		O&M	CP	N	1	Tazewell	Byrd Earbie Residence STP	267 Limestone Rd	Pounding Mill
VAG400041		MC	CP	Y	1	Tazewell	Elswick Jay D Residence STP	142 Montclair Circle Rd	Tazewell County
VAG400046		MC	CP	N	1	Tazewell	Norris Screen & Manufacturing	21405 Gov G C Peery Hwy	Tazewell
VAG400048		MC	CP	N	2	Tazewell	Coal Fillers Incorporated	271 St Clairs Crossing	Bluefield
VAG400050		O & M	CP	N	1	Buchanan	Coleman Barry Residences STP	Route 729	Vansant
VAG400064		O & M	CP	N	1	Buchanan	Dellas Residences STP	6556 Slate Creek Rd	Grundy
VAG400085		O & M	CP	Y	1	Tazewell	Gilbert Mark Anthony Residence STP	129 Murray Hollow Rd	Richlands
VAG400087		MC	CP	N	1	Buchanan	Crigloo Properties, LLC STP	Rte 83	Vansant
VAG400094		MC	CP	N	1	Tazewell	Davis and Penley Residences STP	830 and 856 Willow Springs Road	Cedar Bluff
VAG400094		MC	CP	N	1	Tazewell	Davis and Penley Residences STP	830 and 856 Willow Springs Road	Cedar Bluff
VAG400096		O & M	CP	Y	1	Buchanan	Scarberry Joyce Residence STP		Maxie
VAG400105		O & M	CP	N	1	Buchanan	Hurricane Baptist Church STP	Rising Sun Rd	Davenport
VAG400106		O & M	CP	Y	1	Buchanan	Hylton Jimmy Dale Residence STP	1233 Green Shadows Rd	Breaks
VAG400108		MC	CP	N	1	Buchanan	Appalachian Air, Incorporated	2571 Lover's Gap Rd	Vansant
VAG400114		O & M	CP	N	1	Tazewell	Morris Rodney Residence STP	790 Willow Spring Rd	Cedar Bluff
VAG400129		MC	CP	Y	1	Buchanan	Belcher Scott Residence STP	1011 Windward Dr	Homecreek
VAG400130		MC	CP	N	1	Dickenson	Fremont Train Station STP	Intersection of Rte 63 & Rte 83	Clinchco
VAG400133		O & M	CP	Y	1	Russell	McIntyre Rick Residence STP	2417 Cleveland Rd	Cleveland
VAG400141		O & M	CP	N	1	Dickenson	Mullins Residences STP	390 Willow Ln	Clintwood
VAG400146		MC	CP	Y	1	Buchanan	Owens Carl E Residence STP	1122 Rife Circle Rd	Pilgrim Knob
VAG400148		MC	CP	N	1	Tazewell	PM Quick Mart - 12 Enterprise STP	14145 Gov GC Peery Hwy	Pounding Mill
VAG400149		O & M	CP	N	1	Tazewell	Mitchell Ronnie Residences STP	1457 Bandy Rd	Cedar Bluff
VAG400152		O & M	CP	N	2	Buchanan	Presley Gaylene and Sherry Residences STP	1047 Gravel Knoll Rd	Buchanan Co
VAG400152		O & M	CP	N	2	Buchanan	Presley Gaylene and Sherry Residences STP	1045	Buchanan Co
VAG400155		MC	CP	Y	1	Dickenson	Rasnake Joley Residence STP	9865 Sandlick Rd	Bee
VAG400175		O & M	CP	Y	1	Tazewell	Shreve David Residence STP	2831 Daw Rd	Cedar Bluff
VAG400180		MC	CP	Y	1	Buchanan	Blankenship Jimmy Residence STP	1015 Hazelnut Rd	Grundy
VAG400183		MC	CP	Y	1	Tazewell	Fugate Adam Residence STP	2736 Indian Creek	Cedar Bluff
VAG400185		MC	CP	Y	1	Tazewell	Rasnake David Residence STP	7046 Dry Fork Rd	North Tazewell
VAG400186		MC	CP	Y	1	Russell	Wilson Burton Residence STP	3146 East Crossroads Rd	Lebanon
VAG400190		O & M	CP	Y	1	Buchanan	Taylor Larry K Residence STP	Old Rocklick Rd	Big Rock
VAG400191		MC	CP	N	2	Buchanan	Thompson Enterprises STP	34630 Riverside Dr	Big Rock
VAG400192		O & M	CP	Y	1	Buchanan	Thompson Danny R Residence STP	1035 Navigator Rd	Grundy
VAG400198		O & M	CP	Y	1	Buchanan	Viers Harold G Residence STP	1202 Cranesnest Rd	Vansant
VAG400199			CP	Y	1	Buchanan	Mullins Justin Residence STP	St Rte 83	Buchanan Co
VAG400201		O & M	CP	Y	2	Tazewell	Waldron Edith M Residence STP	106 Linkous Chapel Rd	North Tazewell
VAG400211		NB	CP	Y	1	Buchanan	Wimmer Evelyn Residence STP	1140 Wimmer Gap Rd	Whitewood
VAG400214		O & M	CP	Y	1	Tazewell	Patton Michael Residence STP	561 Shannon Branch Rd	Cedar Bluff
VAG400216		MC	CP	N	1	Buchanan	Justice Antoinette and Kim Residences STP	1114 Country Meadows Rd	Breaks
VAG400239		O & M	CP	Y	2	Dickenson	Wampler Dale Residence STP	424 Rakes Ridge Rd	Birchleaf
VAG400257		NB	CP	Y	1	Tazewell	Large Randolph and Carolyn Residence STP	Route 1, Box 46	Bandy



Permit No	Returns	Maintenance	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400258		MC	CP	N	2	Dickenson	Splashdam Freewill Baptist Church STP	146 Kiwanis Park Rd	Haysi
VAG400264		MC	CP	Y	1	Tazewell	Roberts Rodney L Residence STP	501 Birmingham Rd	Cedar Bluff
VAG400272		MC	CP	N	1	Dickenson	Wolford Businesses STP	2870 Breaks Park Rd	Haysi
VAG400277		MC	CP	N	1	Dickenson	Belcher Rental Residences STP	2668 Breaks Park Rd	Haysi
VAG400278		MC	CP	Y	1	Russell	Hale Sandra Residence STP	207 Plasters Rd	Swords Creek
VAG400279		MC	CP	N	1	Tazewell	Super Stop, Inc	23271 Hwy 19	Cedar Bluff
VAG400280		MC	CP	N	1	Russell	Double Kwik 58 STP	Highway 19	Rosedale
VAG400284		MC	CP	N	1	Dickenson	Clintwood Mills Scale House STP	1031 Chipmill Rd	Clintwood
VAG400286		MC	CP	N	1	Dickenson	Clintwood Mills STP	1031 Chipmill Rd	Clintwood
VAG400291		O & M	CP	N	1	Russell	Stone Mountain Health Services STP	Highway 63 North	St. Paul
VAG400295		MC	CP	Y	1	Dickenson	Breeding Rita Residence STP	Justine Drive	Birchleaf
VAG400302		MC	CP	Y	1	Dickenson	Mullins James and Donna Residence STP	6814 Dickenson Hwy	Clintwood
VAG400303		MC	CP	N	1	Dickenson	Moore Lester Residences STP	235 Flemingtown Rd	Clintwood
VAG400304		MC	CP	Y	1	Tazewell	Wright Billie J Residence STP	St Rte 91	Tazewell County
VAG400306		MC	CP	Y	2	Tazewell	Richardson Timothy Residence STP	415 Earls Branch Rd	Pounding Mill
VAG400314			CP	Y	1	Tazewell	Short Jason G Sr Residence STP	1376 Indian Creek Rd	Cedar Bluff
VAG400315		MC	CP	Y	1	Tazewell	Nunley Jami Residence STP	143 Mundytown Rd	North Tazewell
VAG400316	X	MC	CP	Y	1	Dickenson	Hickman Teddy Residence STP	1012 King Solomon Colley Rd	Breaks
VAG400317		MC	CP	Y	1	Tazewell	Vandyke Ronnie Residence STP	Madison Rd	Cedar Bluff
VAG400327	X	MC	CP	N	1	Tazewell	Cottman Transmissions	11102 Governor G C Peery Highway	Cedar Bluff
VAG400329		MC	CP	N	1	Dickenson	Brooks Danny and Gloria Residences STP	210 Violet Trailer Park	Clintwood
VAG400331		O & M	CP	Y	1	Tazewell	Murray Donna B Residence STP	2796 Indian Creek Rd	Cedar Bluff
VAG400342		O & M	CP	N	1	Tazewell	Ramaco Resources Land Holdings LLC - Till	St Rte 687	Raven
VAG400352		MC	CP	Y	1	Tazewell	Beavers Jason Residence STP	2754 Indian Creek Rd	Cedar Bluff
VAG400358			CP	N	1	Dickenson	Down Home Market at Flemingtown STP	1080 The Lake Rd	Clintwood
VAG400364		MC	CP	Y	2	Dickenson	Adkins Rodney & Barbara Residence STP	416 Steinman Circle	Clinchco
VAG400367		MC	CP	N	1	Tazewell	Sparks Paula Residences STP	140 Tagalong Ln	North Tazewell
VAG400371		MC	CP	Y	1	Dickenson	Counts Kevin J Residence STP	8897 Dante Mountain Rd	Dante
VAG400372		MC	CP	Y	1	Dickenson	Mullins Bobby R. Residence STP	990 Priest Fork Rd	Bee
VAG400378	X	O & M	CP	Y	1	Dickenson	Sutherland Gaynell Residence STP	1566 Dickenson Hwy	Baden
VAG400384		O & M	CP	Y	1	Tazewell	Hale Samuel D. Residence STP	1839 Middle Creek Rd	Cedar Bluff
VAG400385		MC	CP	Y	2	Tazewell	Bandy Jennifer Residence STP	243 Old Mill Road	Cedar Bluff
VAG400388		MC	CP	Y	1	Dickenson	Barton Charlie Ayers Residence STP	1719 Crooked Branch Rd	Birchleaf
VAG400391		MC	CP	Y	1	Buchanan	Hensley Elsie Residence STP	8261 Hurley Rd	Hurley
VAG400397		NB	CP	Y	1	Buchanan	O'Neill Larry D and Rebecca S Residence STP	1119 Country Meadows Rd	Breaks
VAG400398		O & M	CP	Y	1	Buchanan	Newsome Dorothy Residence STP	1087 Old Spring Rd	Haysi
VAG400401		MC	CP	N	1	Tazewell	Stinson Lena F Residences STP	State Route 67	Richlands
VAG400402		MC	CP	Y	1	Dickenson	Edwards Gaylord Residence STP	482 Road Branch Rd	Clinchco
VAG400403		O & M	CP	N	1	Buchanan	Brown David Residences STP	8371 Hurley Rd	Hurley
VAG400404		O & M	CP	Y	1	Buchanan	Hurley Bobby and Hurst Sherry Residence STP	1700 Poplar Creek Rd	Grundy
VAG400405		MC	CP	Y	1	Buchanan	Deel Sherry Residence STP	State Rte 627	Buchanan Co
VAG400407		MC	CP	Y	1	Dickenson	Stanley Bill Residence STP	State Route 629, Brush Creek	Clintwood
VAG400408		MC	CP	Y	1	Dickenson	Ramey Roger R Residence STP	3207 Jerrys Branch	Clintwood

Permit No	Returns	Maintenance	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400409		O & M	CP	Y	1	Dickenson	Pigott Penny Residence STP	776 Buffalo Creek Rd	Nora
VAG400411		O & M	CP	Y	1	Russell	Duty Margaret Residence STP	275 Willis Chapel Circle	Lebanon
VAG400412			CP	Y	1	Buchanan	Coleman Mary M Residence STP	State Route 627	Vansant
VAG400413		MC	CP	N	1	Buchanan	Matney Construction Company Shop STP	4219 Dismal Rd	Vansant
VAG400414		MC	CP	Y	1	Buchanan	Deel Walter and Janice F Residence STP	4135 Old Greenbriar Rd	Haysi
VAG400421		MC	CP	N	1	Tazewell	Gearhart William C. Residences STP	174 Wild Rose Drive	Raven
VAG400422		MC	CP	Y	1	Tazewell	Honaker Frankie Laine Residence STP	838 Crab Orchard Rd	Tazewell
VAG400425		MC	CP	N	1	Dickenson	Deel Tony Residences STP	243 Pickett Rd	Bee
VAG400428		MC	CP	Y	1	Dickenson	Shields Tamara Residence STP	6134 Lick Creek Rd	Birchleaf
VAG400434		MC	CP	Y	1	Russell	Dye Ronnie K Residence STP	797 Truel Brown Rd	Swords Creek
VAG400435		O & M	CP	N	1	Tazewell	Alexander UM Church and Residence STP	Intersection of Routes 16 and 753	Bishop
VAG400436		MC	CP	Y	1	Dickenson	Hall Lila Residence STP	385 Owens Branch	Haysi
VAG400443		MC	CP	Y	1	Tazewell	Elswick Nannie M Residence STP	146 Three Rd	Richlands
VAG400444		MC	CP	Y	1	Russell	Perkins Jimmy E Residence STP	799 Long Branch Rd	Swords Creek
VAG400445		O&M	CP	N	1	Buchanan	Pilgrims Knob Community Park STP	State Route 638	Pilgrims Knob
VAG400447		MC	CP	N	1	Buchanan	Willowbrook Country Club	State Route 609	Breaks
VAG400452		MC	CP	Y	1	Dickenson	Sutherland Terry Residence STP	3307 Rock Lick Rd	Haysi
VAG400456		MC	CP	N	1	Tazewell	Shore Stop 452 STP	US Hwy 460	Springville
VAG400458		MC	CP	Y	2	Dickenson	Brett Sykes Residence STP	State Route 80	Birchleaf
VAG400460		NB	CP	Y	1	Tazewell	Duty Jerry Residence STP	State Route 641	Bishop
VAG400461		MC	CP	N	1	Tazewell	Street and Collier Residences STP	2910 Ravens Nest Branch Rd	Cedar Bluff
VAG400461		MC	CP	N	1	Tazewell	Street and Collier Residences STP	2886 Ravens Nest Branch Rd	Cedar Bluff
VAG400463		MC	CP	N	1	Dickenson	Baker Dennis and Eugenia Residences STP	790 Hospital Dr	Clintwood
VAG400465		MC	CP	N	1	Buchanan	R & J Properties STP	Pheasant Run Rd	Grundy
VAG400476		MC	CP	Y	1	Dickenson	Deel Jerry and Arlene Residence STP	28131 Dickenson Hwy	Haysi
VAG400479		MC	CP	N	1	Dickenson	Alpha & Omega Service and Repair	9288 Dickenson Hwy	Clintwood
VAG400480		MC	CP	N	1	Dickenson	Childress Rosemarie Berlin Residence STP	1908 Jerrys Branch	Clintwood
VAG400482		MC	CP	Y	1	Dickenson	Hale Joseph Residence STP	388 Horse Shoe Rd	Coeburn
VAG400483		MC	CP	Y	1	Tazewell	Adams Charles M Residence STP	1600 Indian Creek Rd	Cedar Bluff
VAG400484		MC	CP	Y	1	Tazewell	Edwards Wade and Jennifer Residence STP	1937 Loop Rd	Falls Mills
VAG400487		MC	CP	Y	1	Dickenson	Edwards Kathy Residence STP	327 Jerrys Br	Clintwood
VAG400490		MC	CP	N	1	Dickenson	Bryant Ike Residences STP	822 Bear Pen Creek	Clintwood
VAG400492		MC	CP	N	1	Russell	Griffith Glenn Residences STP	State Route 635	Swords Creek
VAG400493		NB	CP	Y	1	Russell	Dye Douglas E and Judy Residence SFH STP	State Route 67	Swords Creek
VAG400498		MC	CP	Y	1	Tazewell	Scyphers James and Delores Residence STP	142 Low Rd	Richlands
VAG400499		MC	CP	Y	1	Tazewell	Byrd Lisa Residence STP	198 Lark Lane	Bluefield
VAG400500		MC	CP	Y	1	Tazewell	Smith Dorothy Residence STP	179 Auburn Drive	Bluefield
VAG400501		MC	CP	N	1	Tazewell	Coleman Jeffery and Rebecca Residences STP	107 Jim Lane	Cedar Bluff
VAG400502		MC	CP	N	1	Buchanan	Hurley Heights I - Lots A, 1, & 2 STP	St Rte 650	Roseanne
VAG400504		MC	CP	N	1	Russell	Sarah, Sana, & Hena, LLC STP	US 19 and St Rte 676	Hansonville
VAG400511		MC	CP	Y	1	Tazewell	Shreve Mark Residence STP	256 Creeper Rd	Cedar Bluff
VAG400512		MC	CP	Y	1	Dickenson	Branham Stearl Residence STP	State Rte 83	Clinchco
VAG400513		NB	CP	Y	1	Russell	Sutherland Natasha Residence STP	268 Perkins Hollow Rd	Swords Creek



Permit No	Returns	Maintenanc	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400515		MC	CP	N	1	Buchanan	Buchanan County Animal Shelter STP	1991 Dog Pound Rd	Grundy
VAG400516		MC	CP	N	1	Buchanan	Newberry Freddie Residences STP	1025 Cranesnest Rd	Vansant
VAG400521		MC	CP	Y	1	Russell	Harris Jennifer Residence STP	413 Ball Hollow Rd	Honaker
VAG400522		MC	CP	Y	1	Tazewell	Phipps Harry D Residence STP	398 Phipps Rd	Bluefield
VAG400525		MC	CP	Y	1	Tazewell	Wynn Ernest W Residence STP	1716 Adria Rd	North Tazewell
VAG400532		O & M	CP	N	1	Dickenson	Vanover Apartments STP	3442 Coeburn Rd	Clintwood
VAG400535		MC	CP	Y	1	Dickenson	Rasnake George Residence STP	1481 Priest Fork Rd	Bee
VAG400537		NB	CP	Y	1	Tazewell	Woodall Mary Residence STP	2333 Grassy Spur Rd	Bandy
VAG400538		MC	CP	Y	1	Dickenson	Phipps Thomas E Residence STP	St Rt 689	Clintwood
VAG400539		MC	CP	Y	1	Dickenson	Owens Donald Residence STP	498 Arrington Dr	Haysi
VAG400540		NB	CP	Y	1	Tazewell	Nelson Rodney Residence STP	1952 Bandy Rd	Cedar Bluff
VAG400542		MC	CP	Y	1	Tazewell	Webb Nathan Residence STP	559 Ascue Rd	Cedar Bluff
VAG400545			CP	Y	1	Buchanan	McCoy Cora Residence SFH STP	St Rt 691	Big Rock
VAG400546		MC	CP	Y	1	Tazewell	Ice Kevin Residence STP	111 Branch Rd	Pounding Mill
VAG400547	X	MC	CP	Y	1	Dickenson	Young Robert Residence SFH STP	2656 Dyers Chapel Rd	Clinchco
VAG400549		MC	CP	Y	1	Buchanan	Duty Kermit Residence STP	2584 Hobbs Branch Rd	Grundy
VAG400550		MC	CP	Y	1	Buchanan	Cline Dalis and Crystal Residence STP	1880 Upper Elk Creek	Hurley
VAG400551		MC	CP	Y	1	Tazewell	Ball Bobby and Susan Residence STP	1050 Ascue Rd	Cedar Bluff
VAG400553		MC	CP	N	1	Tazewell	Meade Business and Residence STP	2368 Crab Orchard Rd	Tazewell
VAG400557		MC	CP	N	1	Buchanan	Cardinal Development Inc STP 1	Intersection State Rte 83 and 674	Grundy
VAG400558		MC	CP	N	1	Buchanan	Cardinal Development Inc STP 2	Intersection State Rte 83 and 674	Grundy
VAG400559		MC	CP	Y	1	Buchanan	Matney Shirley Residence STP	1332 Old Guesses Fork Rd	Hurley
VAG400561	X	MC	CP	Y	1	Tazewell	Taylor Teresa Residence STP	6555 Pounding Mill Branch Rd	Pounding Mill
VAG400563		MC	CP	Y	1	Tazewell	Smith Dennis W Residences STP	420 Mill Creek	Raven
VAG400565		MC	CP	N	1	Buchanan	Hurley Community Development STP	3206 Lesters Fork Road	Hurley
VAG400567		MC	CP	N	1	Buchanan	Boyd Residences STP	7905 Lovers Gap Road	Vansant
VAG400568	X	MC	CP	Y	1	Tazewell	Griffith Frank J Residence STP	212 Low Rd	Richlands
VAG400569		MC	CP	Y	1	Tazewell	Smith Mark W Residence STP	161 Cannal St	Richlands
VAG400571		MC	CP	N	1	Tazewell	McFarland Residences and Shop STP	2011 Clearfork Rd	Tazewell
VAG400573		NB	CP	Y	1	Buchanan	Keen Robert Charles Residence STP	2582 Old KY Turnpike Rd	Raven
VAG400575		MC	CP	Y	1	Tazewell	Horn Sherry Residence STP	326 Hagy St	Pounding Mill
VAG400578		MC	CP	Y	1	Buchanan	Cantrell Jared and Alyssa Residence STP	1024 Green Shadows Rd	Breaks
VAG400580		MC	CP	Y	1	Dickenson	Mullins Billie N Residence STP	310 Rakes Ridge Rd	Birchleaf
VAG400583		O & M	CP	N	1	Tazewell	Meeks Michael Residences STP	1636 Loop Rd	Falls Mills
VAG400586		MC	CP	N	1	Russell	Clinch River Hemp Company LLC STP	3922 US Hwy 19	Lebanon
VAG400587		MC	CP	N	1	Russell	Johnson Jennifer Dye Residences STP	523 Strouth Creek	Swords Creek
VAG400588		MC	CP	Y	1	Dickenson	Mullins Kimberly Residence STP	258 Cornerstone Trailer Park	Coeburn
VAG400590		MC	CP	N	1	Buchanan	Williamson Connie Residences STP	1055 Hunts Fork Road	Hurley
VAG400597		MC	CP	N	1	Tazewell	Thompson Larry J & Connie L Residences S	315 Shrader Rd	Cedar Bluff
VAG400604		MC	CP	Y	1	Buchanan	Stacy Rita Residence STP	2964 Straight Fork Rd	Grundy
VAG400605		MC	CP	N	1	Tazewell	Smith Tommy A Residence STP	798 Willow Springs Rd	Cedar Bluff
VAG400606		MC	CP	Y	1	Tazewell	TePoel Louis Residence STP	555 Peery Addition Rd	Tazewell
VAG400608		MC	CP	N	1	Russell	Howe Donna Residences STP	7377 Clinch Mountain Rd	Lebanon

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VAG400609		NB	CP	Y	1	Tazewell	Addison Richard L Residence STP	St Rte 627	Tazewell
VAG400610		MC	CP	N	1	Dickenson	Superior Fabrication Group STP	1680 Breaks Park Rd	Haysi
VAG400611		MC	CP	N	1	Dickenson	Steele Michael Residences STP	184 Charlie Ln	Clintwood
VAG400613		MC	CP	N	1	Buchanan	Poplar Gap Gymnasium STP	Park Rd	Poplar Gap
VAG400614		MC	CP	N	1	Russell	Deskins Tessa Residences STP	43 Aspen Court	Hoanker
VAG400619		MC	CP	N	1	Buchanan	Harman Memorial Baptist Church	4321 Bull Creek Rd	Grundy
VAG400622		O & M	CP	N	1	Russell	Dye Jerry W Residences STP	2191 Pine Creek Rd	Swords Creek
VAG400625		MC	CP	N	1	Dickenson	Hensley Angie and Jessie Residences STP	Red Oak Ridge Rd	Castlewood
VAG400626		MC	CP	N	1	Buchanan	Hurley Family Health Center	10279 Hurley Rd	Hurley
VAG400627		MC	CP	Y	1	Russell	Puckett John H Residence STP	544 Mew Rd	Dungannon
VAG400628		MC	CP	N	1	Russell	Russell County Head Start Center	7341 Swords Creek Rd	Swords Creek
VAG400629		MC	CP	Y	1	Buchanan	Stevens Patsy Crumb Residence STP	10132 Hurley Rd	Hurley
VAG400634		MC	CP	Y	1	Buchanan	Bevins James and Banna Residence STP	1670 Elkins Branch Road	Grundy
VAG400635		MC	CP	Y	1	Buchanan	MCClanahan Kaitlyn Residence STP	1998 Pounding Mill Rd	Hurley
VAG400637		MC	CP	N	1	Tazewell	Bandy Diana Residences STP	684 Johnson's Branch Road	Bandy
VAG400638		MC	CP	Y	1	Tazewell	Lewis McKinley Residence STP	750 Ascue Rd	Pounding Mill
VAG400639		NB	CP	Y	1	Dickenson	Hackney Ronney Residence STP	147 Blankenship Lane	Haysi
VAG400643		MC	CP	Y	1	Buchanan	Stacy Christopher and Rita Residence STP	1091 Sun Branch Rd	Grundy
VAG400644		MC	CP	N	1	Tazewell	Moore Tommy R Land and Cattle Company	14276 Governor GC Peery Hwy	Pounding Mill
VAG400646			CP	Y	1	Russell	Daughtery DeAnna Residence STP	US 19	Hansonville
VAG400647			CP	N	1	Russell	Hill Bernard Residences STP	910 & 922 Maple Gap Rd	Swords Creek
VAG400648		MC	CP	N	1	Buchanan	Hall Barbara Residences STP	1033 Guesses Fork Road	Hurley
VAG400655			CP	N	1	Tazewell	Barnett George Residences STP	3230 Bandy Rd	Bandy
VAG400657		MC	CP	N	1	Dickenson	Whisenhunt Michael Residences STP	2577 Bad Ridge Rd	Coeburn
VAG400658		O & M	CP	Y	1	Buchanan	Matney Nancy Residence STP	4112 Old Guesses Fork Rd	Hurley
VAG400660		NB	CP	Y	1	Tazewell	Hill Edward D Residence STP	220 McGraw Hill Rd	North Tazewell
VAG400661	X	NB	CP	Y	1	Russell	Salyer Roger K and Mary Residence STP	St Rt 679	Russell Co
VAG400662		O&M	CP	N	2	Tazewell	Easy Stop STP	18291 G C Perry Hwy	Pounding Mill
VAG400663		MC	CP	Y	1	Buchanan	Smith Loyal R and Betty Residence STP	5712 Deskins Rd	Vasant
VAG400664		NB	CP	Y	1	Buchanan	Dotson Sherry Lynn Residence STP	2192 Stone Coal Rd	Grundy
VAG400665		MC	CP	Y	1	Tazewell	Whitt Eric Residence STP	2224 Wittens Mill Rd	North Tazewell
VAG400668		NB	CP	Y	1	Buchanan	Stacy Junior B Residence STP	1031 Smith Branch Rd	Grundy
VAG400673		MC	CP	N	1	Buchanan	Justus Hazel Residences STP	4939 Old Lester Fork Rd	Grundy
VAG400675		NB	CP	Y	1	Dickenson	Hill William F Residence STP	St Rte 607	Dickenson County
VAG400677		NB	CP	Y	1	Tazewell	Dickenson Fannie Residence STP	St Rte 643	Tazewell County
VAG400678		MC	CP	N	1	Buchanan	Carl L Harman Apartment STP	10055 Garden Creek Rd	Oakwood
VAG400679		MC	CP	N	1	Buchanan	Justus Allan and Cheryl Residences STP	4897 Lester's Fork Rd	Grundy
VAG400680		MC	CP	Y	1	Buchanan	Rigsby Rachel Residence STP	3838 Bull Creek Rd	Maxie
VAG400681		MC	CP	Y	1	Buchanan	Williams Scotty Residence STP	6506 Home Creek Rd	Big Rock
VAG400682			CP	Y	1	Buchanan	Marshall Ida Matney Residence STP	1056 Old Home Creek Rd	Rowe
VAG400684		MC	CP	Y	1	Buchanan	Deel Robin Residence STP	2929 Greenbrier Rd	Haysi
VAG400686		NB	CP	N	1	Buchanan	Boyd-Sexton Residences STP	1008 Laguna Rd	Grundy
VAG400686		NB	CP	N	1	Buchanan	Boyd-Sexton Residences STP	1008 Laguna Rd	Grundy



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VAG400688		NB	CP	Y	1	Buchanan	Clevinger Ronald Residence STP	14772 Hurley Rd	Hurley
VAG400691		MC	CP	Y	1	Tazewell	Cole Greg and Lynn Residence SFH STP	1460 Green Acres St	Richlands
VAG400692		NB	CP	Y	1	Russell	Beavers Arthur and Patricia Residence STP	3137 Finney Rd	Honaker
VAG400697	X	MC	CP	Y	1	Buchanan	Collins Gary Residence STP	County Route 3005	Vansant
VAG400698		MC	CP	N	1	Buchanan	Thompson Pal Residences STP	1077 Navigator Rd	Harman
VAG400699		MC	CP	N	1	Buchanan	Estep Joseph and Ruth Residences STP	1665 Hunts Fork Rd	Hurley
VAG400702		MC	CP	Y	1	Tazewell	Mabe Ronnie Residence STP	426 Holy Rd	Richlands
VAG400703			CP	Y	1	Buchanan	Ashby Rosetta McFarlane Residence STP	2226 Hurricane Creek Rd	Vansant
VAG400704	X	NB	CP	Y	1	Buchanan	Layne John R Residence STP	8355 Hurley Rd	Hurley
VAG400710		MC	CP	N	1	Buchanan	Street Michael Residences STP	2732 Dry Fork Rd	Buchanan Co
VAG400712		MC	CP	N	1	Buchanan	McClain Darlene Residences STP	1095 Buford Dr	Vansant
VAG400714		NB	CP	Y	1	Russell	Chafin Randall L Residence SFH STP	2537 Carterton Rd	Lebanon
VAG400716		NB	CP	N	1	Dickenson	Dickenson County PSA - Haysi Residences	St Rte 80	Haysi
VAG400717		O&M	CP	N	1	Tazewell	Tazewell County PSA - Neal Hollow STP 1	145 Hawkins Dr	Falls Mills
VAG400718		O&M	CP	N	1	Tazewell	Tazewell County PSA - Neal Hollow STP 2	205 Hawkins Dr	Falls Mills
VAG400721		NB	CP	Y	1	Buchanan	Boyd John L Residence STP	1089 Country Meadows Rd	Breaks
VAG400727		MC	CP	N	1	Buchanan	VEDCO Holdings Inc Office STP	1793 Dry Fork Rd	Vansant
VAG400728		NB	CP	Y	1	Buchanan	Ling Willard and Gusene Residence STP	1829 Mill Creek Rd	Hurley
VAG400729		NB	CP	Y	1	Buchanan	Deel Teresa Residence STP	1144 Deadbolt Rd	Vansant
VAG400730		NB	CP	N	2	Buchanan	Whitewood Volunteer Fire Dept & Community	16128 Dismal River Rd	Whitewood
VAG400731		NB	CP	Y	1	Buchanan	Griffey Tabitha and Donald Residence STP	2188 Upper Mill Branch Rd	Grundy
VAG400735		NB	CP	Y	1	Buchanan	Scott Randy and Sue Residence STP	2439 Slate Creek Rd	Grundy
VAG400737	X		CP	Y	1	Buchanan	Hensley Michael Shawn Residence STP	1335 Old Lesters Fork Rd	Hurley
VAG400741		NB	CP	Y	1	Buchanan	Lowe Paul Residence STP	4348 Dry Fork Rd	Buchanan Co
VAG400745		NB	CP	Y	1	Tazewell	Sparks Donald Residence STP	400 Middle Creek Rd	Ringgold
VAG400749		NB	CP	Y	1	Buchanan	Stacy Tony R Sr Residence STP	1017 Ray Stacy Rd	Wolford
VAG400751		NB	CP	Y	1	Dickenson	Sutherland Mark Residence STP	3385 Rock Lick Rd	Haysi
VAG400752		MC/O&M	CP	Y	1	Dickenson	Keen Tammy Residence STP	664 Backbone Ridge	Haysi
VAG400753		NB	CP	Y	1	Dickenson	O'quin Ashley Residence STP	6121 Aily Rd	Dante
VAG400754		NB	CP	Y	1	Russell	Barnhart Lawrence Marvin Residence STP	2397 Corn Valley Rd	Honaker
VAG400755		NB	CP	Y	1	Buchanan	McCoy Teddy Residence STP	4127 Guesses Fork Rd	Hurley
VAG400757		O&M	CP	N	1	Buchanan	Looney's Shop STP	2727 Upper Mill Branch Rd	Grundy
VAG400758			CP	Y	1	Buchanan	Viars Deborah Jane Residence STP	2782 Hale Creek Rd	Pilgrims Knob
VAG400759		NB	CP	Y	1	Dickenson	Ison Vanessa Residence STP	732 Jerrys Branch	Clintwood
VAG400760			CP	N	1	Tazewell	Moseley Rory Residence and Shop STP	730 Willow Spring Rd	Cedar Bluff
VAG400761		NB	CP	Y	1	Buchanan	Ward Brian Residence STP	3179 Lovers Gap Rd	Vansant
VAG400762		NB	CP	Y	1	Buchanan	Cline Robert E II Residence STP	1031 Brown Rd	Roseann
VAG400763		NB	CP	Y	1	Tazewell	Maloyed Betty Rhea Residence STP	553 Mt Spring Rd	Tannersville
VAG400764		NB	CP	Y	1	Russell	Gullett Eddie E and Twilia Y Residence SFH	58 Rebel Dr	St. Paul
VAG400765		NB	CP	Y	1	Tazewell	Billips Carl Rex Jr and Paula Residence STP	9915 Mud Fork Rd	Bluefield
VAG400767		NB	CP	Y	1	Tazewell	Brown Jimmy and Brigette Residence STP	1753 Green Mountain Rd	Cedar Bluff
VAG400768		NB	CP	Y	1	Buchanan	Belcher Linda Residence STP	St Rte 643	Hurley
VAG400769		NB	CP	Y	1	Dickenson	Fleming Noah Doug Residence STP	1581 Little Lick Hollow	Haysi

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VAG400770			CP	N	1	Buchanan	Nations Richard Residences STP	7839 Bull Creek Rd	Buchanan
VAG400772		NB	CP	Y	1	Buchanan	Stacy Gary and Lisa Residence STP	1016 Day Lily Dr	Grundy
VAG400779		NB	CP	Y	1	Buchanan	Belcher Linda Residence STP - Harman	1556 Belcher Fork Rd	Harman
VAG400780		NB	CP	Y	1	Buchanan	Altizer Charlie Residence STP	2313 Happy Hollow Rd	Breaks
VAG400781		NB	CP	N	1	Tazewell	Horne Judy C Residences STP	927 Willow Springs	Cedar Bluff
VAG400782		NB	CP	Y	1	Buchanan	Bowman James and Geraldine Residence S	2192 Red Dirt Rd	Leemaster
VAG400785		NB	CP	Y	1	Dickenson	Rose Richard W and Pamela Residence ST	2292 Coeburn Rd	Clintwood
VAG400791		NB	CP	Y	1	Tazewell	Wimmer Tammy V. Horton Residence STP	175 Addison Road	Cedar Bluff
VAG400794		MC	CP	Y	1	Tazewell	Kiser Jason Residence STP	185 Stiltner Dr	Cedar Bluff
VAG400795		NB	CP	Y	1	Russell	Smith Bertha Residence STP	Cleveland Rd	Cleveland
VAG400797		NB	CP	Y	1	Russell	Phillips Annie Gail Residence STP	3658 Dante Road	Castlewood
VAG400801		NB	CP	Y	1	Buchanan	Yates Matthew and Melanie Residence STP	5242 Bull Creek Rd	Harman
VAG400802		NB	CP	N	1	Dickenson	Flannagan Recreation Park STP	379 Hollow Place Rd	Dickenson Co
VAG400805		NB	CP	Y	1	Dickenson	Counts Jimmy Residence STP	516 Dark Hollow Rd	Haysi
VAG400806			CP	N	1	Tazewell	Dunford Denise C Residences STP	350 Addison Rd	Cedar Bluff
VAG400807		NB	CP	Y	1	Tazewell	Miller Harold L Residence STP	448 Bailey Switch Rd	Bluefield
VAG400808		NB	CP	Y	1	Russell	Collins Justin Residence STP	1059 Mew Rd	Castlewood
VAG400809	X	NB	CP	N	1	Buchanan	Photo Classics Inc STP	16554 Riverside Dr	Oakwood
VAG400810		NB	CP	Y	1	Buchanan	Thornsberry Ian Residence STP	1245 Peeled Poplar Rd	Grundy
VAG400812		MC	CP	N	1	Buchanan	Sexton Jonathan Residences STP	1048 Sweet Cherry Rd	Grundy
VAG400813		MC	CP	N	1	Tazewell	Font John H Residences STP	460/8 Burkes Garden	Tazewell
VAG400814		NB	CP	Y	1	Dickenson	Edwards Edmund and Linda Residence STP	1059 Baker Ridge Rd	Clintwood
VAG400825		NB	CP	Y	1	Buchanan	Rife James Residence STP	1143 Lower Fork Road	Pilgrim Knob
VAG400826		NB	CP	Y	1	Dickenson	Hill Conrad Residence STP	1052 Gardina Way	Bee
VAG400830		NB	CP	N	1	Buchanan	Paul's Repair Shop STP	2125 Home Creek Rd	Grundy
VAG400837	X	NB	CP	Y	1	Dickenson	Neece Vera Residence STP	191 Paradise Ally	Trammel
VAG400838		NB	CP	Y	1	Dickenson	Rose Kenneth & Joyce Residence STP	5680 Frying Pan Creek Road	Birchleaf
VAG400839			CP	Y	1	Dickenson	Deel Arlene Rental Property STP	26016 Dickenson Hwy	Haysi
VAG400844		NB	CP	Y	1	Russell	Atwell Robert Jr Residence STP	US 19	Russell County
VAG400845		NB	CP	Y	1	Russell	Rasnick Daryl Residence STP	137 Trout Farm Rd	Castlewood
VAG400846		NB	CP	Y	1	Buchanan	Swiney Gary and Amy Residence STP	1674 Doubling Fields Road	Maxie
VAG400847		NB	CP	Y	1	Tazewell	Kidd Roba D Kidd Residence STP	3317 Wrights Valley Rd	Bluefield
VAG400849		NB	CP	Y	1	Buchanan	Hess Betty Residence STP	3174 Big Branch Rd	Vansant
VAG400850		NB	CP	N	1	Dickenson	Thomas Randy Residences STP	2583 Bartlick Rd	Haysi
VAG400851		NB	CP	Y	1	Tazewell	Stacey Elmer Residence STP	2750 Virginia Ave	Bluefield
VAG400852		NB	CP	Y	1	Dickenson	O'Quinn Teddy Residence STP	1045 Medley Dr	Bee
VAG400853		NB	CP	Y	1	Tazewell	Bowman George Jr Residence STP	626 Peery Addition Rd	Tazewell
VAG400854		NB	CP	Y	1	Buchanan	Gibson Jacqueline Residence STP	1029 Dogwood Dr.	Hurley
VAG400859		NB	CP	N	1	Tazewell	Bobby's Towing Inc STP	2095 Wrights Valley Rd	Bluefield
VAG400861		MC	CP	N	1	Tazewell	Sparks Dallas and Dori Residence & Office S	897 Bailey Switch Road	Bluefield
VAG400862		NB	CP	Y	1	Russell	Wilson Michael Scott Residence STP	481 McFarlane Ln	Rosedale
VAG400863		NB	CP	Y	1	Dickenson	Stanley Bradley and Allison Residence STP	138 Auty's Ln	Haysi
VAG400864		MC	CP	N	1	Russell	Advance Diagnostics Inc	1708 US Hwy 19	Lebanon



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VAG400865		MC	CP	Y	1	Buchanan	Justus Brandon J and Amanda D Residence	1434 Squire Branch Rd	Grundy
VAG400866		NB	CP	Y	1	Russell	Owens Bill Residence STP	163 Grace Ln	Rosedale
VAG400870		NB	CP	Y	1	Dickenson	Owens Betty Residence STP	914 Steves Branch	Bee
VAG400871			CP	Y	1	Dickenson	Robinson James T Residence STP	St Rte 72	Dickenson Co
VAG400872		NB	CP	Y	1	Tazewell	Asbury Heather Residence STP	1400 Six Farm Rd	Tazewell
VAG400873		MC	CP	N	1	Russell	Davis Frank and Hurd Dewey Residences STP	St Rte 683	Russell County
VAG400873		MC	CP	N	1	Russell	Davis Frank and Hurd Dewey Residences STP	St Rte 683	Russell County
VAG400876		MC	CP	Y	1	Dickenson	Mullins Laura Beth Residence STP	1238 Crabtree Hollow Rd	Clintwood
VAG400884		NB	CP	Y	1	Buchanan	Stacy Brian Residence STP	1098 Gent Branch Rd	Vansant
VAG400887		NB	CP	Y	1	Tazewell	Stevenson Janice and Ronnie Residence STP	1880 Bandy Rd	Cedar Bluff
VAG400888		NB	CP	N	1	Buchanan	Smith David Residences STP	1400 Fox Farm Rd	Hurley
VAG400889		NB	CP	Y	1	Dickenson	Mullins Bradley and April Residence STP	St Rte 632	Dickenson County
VAG400890		MC	CP	Y	1	Dickenson	Heaton Tunnia Residence STP	114 Rattlesnake Rd.	Dante
VAG400891		NB	CP	N	1	Buchanan	Hale Rita Carol Ball Residences STP	1100 Spring Pond Rd	Honaker
VAG400892		NB	CP	Y	1	Dickenson	Hale Julie Marie Residence STP	10472 Dante Mtn Rd	Dante
VAG400893		NB	CP	Y	1	Dickenson	Gulley Tauna Residence STP	1910 Brush Creek Rd	Clintwood
VAG400894		MC	CP	N	1	Buchanan	May Karla Residences STP	1120 Typhoon Rd	Grundy
VAG400896		NB	CP	N	1	Dickenson	Cranesnest Trailhead STP	St Rte 83	Dickenson County
VAG400897		NB	CP	Y	2	Tazewell	McGlothlin James E and Michael M Res STP	US 19/460	Tazewell County
VAG400898		NB	CP	N	1	Buchanan	Justice Georgie and Emmie Jean Residence	675 Brushy Fork Rd	Buchanan County
VAG400899		NB	CP	Y	1	Buchanan	Miller Rosemarie Residence STP	5796 Slate Creek Rd	Grundy
VAG400900		NB	CP	Y	1	Tazewell	Miner Donna and Peak Stephen T Residence	2404 Kents Ridge Rd	Cedar Bluff
VAG400901		NB	CP	Y	1	Buchanan	Boyd Jerlene Residence STP	1073 Clanton Rd	Grundy
VAG400902		NB	CP	Y	1	Tazewell	Burke Danny Residence STP	4420 Burkes Garden Rd	Tazewell
VAG400903		NB	CP	Y	1	Dickenson	Wesley McCowan Residence STP	600 Dyers Chapel Rd	Clinchco
VAG400905		NB	CP	Y	1	Dickenson	Mackey Sylvia E and Richard Residence STP	301 Corps Lower Twin Ln	Haysi
VAG400906		NB	CP	N	1	Buchanan	Justus Jennie and Blankenship Tim Residence	1393 and 1409 Brushy Fork Rd	Buchanan County
VAG400906		NB	CP	N	1	Buchanan	Justus Jennie and Blankenship Tim Residence	1393 and 1409 Brushy Fork Rd	Buchanan County
VAG400907		NB	CP	Y	1	Dickenson	Fleming Tara Residence STP	252 Willow Ln	Clintwood
VAG400908		NB	CP	Y	1	Buchanan	Viers Shad Residence STP	1026 Butterfly Hill Rd	Haysi
VAG400911		NB	CP	N	2	Dickenson	E & S Grocery STP	222 Sandlick Rd	Birchleaf
VAG400912		O&M	CP	Y	1	Tazewell	TCPSA Middle Creek Sewerage (C2)	131 Smith Dr	Tazewell
VAG400913			CP	Y	1	Tazewell	TCPSA Middle Creek Sewerage (C3)	1020 Middle Creek Rd	Tazewell
VAG400914			CP	Y	1	Tazewell	TCPSA Middle Creek Sewerage (C4)	1077 Middle Creek Rd	Tazewell
VAG400916		O&M	CP	N	1	Tazewell	TCPSA Middle Creek Sewerage (C6)	1298 Middle Creek Rd	Tazewell
VAG400917		O&M	CP	N	1	Tazewell	TCPSA Middle Creek Sewerage (C7)	150 George Rd	Tazewell
VAG400918		O&M	CP	N	1	Tazewell	TCPSA Middle Creek Sewerage (C8)	1565 Middle Creek Rd	Tazewell
VAG400919		NB	CP	Y	1	Buchanan	Freeman Jenny Residence STP	1600 Upper Mill Branch Rd.	Grundy
VAG400920		MC	CP	N	1	Buchanan	Willis Danny and Shirley Residences STP	2916 Happy Hollow Road	Breaks
VAG400921		MC	CP	N	1	Buchanan	Jewell Coal and Coke Processing and Transf	1034 Dismal River Rd	Oakwood
VAG400922		MC	CP	Y	1	Tazewell	Meade Steven M and Deborah A Residence	2765 Crab Orchard Rd	Tazewell
VAG400924			CP	Y	1	Dickenson	Owens Heather Residence STP	3498 Indian Creek Rd	Bee
VAG400926			CP	Y	1	Buchanan	Stacey William T and Louise Res STP	4781 Hurley Rd	Hurley

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VAG400927	X	NB	CP	Y	1	Buchanan	Dales Phyllis Residence STP	8269 Leemaster Dr	Vansant
VAG400928			CP	Y	1	Tazewell	Elswick Janice Residence STP	214 Webb St	Cedar Bluff
VAG400929			CP	Y	1	Tazewell	Fields Whitney Residence STP	283 Monk Rd	Bandy
VAG400932		O&M	CP	N	1	Russell	St. Paul Apparel Inc STP	111 Water Ln	St. Paul
VAG400933			CP	Y	1	Russell	Phillips Paul Arthur Residence STP	1354 Calvary Baptist Rd	Castlewood
VAG400934			CP	Y	1	Buchanan	Keene Brian Residence STP	8519 Slate Creek Rd	Grundy
VAG400936			CP	Y	1	Buchanan	Lester Jerry T Residence STP	1500 Peeled Poplar Rd	Grundy
VAG400937	X		CP	Y	1	Russell	Whited Nancy Residence STP	205 Wild Rose Dr	Russell County
VAG400938			CP	Y	1	Dickenson	Fuller Joey Residence STP	3384 Breaks Park Rd	Haysi
VAG400940		NB	CP	Y	1	Russell	Robinson Stephen Daniel Residence STP	138 Johnson Hollow Rd	Russell County
VAG400945		O&M	CP	Y	1	Dickenson	Meade Sierra Residence STP	St Rte 83	Dickenson County
VAG400946		NB	CP	Y	1	Buchanan	Gooch Stephen and Melanie Residence STP	St Rte 83	Buchanan County
VAG400947		NB	CP	Y	1	Dickenson	Jenkins Mark and Tommy Residence STP	325 Christina Ln	Clintwood
VAG400950		MC	CP	N	1	Dickenson	Mullins Joseph and Karen Residences STP	3300 Coeburn Rd	Dickenson County
VAG400952		NB	CP	Y	1	Russell	Beavers Randall Residence STP	25 Tunnel Rd	Honaker
VAG400953		MC	CP	N	1	Buchanan	Wooden Horse Grill STP	St Rte 650	Buchanan County
VAG400954		NB	CP	Y	1	Dickenson	Owens Sarah E Residence STP	St Rte 606	Dickenson Co
VAG400955	X		CP	Y	1	Dickenson	Deel Brandon and Brittany Residence STP	4285 Breaks Park Rd	Haysi
VAG400956		NB	CP	Y	1	Dickenson	Dorton Byron J and Jennifer R Residence STP	St Rte 607	Dickenson County
VAG400961		NB	CP	Y	1	Buchanan	Gibson Larry Residence STP	St Rte 647	Buchanan County
VAG400963		NB	CP	Y	1	Buchanan	Estep Cline Dale Residence STP	St Rte 644	Buchanan County
VAG400964	X	NB	CP	Y	1	Buchanan	Stiltner Breck K Residence STP	3162 Old Rocklick Rd	Buchanan County
VAG400967	X	NB	CP	Y	1	Buchanan	Looney Randy and Dianna Residence STP	St Rte 635	Buchanan County
VAG400968		NB	CP	Y	1	Russell	Dye Russell B Residence STP	St Rte 622	Russell County
VAG400969		MC	CP	Y	1	Buchanan	Hensley William Residence STP	3944 Bull Creek Rd	Grundy
VAG400970		NB	CP	Y	1	Tazewell	Honaker LonnieP Residence STP	St Rte 631	Tazewell County
VAG400971		NB	CP	Y	1	Russell	Mountain Meadows Lots 13, 14 and 15 Resid	US 19 and Forrest Lodge Rd	Russell County
VAG400972		NB	CP	N	1	Russell	Jeffrey Clifton Dale Business STP	23 Forest Lodge Dr	Lebanon
VAG400973		NB	CP	Y	1	Buchanan	Clark Allen and Tina Clark	St Rte 619	Buchanan County
VAG400974		NB	CP	Y	1	Tazewell	Scott Leta Residence STP	St Rte 627	Tazewell County
VAG400975		NB	CP	Y	1	Buchanan	May Rickey Residence STP	St Rte 643	Buchanan County
VAG400977	X	NB	CP	Y	1	Buchanan	Lester Cassandra Residence STP	St Rte 600	Buchanan County
VAG400979		NB	CP	Y	1	Buchanan	Justus Evanelle Residence STP	St Rte 675	Buchanan Co
VAG400980		NB	CP	Y	1	Buchanan	Stacy Donnie Ray and Jessica Residence STP	St Rte 652	Buchanan Co
VAG400981		NB	CP	Y	1	Tazewell	Sparks Rex Residence STP	St Rte 686	Tazewell County
VAG400982		NB	CP	Y	1	Tazewell	Chambers John Residence STP	St Rte 631	Tazewell County
VAG400983		MC	CP	N	1	Dickenson	Paramont Contura LLC - No 88 Strip STP	3210 Monte Rd	Bee
VAG400984		NB	CP	N	1	Russell	Roy Gomez Apartments STP	3933 Swords Creek Rd	Honaker
VAG400986		NB	CP	Y	1	Buchanan	Bandy Darvel Residence STP	St Rte 650	Buchanan County
VAG400990		NB	CP	Y	1	Buchanan	Wolford Charlie Residence STP	St Rte 646	Buchanan County
VAG400993		NB	CP	N	1	Tazewell	Vance Matthew L Residences STP	St Rte 699	Tazewell County
VAG400994		NB	CP	N	1	Russell	Maxfield Bernard Residences STP	St Rte 630	Russell County
VAG400995		NB	CP	Y	1	Buchanan	Deel Patrick Keith Residence STP	1425 JWB Hollow Rd	Buchanan County



Permit No	Returns	Maintenanc	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400996		NB	CP	N	1	Buchanan	Dollar General Store STP - Hurley	St Rte 643	Buchanan County
VAG400997		NB	CP	Y	2	Russell	Barnhart Angela Residence STP	414 Arnold Rd	Honaker
VAG400999		NB	CP	Y	1	Tazewell	Strouth Kayla Residence STP	St Rte 67	Tazewell County
VAG409000		MC	CP	Y	1	Buchanan	Blankenship Sandra Residence STP	St Rte 83	Buchanan County
VAG409001		NB	CP	Y	1	Russell	Campbell Cecil Douglas Residence STP	7954 Swords Creek Rd	Russell County
VAG409003		NB	CP	Y	2	Russell	Artrip Freeman Residence STP	St Rte 664	Russell County
VAG409004		NB	CP	Y	1	Russell	Miller Kathy Residence STP	St Rte 670	Russell County
VAG409007		NB	CP	Y	1	Russell	Sims Floyd and Amanda Residence STP	St Rt 67	Russell County
VAG409008		NB	CP	Y	1	Buchanan	Willis Phillip Residence STP	St Rte 610	Buchanan County
VAG409009		MC	CP	N	1	Tazewell	Green Peggy Residences STP	260 Baptist Valley Rd	Tazewell County
VAG409013		NB	CP	Y	1	Buchanan	Clifton Anthony Residence STP	7392 Hurley Rd	Buchanan County
VAG409014		NB	CP	N	1	Dickenson	Nora Community Sewerage Project-Area 1 S	St Rte 63	Dickenson County
VAG409015		NB	CP	N	1	Dickenson	Nora Community Sewerage Project-Area 2 S	St Rte 63	Dickenson County
VAG409016		NB	CP	N	1	Dickenson	Nora Community Sewerage Project-Area 3 S	St Rte 63	Dickenson County
VAG409018		NB	CP	Y	1	Tazewell	Childress Ralph J and Beulah J Residence S	1532 Polly Pd	Bluefield
VAG409020		NB	CP	Y	1	Tazewell	Vance Joseph Residence STP	St Rte 609	Tazewell County
VAG409021		NB	CP	Y	1	Buchanan	Christian Jim Residence STP	St Rte 652	Buchanan County
VAG409022		NB	CP	Y	1	Russell	Dye Rafty and Deborah K Residence STP	St Rte 632	Russell County
VAG409024		NB	CP	Y	1	Dickenson	Cox Milton Lee Residence STP	944 Wolfe Pen Rd	Dickenson County
VAG409025		NB	CP	Y	1	Buchanan	Rasnake Loraine Residence STP	1731 Pealog Branch Rd	Buchanan Co
VAG409028		NB	CP	Y	1	Dickenson	Thomas James Donald Residence STP	118 Rakes Ridge Rd	Birchleaf
VAG409029		O&M	CP	N	1	Russell	Gas Field Services Inc STP	17908 US Hwy 19	Rosedale
VAG409030		NB	CP	Y	1	Russell	Griffith Peggy N Residence STP	St Rt 670	Russell County
VAG409031		NB	CP	Y	1	Dickenson	Hull Russell and Samantha Residence STP	391 Spring Branch Dr	Dickenson County
VAG409032	X	NB	CP	N	1	Buchanan	Blankenship Henry C and Lillian Residences	1335 Crescent Rd	Buchanan County
VAG409033			CP	Y	1	Tazewell	Graham Mellie Residence STP	2658 Dry Fork Rd	Bandy
VAG409035			CP	N	1	Buchanan	Allen Boyd R Residences STP	3890 Knox Creek Dr	Hurley
VAG409039		NB	CP	Y	1	Russell	Meade Teddy L Residence STP	4301 High Point Rd	Russell County
VAG409042		NB	CP	N	1	Russell	Phillips Anthony Residences STP	Old School Way	Russell County
VAG409043	X	NB	CP	N	1	Buchanan	Pilgrims Knob Rescue Squad STP	13228 Dismal River Rd	Pilgrims Knob
VAG409045		NB	CP	N	1	Dickenson	Rose Daniel and Linda Residences STP	4512 Doctor Stanley Hwy	Coeburn
VAG409047		NB	CP	Y	1	Buchanan	Prater Jonathan W Residence STP	1195 Peeled Poplar Rd	Grundy
VAG409048		NB	CP	Y	1	Tazewell	Dunford Denise C SFH STP	256 Addison Rd	Cedar Bluff
VAG409050		NB	CP	Y	1	Buchanan	Coleman's Methodist Church Parsonage STP	6803 Lovers Gap Rd	Buchanan County
VAG409051		NB	CP	Y	1	Buchanan	Rife Angie and Wolford Danny Residence ST	1008 River Bottom Dr	Buchanan County
VAG409052			CP	Y	1	Buchanan	Billiter Johnny and Pamela Residence STP	2107 Woods Fork Rd	Grundy
VAG409055	X	NB	CP	Y	1	Russell	Owens Juanita Residence STP	545 Mannheim Rd	Lebanon
VAG409056		NB	CP	N	1	Dickenson	Strouth Phillip Residences STP	1085 Honey Camp Rd	Clintwood
VAG409058		NB	CP	Y	1	Buchanan	Matney Ernest E Residence STP	1020 Greenfield Rd	Vansant
VAG409060		NB	CP	Y	1	Russell	Harris Danny B and Rema Residence STP	St Rte 647	Russell County
VAG409065		NB	CP	Y	2	Russell	McGlothlin Deidra Residence STP	Cedar Cliff Rd	Russell County
VAG409066		NB	CP	Y	1	Buchanan	Lee Amanda and Shannon Residence STP	2907 Upper Elk Creek Dr	Hurley
VAG409068		NB	CP	Y	1	Russell	Meadows James and Tammy Residence STP	Off US 19	Russell County

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VAG409069		NB	CP	Y	1	Buchanan	Adkins John and Victoria Residence STP	Off St Rte 650	Buchanan County
VAG409072		NB	CP	Y	1	Tazewell	Goss Denny Residence STP	1157 Ascue Rd	Cedar Bluff
VAG409073		NB	CP	Y	1	Buchanan	Woods Brandon S Residence STP	Off St Rte 673	Buchanan County
VAG409074		NB	CP	Y	1	Buchanan	Justus John and Maggie Residence STP	Off St Rte 659	Buchanan County
VAG409075		NB	CP	Y	1	Buchanan	McCoy Daniel Residence STP	Off St Rte 647	Buchanan Co
VAG409081	X	NB	CP	Y	1	Russell	Kite Jeff and Jennifer Residence STP	100 North Mill Hollow Rd	Russell County
VAG409082		NB	CP	Y	1	Russell	Kennedy Rita Residence STP	1207 Rocky Fork Rd	Russell County
VAG409083			CP	N	1	Buchanan	Justus Richard Residences STP	1379 Puncheon Camp Rd	Buchanan County
VAG409084		NB	CP	Y	1	Buchanan	Gray Charles and Cathy Residence STP	1476 Elijah Branch Rd	Buchanan County
VAG409085		O&M	CP	N	1	Buchanan	Russell Prater Elementary School	8433 Lover's Gap Rd	Buchanan County
VAG409086		O&M	CP	Y	1	Russell	Stevens Christina Residence STP	St Rte 615	Russell County
VAG409087		NB	CP	Y	1	Tazewell	Stiltner Jesse and Kayla Residence STP	2006 Steelsburg Hwy	Tazewell County
VAG409088			CP	N	1	Russell	Clifffield Homes Inc. STP	12816 US Hwy 19	Russell County
VAG409091		NB	CP	Y	2	Russell	Harman Cass Residence STP	Dorado Bottom Rd	Russell County
VAG409092		NB	CP	Y	1	Russell	Smith Terry Residence STP	1135 Fork Ridge Rd	Lebanon
VAG409093		NB	CP	Y	1	Dickenson	Gulley Michael Residence STP	St Rte 631	Dickenson County
VAG409094		MC	CP	Y	1	Tazewell	Goodie Michael and Rebecca Residence STP	2606 Indian Creek Rd	Cedar Bluff
VAG409097		NB	CP	Y	1	Buchanan	Powers Freda Residence STP	St Rte 600	Buchanan County
VAG409098		NB	CP	Y	1	Tazewell	Elswick Carmie Residence STP	St Rte 631	Tazewell County
VAG409100		NB	CP	Y	1	Buchanan	Rife Jory Residence STP	4937 Hale Creek Rd	Pilgrims Knob
VAG409101		NB	CP	Y	2	Tazewell	Richardson Shelma Residence STP	290 Woodall St	Tazewell County
VAG409102			CP	N	1	Buchanan	Jewell Coal and Coke Co 3 - Side Lunchroom	St Rte 638	Buchanan County
VAG409104		NB	CP	Y	1	Buchanan	Matney James Residence STP	Off St Rt 617	Buchanan County
VAG409107	X	NB	CP	Y	1	Buchanan	Pruitt Elmer Residence STP	1011 Nance Fork Circle	Buchanan County
VAG409109			CP	Y	1	Tazewell	Tetlow Jeanie Colley Residence STP	St Rt 631	Tazewell County
VAG409110			CP	N	1	Tazewell	Dunford Roofing Rentals STP	132 and 114 Burton Hollow Rd	Tazewell County
VAG409111	X		CP	Y	1	Buchanan	Fraley Coty M Residence STP	St Rte 645	Buchanan County
VAG409116			CP	N	1	Buchanan	Hurley Brian K Residences STP	1196 Mohagany Rd	Honaker
VAG409118			CP	N	1	Dickenson	Bowman Joey Residences STP	303 Kayes Cove	Clintwood
VAG409119			CP	Y	1	Tazewell	Stiltner Judith Ann Residence STP	6290 Clear Fork Rd	Tazewell
VAG409120			CP	Y	1	Dickenson	Hensley Rhonda Vanover Residence STP	Off St Rte 72	Dickenson County
VAG409122			CP	Y	1	Buchanan	Compton Chase Residence STP	Off St Rte 602	Buchanan County
VAG409123			CP	Y	1	Dickenson	Phipps Ruby H Residence STP	1902 Brush Creek Rd	Clintwood
VAG409124			CP	Y	1	Tazewell	Lester Cody B and Charlotte Residence STP	Off St Rte 626	Tazewell County
VAG409125			CP	N	1	Dickenson	Four Way STP	136 Four Way Circle	Dickenson County
VAG409126		NB	CP	Y	1	Buchanan	Gibson Geneva Residence STP	Off St Rt 653	Buchanan Co
VAG409127	X	NB	CP	Y	1	Russell	Penley Connie Residence STP	3207 Drill Rd	Russell Co
VAG409130		NB	CP	Y	1	Tazewell	Wood Larry D and Wanda S Residence STP	745 Johnsons Branch Rd	Tazewell County
VAG409131			CP	N	1	Dickenson	Owens Levearne Residences STP	845 Sandlick Rd	Dickenson Co
VAG409132			CP	Y	1	Tazewell	Vance Michael and Virginia Residence STP	1804 Baptist Valley Rd	Tazewell County
VAG409133			CP	N	1	Dickenson	Presley Frank and Jennifer Residence STP	Pickett Rd	Dickenson County
VAG409135			CP	Y	1	Russell	Justice Barbara Residence STP	21808 Hwy 19	Russell Co
VAG409136			CP	Y	1	Buchanan	Jackson Matthew and Alisha Residence STP	Stiltner Creek Rd	Buchanan Co



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VAG409137			CP	N	1	Buchanan	J.M. Bevins Community Center STP	8668 Slate Creek Rd	Buchanan
VAG409138			CP	Y	1	Tazewell	Carston Ford Residence STP	116 Lincoln St	Pounding Mill
VAG409139			CP	N	1	Buchanan	R & J Properties No 2 STP	1009 Pine Cone Rd	Buchanan County
VAG409140			CP	N	1	Buchanan	Dollar General - Slate Creek STP	St Rt 83	Buchanan County
VAG409142			CP	Y	1	Buchanan	Love Lacy Residence STP	St Rt 645	Buchanan County
VAG409143			CP	Y	1	Buchanan	Oquin Bobby E Residence STP	St Rt 83	Buchanan County
VAG409144			CP	Y	1	Buchanan	Stacy James W Residence STP	Off St Rt 643	Buchanan County
VAG409146			CP	Y	1	Buchanan	Griffey Lois Residence STP	Off St Rt 651	Buchanan County
VAG409147			CP	Y	1	Buchanan	Davis Johnny and Eva Residence STP	Off St Rt 635	Buchanan County
VAG409148			CP	N	1	Buchanan	Ramey Willard and Verna Residences STP	Off St Rt 645	Buchanan County
VAG409149			CP	Y	1	Buchanan	Looney Brenda Kay Residences STP	1066 Pecan Rd	Grundy
VAG409150			CP	Y	1	Russell	Shepard Donna Residence STP	892 US Hwy 19	Russell County
VAG409151			CP	Y	1	Russell	Robinette Candace Residence STP	8322 North 71	Russell County
VAG409152			CP	Y	1	Buchanan	Charles Sylvia H Residence STP	St Rt 620	Buchanan County
VAG409153			CP	Y	1	Tazewell	Vance Matthew L Single Family Residence S	St Rt 637	Tazewell County
VAG409154			CP	Y	1	Buchanan	Owens Sammy Residence No. 1 STP	St Rt 737	Buchanan County
VAG409155			CP	Y	1	Buchanan	Owens Sammy Residence No. 2 STP	St Rt 737	Buchanan County
VAG409156			CP	Y	1	Dickenson	Lyall Sue R Residence STP	Off St Rt 63	Dickenson County
VAG409158			CP	Y	1	Buchanan	Bailey Melissa Residence STP	1959 Mountain Laurel Rd	Hurley
VAG409159			CP	Y	1	Buchanan	Johnny Dotson	17819 Hurley Rd	Buchanan County
VAG409162			CP	N	1	Dickenson	Hamilton George Residences STP	973 Crabtree Hollow	Clintwood
VAG409163			CP	Y	1	Russell	Yates Scotty and Bonnie Residence STP	2095 Cabo Rd	Russell County
VAG409172			CP	Y	1	Russell	Brendlinger Robert L. Residence STP	US Hwy 19	Russell County
VAG409175			CP	Y	1	Tazewell	Phillips Seth Residence STP	Off US 19	Tazewell County
VAG409178			CP	Y	1	Tazewell	Cordle Keith D and Amanda B Residence ST	1297 Willow Springs Rd	Tazewell County
VAG409180			CP	Y	1	Russell	Amos Marvin E Jr Residence STP	St Rt 700	Russell County
VAG409183			CP	Y	1	Buchanan	Humbert Ida Roselee Residence STP	2155 Leemaster Dr	Vansant
VAG409184			CP	Y	1	Dickenson	Sykes Carmelia Residence STP	138 Willow Lane	Clintwood
VAG409185			CP	Y	1	Buchanan	Davis Jerry Residence STP	St Rt 650	Buchanan County
VAG409186			CP	Y	1	Buchanan	Rife Chase and Morgan Residence STP	Little Prater Rd	Buchanan County
VAG409188			CP	N	1	Dickenson	Snowball Hollow Shooting Range STP	418 Dixon Range Rd	Clintwood
VAG409189			CP	Y	1	Dickenson	Mullins Dawn Allison Residence STP	478 Clay Taylor Hollow Rd	Clincho
VAG409190			CP	Y	1	Buchanan	Ramey Ronald Jordan Residence STP	Buchanan County at U. I. of Charles Fork located off of Woodchuck Road	Grundy
VAG409191			CP	Y	1	Dickenson	Fleming Kaitlyn Residence STP	TBD Willow Lane	Clintwood
VAG409192			CP	Y	1	Dickenson	Rogers Judy Residence STP	1193 Breaks Park Rd	Haysi
VAG409194			CP	Y	1	Dickenson	Rowe Aaron Residence STP	4048 S of the Mountain Rd	Clintwood
VAG409196			CP	Y	1	Buchanan	Stiltner Johnny R Residence STP	ST Rt 609	Maxie
VAG409199			CP	Y	1	Buchanan	Boyd Logan and Savannah Residence STP	1014 Flat Rock Rd	Grundy
VAG409200			CP	Y	1	Buchanan	Keen Harold and Tammy Residence STP	1027 Sheppard Rd	Rowe
VAG409201			CP	Y	1	Buchanan	Elswick Christine Residence STP	4578 Bull Creek Rd	Grundy
VAG409202			CP	Y	1	Tazewell	Bagielto Paul Residence STP	2324 Baptist Valley Rd	Cedar Bluff
VAG409203			CP	Y	2	Dickenson	Herald Glenn Residence STP	131 Jim Hess Rd	Birchleaf
VAG409204			CP	N	2	Tazewell	Richard Hudson-Clinch River Farms STP	Estates Dr	Pounding Mill

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VAG409205			CP	Y	1	Russell	Stinson Carline Residence STP	558 Crackers Neck Rd	Cleveland
VAG409207			CP	Y	2	Dickenson	Sexton Cody and Kendra Residence STP	3364 Lick Creek Rd	Haysi
VAG409211			CP	Y	1	Buchanan	Matney Brian and Melissa Residence STP	Old Lester's Fork Rd	Grundy
VAG409213			CP	Y	1	Buchanan	Boyd Robert and Linda Residence STP	1082 Ardue and Jane Rd	Vansant
VAG409215			CP	Y	1	Russell	Frazier David and Jill LeRoy Residence STP	561 North Mill Hollow Rd	Castlewood
VAG409217		O & M	CP	N	1	Dickenson	Stanley Dempsey Kevin Residences STP	7884 Dickenson Hwy	Clintwood
VAG400005		O&M	LEN	N	2	Wise	Adams Irene Residence STP	11028 Woodrow Adams Rd	Pound
VAG400008		MC	LEN	Y	1	Scott	Arnold Julia Residence STP	5369 Daniel Boone Rd	Gate City
VAG400010		MC	LEN	Y	1	Scott	Austin Bobby Residence STP	5387 Natural Tunnel Pkwy	Duffield
VAG400011		O & M	LEN	Y	1	Scott	Bailey Aaron K Residence STP	122 Daniel Boone Rd	Gate City
VAG400013		MC	LEN	N	1	Scott	GPM Investments LLC - Fasmart 424	224 Wadlow Gap Road	Gate City
VAG400015	X		LEN	Y	1	Wise	Baugh James Residence STP	2301 Egan Road	Big Stone Gap
VAG400016		O & M	LEN	Y	1	Wise	Vanover Timothy Residence STP	5220 Back Valley Road	Big Stone Gap
VAG400017		MC	LEN	N	1	Scott	Bellamy James Fred Residences STP	1234 Colonial Post Office Rd	Gate City
VAG400019		O & M	LEN	N	1	Wise	Bethel Chapel Church STP	6220 Johns Road	Wise
VAG400020		O & M	LEN	Y	1	Wise	Kirk Dean F Residence STP	5516 Kilgore Rd	Wise
VAG400021		O & M	LEN	Y	1	Wise	Mullins Nicholas Residence STP	9935 Bowzer Rd	Pound
VAG400028		NB	LEN	Y	2	Scott	Boy Riley Residence STP	726 Daniel Boone Rd	Gate City
VAG400037		MC	LEN	Y	1	Scott	Calhoun Jimmy Residence STP	114 Quarryview Ln	Gate City
VAG400044		MC	LEN	N	1	Wise	Pound Double Kwik	10107 Orbey Cantrell Hwy	Pound
VAG400049		O & M	LEN	Y	1	Wise	Cole Mary Residence STP	4042 Tate Springs Road	Big Stone Gap
VAG400052		O & M	LEN	Y	1	Wise	Rowe Taylor Yeary Residence STP	9223 Percy Rd	Wise
VAG400054			LEN	Y	1	Wise	Wilson Victor Wayne and Carolyn Jean Wilson Residence STP	1727 Egan Rd	Big Stone Gap
VAG400057		O & M	LEN	Y	1	Scott	Cox Linda G Residence STP	1353 Hilton Rd	Gate City
VAG400060		O & M	LEN	N	1	Wise	Dale Pat & Carroll Residences STP	9533 Coeburn Mountain Road	Wise
VAG400061		O & M	LEN	Y	1	Scott	Darter Douglas & Sandra Residence STP	286 Barbour Hollow Ln	Gate City
VAG400082		O & M	LEN	Y	1	Scott	Gardner Phillip C Residence STP	196 Countrysire Circle	Hiltons
VAG400083		MC	LEN	Y	1	Scott	Bledsoe George Residence STP	697 Sinks Rd	Blackwater
VAG400084		MC	LEN	Y	1	Scott	Gibson Monnie C Residence STP	163 Goose Neck Dr	Gate City
VAG400089		O & M	LEN	Y	1	Wise	Greene Tim & Brenda Residence STP	5110 Thackers Branch Road	Norton
VAG400091		O & M	LEN	N	1	Wise	Hamilton James Richard Residences	6332 Black Stone Rd	Wise
VAG400095		O & M	LEN	Y	1	Scott	Williams Benny J II Residence STP	1005 Manville Rd	Gate City
VAG400097		MC	LEN	Y	1	Scott	Cole Thomas Donald Lee Residence STP	5749 Natural Tunnel Pkwy	Duffield
VAG400099		O&M	LEN	Y	1	Wise	Fultz Terry L Residence STP	2459 Egan Road	Big Stone Gap
VAG400101		O&M	LEN	Y	1	Wise	Horne Richard Jr Residence STP	1920-C East Stone Gap Rd	Big Stone Gap
VAG400110		MC	LEN	Y	1	Wise	Jessee Randal Residence STP	6888 Jones Hollow Road	Norton
VAG400118		MC	LEN	N	1	Lee	Keokee Volunteer Fire Department STP	153 Fire Hall Rd	Keokee
VAG400119		O & M	LEN	Y	1	Scott	Armstrong Faith Residence STP	1737 Nottingham Rd	Gate City
VAG400121		MC	LEN	Y	1	Wise	Kilgore Glenn Residence STP	6933 Hurricane Rd	Wise
VAG400128		O & M	LEN	Y	1	Wise	McAfee Carl Residence STP	5937 Powell Valley Rd	Norton
VAG400131			LEN	Y	1	Scott	Ramsey Kierra Residence STP	115 Cavalier Dr	Gate City
VAG400132			LEN	Y	1	Wise	Fralely Lori Residence STP	2012 East Stone Gap Rd	Big Stone Gap
VAG400135		NB	LEN	Y	1	Wise	Messer Glen Residence STP	5579 Thackers Branch Road	Norton



Permit No	Returns	Maintenanc	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400137		O & M	LEN	N	1	Scott	Bays Phyllis Residences STP	368 Whitetail Circle	Nickelsville
VAG400147		MC	LEN	Y	1	Scott	Owens Dennis Residence STP	3527 Manville Rd	Gate City
VAG400150		O & M	LEN	Y	1	Scott	Lane Nancy Residence STP	1487 Bristol Hwy	Gate City
VAG400151		MC	LEN	N	1	Wise	Warren Associates STP	450 Orby Cantrell Hwy.	Big Stone Gap
VAG400153		O & M	LEN	Y	1	Scott	Ramey Stella Residence STP	531 Mill Creek Rd	Fort Blackmore
VAG400158		O & M	LEN	Y	1	Scott	Carter Jimmy and Melinda Residence STP	9284 Clinch River Hwy	Fort Blackmore
VAG400159		O & M	LEN	N	2	Scott	Roadside Mission Baptist Church STP	5084 Nickelsville Hwy	Gate City
VAG400161		O & M	LEN	Y	1	Scott	Roberts David Brent Residence STP	348 Dixon Ln	Gate City
VAG400162		O & M	LEN	N	1	Scott	Rogers Douglas Q Residences STP	5294 Natural Tunnel Pkwy	Duffield
VAG400166		O & M	LEN	N	1	Wise	Rutherford Conley Residences STP	1729 Hoot Owl Hollow Road	Norton
VAG400170		O & M	LEN	N	1	Wise	Cox Sherry Residences STP	4856 Back Valley Road	Big Stone Gap
VAG400171		O & M	LEN	N	1	Scott	Daniel Boone Office Complex STP	175 Military Lane	Gate City
VAG400172		O & M	LEN	N	1	Scott	Peters Bill and McMurray Ron Residences S	1522 Bristol Hwy	Gate City
VAG400172		O&M	LEN	N	1	Scott	Peters Bill and McMurray Ron Residences STP		Gate City
VAG400187		O & M	LEN	Y	2	Wise	Rhet John Residence STP	4202 Powell Valley Road	Big Stone Gap
VAG400197		O & M	LEN	N	1	Wise	Paramont Contura LLC - Tom's Creek Prep S	12303 Toms Creek Rd	Coeburn
VAG400203		O & M	LEN	Y	1	Scott	Warren Frederick C Residence STP	213 Screech Owl Dr	Gate City
VAG400207		O & M	LEN	Y	1	Wise	Williams Claud Residence STP	2727 Egan Road	Big Stone Gap
VAG400217		O & M	LEN	Y	1	Wise	McCoy Lester and Wendy Residence STP	9315 Hamilton Chapel Rd	Pound
VAG400218		O & M	LEN	Y	1	Wise	Duncan Suzanne Residence STP	5573 Madison Road	Wise
VAG400225		MC	LEN	N	1	Scott	Harding Donald III and Brittany Residences S	5698 Yuma Rd	Gate City
VAG400227		O & M	LEN	Y	1	Wise	Mullins Cheryl Residence STP	4826 Back Valley Road	Big Stone Gap
VAG400228		MC	LEN	Y	1	Wise	Hunsaker John D Residence STP	5752 Powell Valley Road	Big Stone Gap
VAG400229		O & M	LEN	N	1	Wise	Ison Paul R Residences STP	6308 Hurricane Road	Wise
VAG400234		O & M	LEN	Y	1	Wise	Large Gary W Residence STP	5283 Clearwater Road	Wise
VAG400237		O & M	LEN	Y	1	Scott	Pearce Morgan Residence STP	3101 Pattonville Rd	Duffield
VAG400240		MC	LEN	Y	1	Wise	Jackson Kenneth L Residence STP	6923B Hurricane Road	Wise
VAG400241		MC	LEN	Y	1	Scott	Fincham Joyce Residence STP	183 Hillside Ln	Duffield
VAG400243		MC	LEN	Y	1	Wise	Porter Joseph Residence STP	4939 Pole Bridge Road	Wise
VAG400244		MC	LEN	N	2	Scott	Cochran Alan Residences STP	110 Haynes Valley Rd	Gate City
VAG400246		O & M	LEN	N	1	Wise	D & J Feed Incorporated	5428 Cranes Nest Rd	Coeburn
VAG400247		O & M	LEN	N	1	Wise	John Ring Trucking Incorporated STP	5428 Cranes Nest Rd	Coeburn
VAG400250		O & M	LEN	Y	1	Wise	Shoemaker Genora Residence STP	4166 Cameron Ct	Coeburn
VAG400251		O & M	LEN	Y	1	Scott	Bonham Elizabeth J Residence STP	914 Hilton Rd	Gate City
VAG400252		O&M	LEN	Y	1	Wise	Mullins Bradley and Yates Amanda Residenc	6408 Redwine Rd	Wise
VAG400253		O & M	LEN	Y	1	Wise	Fields Robert Residence STP	606 Orby Cantrell Hwy	Big Stone Gap
VAG400254		MC	LEN	N	1	Wise	Parsons Charles H Residence STP	6945 Hurricane Rd	Wise
VAG400255		O & M	LEN	N	1	Wise	Flatwoods Freewill Baptist Church	13064 Flatwoods Rd	Coeburn
VAG400259			LEN	N	2	Scott	Gardners Memorial Primitive Baptist Church STP	Tri-State Lime Rd	Bristol
VAG400260		MC	LEN	Y	1	Wise	Yeary Patrick W Residence STP	9219B Percy Road	Wise
VAG400262		MC	LEN	N	1	Lee	Boones LLC STP	1982 Wilderness Rd	Ewing
VAG400263			LEN	Y	1	Wise	Sheldon Garrett Residence STP	5923 Stone Creek Rd	Big Stone Gap
VAG400268			LEN	N	1	Wise	Savage Services Corp STP	3701 Russell Creek Rd.	St. Paul

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VAG400270		MC	LEN	Y	1	Wise	Sturgill Randall L Residence STP	6338 Redwine Rd	Wise
VAG400275		O & M	LEN	Y	1	Wise	Boring Daniel and Jenifer Residence STP	4832 Back Valley Road	Big Stone Gap
VAG400281		MC	LEN	Y	2	Wise	Tate Barry N Residence STP	863 Elk Road	Big Stone Gap
VAG400282		O & M	LEN	Y	1	Scott	Holland Richard Residence STP	154 Thorngrove Dr	Duffield
VAG400283	X	MC	LEN	Y	1	Wise	Elkins Amy G Residence STP	2732 Egan Road	Big Stone Gap
VAG400285		O & M	LEN	N	1	Wise	Appalachia Traditions, Inc.	6034 Kent Junction Rd	Norton
VAG400292			LEN	Y	1	Wise	Freeman Anita 7125 Residence STP	7125 Rocky Fork Rd	Wise
VAG400293			LEN	Y	1	Wise	Freeman Anita 7121 Residence STP	7121 Rocky Fork Rd	Wise
VAG400294		O & M	LEN	Y	1	Wise	Martin Bruce Residence STP	5932 Carroll Road	Coeburn
VAG400300			LEN	Y	1	Wise	Couch Sandra Residence STP	12922 Banner Rd	Coeburn
VAG400301		O&M	LEN	N	1	Wise	Reaching Up Reaching Higher Christian Chu	5738 Cranesnest Road	Coeburn
VAG400305			LEN	Y	1	Wise	Couch Lois Residence STP	4785 Kennedy Rd	Coeburn
VAG400310		MC	LEN	N	1	Scott	Lemly and Wolfe Residences	9721 Clinch River Hwy	Fort Blackmore
VAG400310		MC	LEN	N	1	Scott	Lemly and Wolfe Residences	9721 Clinch River Hwy	Fort Blackmore
VAG400323		MC	LEN	Y	1	Wise	Presley Justin Residence STP	5901 Guest River Road	Norton
VAG400325			LEN	Y	1	Scott	DeWitt Amanda Residence STP	208 Cabin Dr	Blackwater
VAG400332		O&M	LEN	N	1	Scott	Lane Rentals STP	5911 Daniel Boone Rd	Gate City
VAG400333		O & M	LEN	N	1	Scott	Heritage Baptist Church	5102 Bristol Hwy Ste 101	Gate City
VAG400334			LEN	Y	1	Wise	Kopp James and Michelle Residence STP	6005 Powell Valley Road	Big Stone Gap
VAG400341		O & M	LEN	Y	1	Wise	Masters Billy Ray Residence STP	9737 Turkey Branch Rd	Wise
VAG400343		MC	LEN	Y	1	Wise	Mullins Jason & Bobbi Residence STP	9607 Turkey Branch Rd	Wise
VAG400347		O & M	LEN	Y	1	Wise	Mitchell Jerome W Residence STP	1910 East Stone Gap Road	Big Stone Gap
VAG400348			LEN	Y	1	Wise	Craiger Tony Residence STP	8603 Harvey Road	Wise
VAG400350	X	NB	LEN	Y	1	Scott	Osborne Caterina Residence STP	7333 River Bluff Rd	Fort Blackmore
VAG400353	X	NB	LEN	Y	1	Wise	B. F. Robinette Contractor Residence SFH S	State Route 610	Big Stone Gap
VAG400354		O & M	LEN	N	2	Scott	Copper Creek Community Church	Ruritan Run Rd	Gate City
VAG400355		O & M	LEN	N	1	Wise	Young Marion E and Dorland Ryan Residenc	5822 Powell Valley Road	Big Stone Gap
VAG400357		O&M	LEN	Y	1	Wise	Waggoner Paul & Rita Residence STP	4530 Crawford Rd	Coeburn
VAG400359		MC	LEN	Y	1	Wise	Strouth Johnny Residence STP	15900 Flags Road	Coeburn
VAG400362		O & M	LEN	Y	1	Wise	Bright Joe and Blanche Residence STP	4946 Barrowman Rd	Coeburn
VAG400366		O & M	LEN	N	1	Scott	Rally Mart, Inc. STP	91 Second St	Hiltons
VAG400368		MC	LEN	Y	1	Wise	Sturgill Laura and David Residence STP	10085 Bear Fork Road	Pound
VAG400370		MC	LEN	N	1	Wise	Mullins James F Residences STP	10105 Green Hollow Rd	Wise
VAG400373			LEN	Y	1	Wise	Phipps Bryan & Bella Residence STP	5838 Powell Valley Rd	Big Sonte Gap
VAG400374		MC	LEN	Y	1	Wise	Lawson Johnathan and Charissa Residence	2106 Exeter Road	Appalachia
VAG400375		O & M	LEN	Y	1	Wise	Ramsey Charlie Residence STP	9901 Turkey Branch Rd	Wise
VAG400376		O & M	LEN	Y	1	Wise	Ramsey Charlie Residence 2 STP	9903 Turkey Branch Rd	Wise
VAG400379		O & M	LEN	N	1	Wise	Travelers Motel STP	10232 Orby Cantrell Highway	Pound
VAG400381		MC	LEN	Y	1	Scott	Smith Johnny Wayne Residence STP	193 War Lance Dr	Nickelsville
VAG400383		MC	LEN	N	1	Wise	Thomas Amanda Residence and Imboden U	2104 Exeter Rd	Appalachia
VAG400387			LEN	N	1	Wise	Marshall Residences STP	3931 Russell Creek Road	St. Paul
VAG400389		O & M	LEN	Y	1	Wise	Fox Shirley Residence STP	5936 Powell Valley Rd	Big Stone Gap
VAG400390		NB	LEN	Y	1	Wise	Burke Donald Ray Residence STP	5818 Carroll Road	Coeburn



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VAG400392		MC	LEN	N	1	Wise	Greater Wise Inc. Office STP	6999 Polk Rd	Norton
VAG400393		MC	LEN	Y	1	Wise	Martin Bruce & Joyce Residence STP	12041 Floyd Road	Coeburn
VAG400394		MC	LEN	Y	1	Wise	Killion Don & Phyllis Residence STP	6240 Hurricane Rd	Wise
VAG400395		O & M	LEN	N	1	Wise	Powell Valley Memorial Gardens STP	5650 Powell Valley Road	Big Stone Gap
VAG400399		O&M	LEN	Y	1	Wise	Scott Stuart Residence STP	9810 Turkey Branch Rd	Wise
VAG400416			LEN	Y	1	Wise	Williams Samuel H Residence SFH STP	3841 Honey Branch Rd	St. Paul
VAG400417	X		LEN	Y	1	Wise	Underwood Robert Residence STP	7202 Hopkins Farm Rd	Wise
VAG400418		NB	LEN	Y	1	Wise	Hall Charles N Residence SFH STP	12244 Carolina Rd	Coeburn
VAG400419		MC	LEN	N	1	Wise	Salyers Jamie Residences STP	5734 Carroll Rd	Coeburn
VAG400423			LEN	Y	1	Wise	Calton Terry Residence STP	6228 Hurricane Rd	Wise
VAG400424		O & M	LEN	Y	1	Wise	Ward George Residence STP	10210 Green Hollow Rd	Wise
VAG400429		MC	LEN	Y	1	Wise	Hamilton John douglas Jr Residence STP	4820 Back Valley Road	Big Stone Gap
VAG400432		O&M	LEN	Y	1	Wise	Gilliam Judith B Residence STP	2800 Egan Road	Big Stone Gap
VAG400433		O & M	LEN	Y	1	Wise	Dotson Melissa R Residence STP	226 Little League Rd	Coeburn
VAG400438		O & M	LEN	Y	1	Wise	Caldwell Brian Residence STP	6991 Dotson Creek Rd	Wise
VAG400442		NB	LEN	Y	1	Wise	Lawson Delmas R Residence SFH STP	7041 Orby Cantrell Hwy	Pound
VAG400446		MC	LEN	Y	1	Wise	Shepherd Travis E Residence STP	6224 Hurricane Rd	Wise
VAG400448		MC	LEN	Y	1	Scott	Bowen Billy T and Michelle Residence STP	128 Windcrest Dr	Duffield
VAG400449		NB	LEN	N	1	Wise	Fleming Jackie Residences STP	8620 and 8612 Hoover Rd	Wise
VAG400450			LEN	Y	1	Wise	Killen Bill Residence STP	8605 Marigold Road	Wise
VAG400457		O & M	LEN	Y	1	Wise	Couch Dale Residence STP	4930 Barrowman Road	Coeburn
VAG400459		MC	LEN	Y	1	Scott	Lane Reggie Residence STP	13106 Clinch River Hwy	Ft. Blackmore
VAG400462		NB	LEN	Y	1	Wise	Cassell Billy Residence STP	5931 Powell Valley Road	Big Stone Gap
VAG400467		O & M	LEN	Y	1	Wise	Boyd Jackie Residence STP	4928 Barrowman Road	Coeburn
VAG400468		MC	LEN	Y	1	Wise	McCoy Ivory and Judy Residence STP	3517 Honey Branch Rd	St. Paul
VAG400469			LEN	Y	1	Wise	Smith J W Residence STP	6631 Old Hurricane Rd	Wise
VAG400470			LEN	Y	1	Wise	Hamilton Christy Residence STP	2818 Egan Rd	Big Stone Gap
VAG400471		O & M	LEN	N	1	Wise	Collier Virginia Residences STP	6814 Prince George Rd	Wise
VAG400472		NB	LEN	Y	1	Wise	Bevins William Residence STP	6910 Hurricane Road	Wise
VAG400474		MC	LEN	Y	1	Wise	Jacobs Gary W and Diane Residence STP	3529 Hardy Hollow Road	St. Paul
VAG400477		O&M	LEN	Y	1	Wise	Richardson Jamey and Sandra Residence S	1425 Wildcat Rd	Big Stone Gap
VAG400486		MC	LEN	Y	1	Wise	Mullins Paul Residence STP	8974 Bean Gap Road	Pound
VAG400494		O & M	LEN	Y	1	Wise	Roberts Bobby Residence STP	7506 Truman Rd	Norton
VAG400495		O & M	LEN	Y	1	Wise	Maggard Jimmy and Hope Residence STP	10110 Green Hollow Rd	Wise
VAG400496		O & M	LEN	Y	1	Wise	Meade Michael Residence STP	10215 Baker - Meade Rd	Pound
VAG400497		NB	LEN	Y	1	Wise	Hughes Jason Residence SFH STP	Adjacent to 7501 Big Branch Rd	Pound
VAG400505		MC	LEN	N	1	Wise	Marr William and Karen Residences STP	5200 Dorchester Rd	Norton
VAG400508			LEN	N	1	Wise	Johnson Melinda Residences STP	13527 Toms Creek Rd	Coeburn
VAG400514		MC	LEN	Y	1	Scott	Holden Edward V Residence STP	120 Desoto Dr	Duffield
VAG400523		NB	LEN	Y	1	Wise	Owens Dwight H and Tammy D Residence S	10237 Green Hollow Rd	Wise
VAG400524		NB	LEN	Y	1	Wise	Tiller Chris and Michelle STP	6521 Gilliam Rd	Wise
VAG400528		NB	LEN	Y	1	Scott	Hunter Randall D Residence STP	290 Kaylors Chapel Ln	Duffield
VAG400530			LEN	Y	1	Wise	Gilliam Residence and Kennel STP	2800 Egan Road	Big Stone Gap

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VAG400536		MC	LEN	Y	1	Wise	Roop Jason Residence STP	5815 Starnes Rd	Coeburn
VAG400541		MC	LEN	N	1	Wise	Ballard Linda Residences STP	6801 Goochland Rd	Wise
VAG400543		MC	LEN	Y	1	Wise	Jackson Jamie G Residence STP	5284 Bear Creek Rd	Norton
VAG400552		O & M	LEN	Y	1	Wise	Johnson Jeffrey Lee Residence STP	256 Little League Rd	Coeburn
VAG400554		NB	LEN	Y	1	Scott	Durham Sarah Residence STP	175 Sarah Circle	Gate City
VAG400556		O & M	LEN	Y	1	Wise	Kerns Tommy Residence STP	7623 S Fork Rd	Pound
VAG400560		NB	LEN	Y	1	Scott	Phillips Karen Residence STP	Bristol Hwy	Bristol
VAG400562		MC	LEN	N	1	Scott	Hilton Residences STP	325 Fairview Rd	Duffield
VAG400577		MC	LEN	Y	1	Scott	Dunford Eddie and Leaschia Residence STP	4932 Sinking Creek Hwy	Dungannon
VAG400582			LEN	Y	1	Scott	McClain Charlene Residence 2 STP	14705 Yuma Rd	Gate City
VAG400584		MC	LEN	Y	1	Scott	Cline Jimmy Residence STP	254 Nightingale Dr	Gate City
VAG400592			LEN	Y	1	Wise	Branham Tommy Residence STP	10500 Killen Hollow Rd	Pound
VAG400593		O & M	LEN	Y	1	Wise	Rumley Lewis Residence STP	140 Elm Ave NE	Coeburn
VAG400595			LEN	Y	1	Wise	Stapleton Phyllis Residence STP	9612 Bold Camp Rd	Pound
VAG400599		MC	LEN	Y	1	Scott	McClain Charlene Residence STP	14653 Yuma Rd	Gate City
VAG400601		MC	LEN	Y	1	Wise	Egan William D and Patricia Residence STP	5726 Powell Valley Rd	Big Stone Gap
VAG400602			LEN	Y	1	Scott	Johnson Richard Residence STP	1150 Cove Creek Mine Ln	Duffield
VAG400603			LEN	Y	1	Wise	Addington Bob A Residence STP	11319 Old Norton Coeburn Rd	Coeburn
VAG400607			LEN	Y	1	Scott	McMurray Kimberly Residence STP	195 Bow Dr	Gate City
VAG400617			LEN	Y	1	Wise	Parton Glen and Irene Residence STP	8635 Taft Rd	Wise
VAG400631		MC	LEN	N	1	Wise	Lauterbach Betty Residences STP	3910 Dungannon Rd	Coeburn
VAG400633			LEN	Y	1	Wise	Meade Glen and Anna Residence STP	10428 Killen Hollow Rd	Pound
VAG400640			LEN	Y	2	Wise	Culbertson Bucky Residence STP	5956 Powell River Road	Wise
VAG400642			LEN	Y	1	Wise	Lawson Randall and Allison Residence STP	4118 Powell Valley Rd	Big Stone Gap
VAG400645			LEN	Y	1	Scott	Clark Teresa Residence STP	714 Old Quarry Dr	Nickelsville
VAG400649			LEN	Y	1	Wise	Ramsey Charlie Residence 3 STP	9807 Turkey Branch Rd	Wise
VAG400650			LEN	Y	1	Scott	Quillen Keith Residence STP	4872 Daniel Boone Rd	Gate City
VAG400651			LEN	Y	1	Scott	McKinney Teresa Rhea Residence STP	294 Jay Hollow Dr	Duffield
VAG400656		NB	LEN	Y	1	Wise	Dingus Wendell Residence STP	10129E White Oak Rd	Wise
VAG400659			LEN	Y	1	Wise	Countiss Michael and Sydney Residence STP	8226 Gilliam Hollow Road	Pound
VAG400666		MC	LEN	Y	1	Wise	Greene William R and Charlene Residence STP	12732 Mosswood Ln	Coeburn
VAG400670		MC	LEN	Y	1	Wise	Baker Connie Residence STP	1904 East Stone Gap Rd	Big Stone Gap
VAG400671			LEN	Y	1	Wise	Graham John & Sue Residence SFH STP	5515 Freeman Rd	Wise
VAG400676			LEN	N	1	Scott	Dorton Bonnie Residences STP	1615 Fairview Rd	Duffield
VAG400683			LEN	Y	2	Scott	Detjen William and Scarlet Residence STP	727 Waters Edge Road	Duffield
VAG400685		NB	LEN	Y	1	Wise	Wilson Chadwick W Residence STP	1810 East Stone Gap Rd	Big Stone Gap
VAG400696		NB	LEN	Y	1	Wise	Jordan Leslie & Betty Residence	251 Little League Rd	Coeburn
VAG400701		NB	LEN	Y	1	Wise	Wyatt Joel Residence STP	248 Little League Rd	Coeburn
VAG400705			LEN	Y	2	Scott	Bays Della Residence STP	849 Slabtown Circle	Gate City
VAG400711		NB	LEN	Y	1	Wise	Chandler John M and Shirley Residence STP	5113 Chandler Rd	Wise Co
VAG400715		NB	LEN	Y	1	Wise	Lawson Judy Ann Residence STP	6309 Little Dipper Rd	Wise Co
VAG400719		NB	LEN	N	1	Wise	Hill Bobby W Residences STP	3311 Russell Creek Rd	St. Paul
VAG400720		NB	LEN	Y	1	Wise	Pickett Kenneth W Residence STP	273 Little League Rd	Coeburn



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VAG400722		NB	LEN	N	1	Wise	Happy Hearts Day Care STP	711 Orby Cantrell Hwy	Big Stone Gap
VAG400724		NB	LEN	Y	1	Wise	Tate Ronnie W and Judy M Residence STP	15525 Frog Pond Rd	St. Paul
VAG400726		NB	LEN	Y	1	Wise	Carroll Larry Residence STP	3243 Russell Creek Road	St. Paul
VAG400736			LEN	Y	1	Wise	Stallard Katherine Residence STP	3512 Labrador Rd.	Coeburn
VAG400738		NB	LEN	Y	1	Wise	Scott Wendy B Residence STP	9216 Yardley Rd	Wise
VAG400739		NB	LEN	Y	1	Scott	Hobbs George and Phyllis Residence STP	6233 Canton Rd	Blackwater
VAG400740		NB	LEN	N	1	Wise	Whitaker Donna Residences STP	10540 Camby Ln	Wise
VAG400742		NB	LEN	Y	1	Scott	Sherron Hugh Residence STP	582 McDowell Branch Ln	Ft Blackmore
VAG400746		MC	LEN	Y	1	Scott	Hartsock Douglas Residence STP	4608 Sinking Creek Hwy	Dungannon
VAG400748	X	NB	LEN	Y	1	Wise	Baugh James C Residence STP	2301 Egan Road	Big Stone Gap
VAG400771		NB	LEN	Y	1	Wise	Stewart Andrea M Residence STP	7198 Hopkins Farm Rd	Wise
VAG400774		NB	LEN	Y	1	Wise	Marsingill Seth Residence STP	9808 Cochise Rd	Pound
VAG400775		NB	LEN	Y	1	Scott	Collett Roger Residence STP	2221 Falls Creek Rd	Dungannon
VAG400778		NB	LEN	Y	1	Wise	Burnham Joshua and Brandi Residence STP	9347 Covington Rd	Pound
VAG400789			LEN	Y	1	Wise	Elkins James Residence STP	7782 South Fork Rd	Pound
VAG400792			LEN	Y	1	Wise	Mullins Donald and Ginger Residence STP	7916 Cransnest Rd	Coeburn
VAG400793		NB	LEN	Y	1	Wise	Shortt Dalton and Candida Residence STP	15502 Frog Pond Rd	St. Paul
VAG400799			LEN	Y	1	Scott	Darnell Justin Residence STP	13974 Hunters Valley West Rd	Duffield
VAG400803		MC	LEN	N	1	Wise	Diversified Southern Midstream LLC - Butche	2452 Preston Rd	Big Stone Gap
VAG400815		NB	LEN	Y	1	Scott	Marcum Colton Residence STP	920 Smith Hollow Ln	Gate City
VAG400827	X		LEN	Y	1	Wise	Strouth Eric Residence STP	5424 Rock Bar Rd	Wise
VAG400831		NB	LEN	Y	1	Wise	Stidham Robert A Residence STP	10015 Ferbie Rd	Pound
VAG400833		NB	LEN	Y	1	Scott	Peters Bobby and Sue Residence STP	2112 Inthepines Circle	Dungannon
VAG400834		NB	LEN	Y	1	Wise	Slemp Courtney Residence STP	10325 Prestige Rd	Pound
VAG400842			LEN	Y	1	Wise	Jackson Thomas Jr Residence STP	13425 Grayson Rd.	Coeburn
VAG400856		NB	LEN	Y	1	Wise	Martin Russell Residence STP	5832 Carroll Rd	St Paul
VAG400857		MC	LEN	N	1	Wise	Adkins Casey and Cox Orange Lee Residence	9927 Miller Hollow Rd	Wise
VAG400857		MC	LEN	N	1	Wise	Adkins Casey and Cox Orange Lee Residence	9927 Miller Hollow Rd	Wise
VAG400860		NB	LEN	Y	1	Scott	Murdock Vickie Residence STP	13182 Clinch River Hwy	Ft Blackmore
VAG400868		MC	LEN	N	1	Wise	Calvary Baptist Church STP	6946 South Fork Rd	Pound
VAG400875		NB	LEN	Y	1	Wise	Raleigh Steven Residence STP	3503 Goldleaf Rd	Big Stone Gap
VAG400878		NB	LEN	Y	1	Wise	Slemp Gary Residence STP	14108 Dry Fork Rd	Coeburn
VAG400879		NB	LEN	Y	1	Wise	Addair Elizabeth Residence STP	9914 Coeburn Mtn Rd	Wise
VAG400880		NB	LEN	Y	1	Wise	Carter Kentra Lee	6109 Lake Rd	Big Stone Gap
VAG400881		NB	LEN	N	1	Wise	Mabe Josh and Lauren Residences STP	7247 Duncan Gap Rd	Wise
VAG400885		NB	LEN	Y	1	Wise	Collins Gerald D Site 1 Residence STP	Scott Roberson Rd	Wise
VAG400886		NB	LEN	Y	1	Wise	Collins Gerald D Site 2 Residence STP	Scott Roberson Rd	Wise
VAG400910		NB	LEN	Y	1	Wise	Carter Paul G Residence STP	GG Two Angels Rd	Big Stone Gap
VAG400923			LEN	Y	1	Scott	Winegar Kevin W Residence STP	2096 Apple Orchard Rd	Gate City
VAG400935			LEN	N	1	Wise	Savage Services Corp - Virginia City STP	3630 Russell Creek Rd	St Paul
VAG400939		NB	LEN	Y	1	Wise	Green Kathy Residence STP	5336 Tacoma Mtn Rd	Wise
VAG400941		NB	LEN	Y	1	Wise	Ramsey Charlie Residence 4 STP	9913 Turkey Branch Rd	Wise

Permit No	Returns	Maintenanc	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400949			LEN	Y	1	Wise	Caudill Kenneth Residence STP	3101 Brooks Rd	Big Stone Gap
VAG400958		NB	LEN	Y	1	Wise	O'Quinn Eddie Residence STP	9542 Candace Dr	Wise
VAG400959		NB	LEN	Y	1	Wise	Branham Donald Residence STP	11307 Robinson Hollow Rd	Coeburn
VAG400962		NB	LEN	Y	1	Lee	Davidson Lester G Residence STP	12707 St Rte 606	Keokee
VAG400965			LEN	Y	1	Scott	Hilton's Rental Property Residence STP	883 Manville Rd	Gate City
VAG400985		NB	LEN	Y	1	Scott	Gilliam Justin Residence STP	5400 Canton Rd	Blackwater
VAG400988	X	NB	LEN	Y	1	Wise	Spears Beau Residence STP	6115 Lake Rd	Norton
VAG400991		NB	LEN	Y	1	Scott	Quillen James D Residence STP	949 A. P. Carter Hwy	Hiltons
VAG400992		NB	LEN	Y	1	Wise	Barnette Chris Residence STP	5130 Thackers Branch Rd	Norton
VAG400998		MC	LEN	N	1	Lee	Lone Mountain Plant Bathhouse Treatment U	2778 Monarch Rd	St. Charles
VAG409002		NB	LEN	Y	1	Scott	Gotts Doris L Residence STP	2455 Natural Tunnel Pkwy	Duffield
VAG409005		NB	LEN	N	1	Scott	Hughes Richard W and Gregory A Residence	4986 Sinking Creek Hwy	Dungannon
VAG409019		NB	LEN	Y	1	Scott	Miller Dewey and Betty Residence STP	2485 Natural Tunnel Pkwy	Duffield
VAG409023		NB	LEN	Y	1	Scott	Turner Sandra Residence STP	180 Emerald Valley Circle	Gate City
VAG409027		NB	LEN	Y	1	Wise	Fleming Noelle C and Stanford Jr. Residence	10134 Fairground Rd	Wise
VAG409034		NB	LEN	Y	1	Wise	Hicks Glenna M Residence STP	3990 Nansemond Rd	Coeburn
VAG409041		NB	LEN	Y	1	Scott	Glass Gregory and Regina Residence STP	2150 Wadlow Gap Rd	Gate City
VAG409046			LEN	N	1	Scott	Scott County Animal Shelter STP	184 Single Tree Rd	Gate City
VAG409049		NB	LEN	Y	1	Scott	Templeton Joseph Residence STP	3178 River Bluff Rd	Fort Blackmore
VAG409054		NB	LEN	N	1	Wise	Wise Rentals STP	Taft Rd	Wise
VAG409057		NB	LEN	Y	1	Scott	Secretary of Housing and Urban Developmer	1230 McDowell Branch Ln	Scott County
VAG409059		NB	LEN	N	1	Wise	Lawson Terri Residences STP	7908 Carter Branch Rd	Wise
VAG409061		NB	LEN	N	1	Wise	Hilton Larry Residences STP	8132 Scott Roberson Hollow	Wise
VAG409062	X	NB	LEN	N	1	Wise	Kiser Luke Residences STP	5125 Tacoma Mountain Rd	Wise
VAG409067		NB	LEN	N	1	Scott	McCloud Jeffery Residences STP	105 and 107 Florida Dr	Gate City
VAG409076		NB	LEN	Y	1	Wise	Bolling Jonathan and Candace Residence S	5227 Tacoma Mountain Rd	Wise
VAG409079		NB	LEN	Y	1	Scott	Collins William MacClay Residence STP	4395 Sinking Creek Hwy	Dungannon
VAG409080			LEN	N	1	Scott	Jennings Apartment STP	1281 Lucy Rd	Gate City
VAG409089		MC	LEN	N	1	Wise	Hartless and Carter Residences STP	9542 Coeburn Mountain Rd	Wise County
VAG409090	X	NB	LEN	Y	1	Wise	Stames Christopher Residence STP	5542 Burwell Rd	Wise
VAG409095		NB	LEN	Y	1	Wise	Baker Zachery and Taylor Residence STP	Pine Branch Rd	Coeburn
VAG409096		NB	LEN	N	1	Lee	Keokee Community Center STP	13719 State Rte 606	Keokee
VAG409099		NB	LEN	Y	1	Scott	Darnell Teddy Residence STP	Mandolin Dr	Hiltons
VAG409103			LEN	N	1	Lee	Dollar General Store - Wheeling Community	152 Wheeler Rd	Ewing
VAG409106		NB	LEN	Y	1	Wise	Dotson Millard Residence STP	8008 Cranes Nest Rd	Coeburn
VAG409108			LEN	Y	1	Wise	Harris Patricia Residence STP	4844 Back Valley Rd	Big Stone Gap
VAG409112			LEN	Y	1	Scott	Gibbs Jerry and Amanda Residence STP	9160 Hunters Valley West Rd	Duffield
VAG409113			LEN	N	1	Lee	New River Hardwoods STP	277 Old Quarry Rd	Ewing
VAG409114			LEN	Y	1	Wise	Blair Tammy Residence STP	5257A Tacoma Mtn Rd	Wise
VAG409115	X		LEN	Y	1	Wise	Hernan Mary E Residence STP	10413 Viking Rd	Pound
VAG409117			LEN	Y	1	Wise	Baker Sharon Residence STP	8633 Hoover Rd	Wise
VAG409129		NB	LEN	Y	1	Scott	Laney Bobby D Residence STP	4787 Hanging Rock Pkwy	Dungannon
VAG409134			LEN	Y	1	Wise	Hall Melvin Residence STP	8201 Birchfield Rd	Wise



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VAG409141			LEN	Y	1	Wise	Sturgill Willie Residence STP	Redwine Rd	Wise
VAG409145			LEN	Y	1	Scott	Barnette April Residence STP	173 Robinette Valley Rd	Duffield
VAG409160			LEN	Y	1	Wise	Ramsey Charlie Residence 5 STP	St Rt 680	Wise County
VAG409161			LEN	Y	1	Wise	Vanover Jimmie Residence STP	8314 Gilliam Hollow	Wise County
VAG409164			LEN	Y	1	Scott	Lane Richard R Residence STP	Patriot Dr	Scott County
VAG409165			LEN	Y	1	Scott	Harding Donald III and Brittany SFH Residen	Yuma Rd	Scott County
VAG409166			LEN	Y	1	Wise	Powers Isaac Residence STP	Duck Camp Rd	Wise County
VAG409167			LEN	Y	1	Wise	Epling Talena C Residence STP	St Rt 634	Wise County
VAG409168			LEN	Y	1	Wise	Stanley Nicholas Residence STP	St Rt 640	Wise County
VAG409169			LEN	Y	1	Wise	Robinson Marty Residence STP	8650 Robinson Hills Rd	Wise County
VAG409170			LEN	Y	1	Scott	Schriber Kathleen Residence STP	190 Morris Dr	Gate City
VAG409171			LEN	N	1	Lee	Carter Charles A Residences STP	ST Rt 611	Lee County
VAG409173			LEN	Y	1	Wise	Calton Jack and Crabtree Stanley Residence	5535 and 5613 Pole Bridge Rd	Wise County
VAG409173			LEN	Y	1	Wise	Calton Jack and Crabtree Stanley Residences STP		
VAG409174			LEN	Y	1	Wise	Mullins Jeffrey N Residence STP	Chipmunk Dr	Pound
VAG409176			LEN	Y	1	Wise	Watkins Tim Residence STP	Off St Rt 609	Wise County
VAG409179		MC	LEN	N	1	Wise	Cornerstone Trailer Park STP	160 Cornerstone Dr	Wise County
VAG409181			LEN	N	1	Scott	Hilton Depot STP	120 A.P. Carter Hwy	Scott County
VAG409193			LEN	Y	1	Wise	Meade Shirley Residence STP	11428 Meade Fork Rd	Pound
VAG409195			LEN	N	1	Wise	Bryant Group Home STP	11215 Old Norton Coeburn Rd	Coeburn
VAG409197			LEN	Y	1	Wise	Patton Bradley Patton Residence STP	Lower Russell Creek Rd	St Paul
VAG409198			LEN	Y	1	Wise	Mullins Andrew Residence STP	Rt 72	Coeburn
VAG409206			LEN	Y	1	Dickenson	Rockhouse STP	3396 Rockhouse Rd	Coeburn
VAG409208			LEN	Y	1	Wise	Hamilton Bradley Residence STP	TBD	Wise
VAG409209			LEN	Y	1	Wise	Hawkins Raymond Residence STP	8316 Chaho Rd	Coeburn
VAG409212			LEN	Y	1	Wise	Yates Nicole Residence STP	Salem Rd	Wise
VAG409214			LEN	Y	1	Wise	Stanley Greg Residence STP	TBD River School Rd	Pound
VAG409218			LEN	Y	1	Wise	Rose Michael and Kayla Residence STP	7139 Carter Stanley Hwy	Coeburn
VAG400006		O & M	MR	N	1	Washington	Braswell Brad and Melanie Duplex 2	23262 Clayman Valley Rd	Bristol
VAG400007		O & M	MR	N	1	Washington	Braswell Brad and Melanie Duplex 1	23262 Clayman Valley Rd	Bristol
VAG400009		O & M	MR	N	2	Washington	Atkins Anthony Residences STP	31227 Cornett Road	Damascus
VAG400012	X	MC	MR	Y	1	Washington	McFadden Sherry Residence STP	14227 Peaceful Valley Road	Abingdon
VAG400042		MC	MR	Y	1	Washington	Lineberry Michael and Suzanne N Residence	30095 North Fork River Road	Saltville
VAG400045		O & M	MR	Y	1	Washington	Clark Larry Residence STP	18393 McCalls Gap Road	Bristol
VAG400053		MC	MR	Y	2	Washington	Doss Sharon and Buford Residence STP	29383 Blue Springs Road	Meadowview
VAG400055		MC	MR	N	2	Washington	Country Boy Seed Incorporated STP	6685 Gate City Highway	Bristol
VAG400062		O & M	MR	Y	1	Carroll	Bartlett Anthony J Residence STP	2107 Pipers Gap Road	Galax
VAG400066		O & M	MR	N	1	Washington	Dillon Matt Residence STP	3088 Willow Branch Rd	Bristol
VAG400071		MC	MR	N	1	Smyth	Poston Gracie Residences STP	614 Walkers Creek Road	Marion
VAG400086		MC	MR	Y	1	Washington	Goff Byron Residence STP	30134 Aistrop Road	Saltville
VAG400088		MC	MR	N	1	Washington	Greendale Chapel Fellowship Hall STP	17468 Rich Valley Rd	Abingdon
VAG400102		MC	MR	N	1	Smyth	Hounshell Residences STP	225 Glade Mtn Rd	Atkins
VAG400103		O & M	MR	Y	1	Washington	Reynolds David Residence STP	15045 Fall Hill Road	Abingdon

Permit No	Returns	Maintenanc	PDC	SFH (dot)	Type	County	Facility Name	Facility Address	FCity
VAG400124		MC	MR	N	1	Washington	Little Flock Holiness Church STP	8417 Old Mill Road	Glade Spring
VAG400126		O & M	MR	Y	1	Carroll	Malcomb Lonnie W Residence STP	3216 Fancy Gap Hwy	Hillsville
VAG400145		MC	MR	N	1	Smyth	Olinger James and Debbie Residences STP	109 Stagecoach Ln	Saltville
VAG400181		O&M	MR	Y	1	Washington	Smith James D Residence STP	34616 Fleet Road	Glade Spring
VAG400194		MC	MR	N	1	Washington	Umberger Residences STP	35273 Bucks Bridge Road	Glade Spring
VAG400209		MC	MR	N	1	Washington	Long Jimmy & Kim Residences STP	22404 Willow Creek Circle	Bristol
VAG400210		O & M	MR	N	1	Washington	Willow Creek Lots 42 & 43 Residences STP	22332 Willow Creek Circle	Bristol
VAG400222		O & M	MR	N	1	Wythe	Saldivar Helena R Residences STP	112 Wise Drive	Ivanhoe
VAG400242		MC	MR	N	1	Washington	Smith Bonnie Residences STP	11439 Toole Creek Rd	Abingdon
VAG400245		MC	MR	N	1	Washington	Virginia Highlands Christian Fellowship Church	22417 Watauga Road	Abingdon
VAG400287		MC	MR	N	1	Wythe	Dehart & Payne Dwellings STP	323 Stillwell Rd	Draper
VAG400290		O & M	MR	N	1	Carroll	Utts Campground STP	574 Campground Road	Fancy Gap
VAG400299		O & M	MR	N	1	Washington	Hess Howard Residences	22460 Remington Drive	Abingdon
VAG400309		MC	MR	N	1	Washington	Spoon Gap Freewill Baptist Church STP	19181 Spoon Gap Rd	Abingdon
VAG400319		NB	MR	Y	1	Smyth	Hubble James M and Adrienne D Residence	2205 Old Wilderness Road	Smyth County
VAG400321		O&M	MR	N	1	Washington	Mayfield Dual Residences STP	20245 Shadowood Circle	Meadowview
VAG400324		MC	MR	N	1	Washington	SERVPRO Industries, Inc. STP	27074 Lee Highway	Abingdon
VAG400328		MC	MR	N	1	Bland	Caudill - Cook Residences STP	13675 N Scenic Hwy	Rocky Gap
VAG400439		O & M	MR	N	1	Carroll	Whitney Lane Apartments	85 Whitney Ln	Galax
VAG400481		MC	MR	N	1	Washington	Kell Rebecca Residences STP	9389 Old Mill Rd	Glade Spring
VAG400491		MC	MR	Y	1	Washington	Clark Ralph and Donna Residence STP	15491 Monroe Road	Glade Spring
VAG400506		MC	MR	Y	1	Bland	Bailey John and Christy Residence STP	8903 Wilderness Rd	Bland
VAG400520		MC	MR	N	1	Washington	Valley Chapel and Parsonage STP	18060 Brumley Gap Rd	Abingdon
VAG400527		O & M	MR	N	1	Washington	Orfield Betsy L Residences	32214 & 32222 Old Salt Works Rd	Meadowview
VAG400544	X	MC	MR	Y	1	Grayson	Samuels Taylor H Residence STP	101 Brickside Ln	Galax
VAG400548		MC	MR	Y	1	Smyth	Shupe Eric and Lindsey Residence STP	1484 Walkers Creek	Marion
VAG400576		O&M	MR	N	1	Smyth	Grove Baptist Church STP	1811 Walkers Creek Road	Marion
VAG400579		NB	MR	Y	1	Smyth	Mountain Joe Company Residence STP	1839 Nicks Creek Rd	Atkins
VAG400585		MC	MR	Y	1	Washington	Greenwald Michael and Karalee Residence S	15326 Greenway Rd	Meadowview
VAG400616			MR	Y	1	Washington	Gillespie Delmus Rush Residence STP	17057 Mill Creek Rd	Meadowview
VAG400618			MR	Y	1	Washington	McKinney Donna G and Samuel Residence	31298 Rivermont Dr	Meadowview
VAG400652		MC	MR	N	1	Wythe	Lane Enterprises Lot 31 Progress Park STP	510 Kents Ln	Wytheville
VAG400654		NB	MR	Y	1	Washington	Heath Russell Dennis Residence STP	31315 Rivermont Dr	Meadowview
VAG400687		NB	MR	Y	2	Washington	Handy James and Carolyn Residence STP	19263 North Fork River Rd	Abingdon
VAG400706		NB	MR	Y	2	Carroll	Laurel Mountain Lot 43 Residence STP	St Rte 735	Carroll Co
VAG400707		NB	MR	Y	2	Carroll	Laurel Mountain Lot 44 Residence STP	St Rte 735	Carroll Co
VAG400708		NB	MR	Y	2	Carroll	Laurel Mountain Lot 45 Residence STP	St Rte 735	Carroll Co
VAG400734		NB	MR	Y	1	Washington	Mullins Jeremy Residence STP	8176 Wagner Rd	Bristol
VAG400747		NB	MR	Y	1	Grayson	Link Street Developers LLC Residence STP	US 21	Grayson Co
VAG400756		NB	MR	Y	1	Bland	Delay James and Penny Residence STP	St Rte 601	Bland County
VAG400766		NB	MR	Y	1	Washington	Michalski Gerald J and Marlene Residence S	28375 Poor Valley Rd	Saltville
VAG400816		MC	MR	Y	1	Washington	Barr Earl W Residence STP	21118 Grassy Ridge Rd	Damascus
VAG400817		NB	MR	Y	1	Smyth	Keesee Christopher Douglas STP	796 St Clair Creek Rd	Chilhowie





APPENDIX G

EPA FACT SHEETS FOR DECENTRALIZED WASTEWATER



## INTRODUCTION

Approximately one in five households in the United States rely on decentralized wastewater systems, such as single-family home septic systems or community cluster systems, for wastewater treatment and disposal. For communities relying on decentralized systems,



costs to repair, replace, or install systems can be expensive, and these costs are often the homeowner's responsibility. EPA's [Financing Decentralized Wastewater Treatment Systems: Pathways to Success with the Clean Water State Revolving Fund Program](#) Guide helps community leaders, local and state decentralized

wastewater treatment programs and state Clean Water State Revolving Fund (CWSRF) administrators understand how the CWSRF can be a viable source of financing for decentralized systems.

The Guide details (1) the CWSRF Program; (2) How to Use the CWSRF to Finance Decentralized System Projects; (3) Options for CWSRF Loan Repayment; and (4) Initiating a Financing Program for Decentralized Wastewater Systems with the CWSRF. This summary sheet highlights key content from these sections.

## 1 The CWSRF Program

EPA's CWSRF Program, administered individually by each state and Puerto Rico, provides low-cost financing for wastewater infrastructure and water quality projects, including decentralized wastewater system projects. The CWSRF functions like an environmental infrastructure bank, providing funding, primarily in the form of below-market interest rate loans to eligible borrowers. However, it is important to note that States are afforded extensive flexibility in administering their program, including defining project and applicant eligibilities, financing terms, and loan forgiveness options for qualified borrowers. Contact your state for [details](#).

## CWSRF Financing Fundamentals



### Is my project eligible for CWSRF funding?

- Planning and design
- Construction
- CWSRF CANNOT pay for *operations and maintenance* (O&M)

Your state's CWSRF staff can help you understand what costs may/may not be included in a CWSRF loan.



### What kinds of projects are eligible?

- New septic system installation
- Repair/replacement projects
- Converting cesspools to septic
- Cluster systems or community package plants
- Certain fees associated with setting up a special district or a Responsible Management Entity



### Am I eligible to apply?

The CWSRF may lend to:

- Communities, municipalities, townships, counties, political subdivisions
- Individual homeowners
- Citizen groups
- Non-profit organizations
- Public utility companies



### What terms are available?

Within statutory limits, state CWSRF programs have a great deal of flexibility to offer borrowers, including leeway with:

- Interest rate and repayment loans
- Limited amounts of loan forgiveness
- Sculpted repayment structures to accommodate borrower cash flows

Check with staff in your state about how a CWSRF loan can be customized to fit your needs.

## 2

### How Can I Use the CWSRF to Finance My Decentralized System Project?

Federal statutes give states the ability to finance decentralized systems, but states determine whether and how to provide the financing. If a CWSRF program determines there is a need and demand for decentralized system financing, it will assess the best way(s) to offer financing. The table below highlights the most common mechanisms used by states for financing decentralized systems. As of 2020, only 11 states regularly use the CWSRF to finance decentralized wastewater projects. The Guide provides detailed information on each of these mechanisms, including case studies.

### How Do CWSRF Decentralized System Financing Programs Work?

Lending Structure	How does it work?	Who is doing it?
<b>Direct homeowner loan</b>	The state CWSRF signs a loan directly with the property owner.	DE
<b>Linked deposit loan</b>	The borrower applies for funding at a participating bank. The CWSRF buys down the interest rate that the bank charges the borrower.	IA, MD, OH
<b>Pass-through loan</b>	The CWSRF makes a loan to a state or local government unit (agency, county, or special district), which uses the funds to make loans for decentralized projects. The government unit ensures repayment of the CWSRF loan.	CT, MA, MN, NJ, OH, PA, WV
<b>CDFI pass-through</b>	Same as above, but through a CDFI or other financial institution.	ID, OR, WA, WV
<b>Sub-state revolving fund</b>	The CWSRF makes a loan to the partner to capitalize another revolving fund. Returns on the sub-state revolving fund are used to repay the CWSRF and to make new loans.	MO, OH, RI, VA, WA
<b>Sponsorship</b>	A utility increases the size of its loan to sponsor a NPS project. In exchange, the CWSRF reduces the interest rate on the loan to cancel out the cost of the NPS project.	DE, IA, OH, OR all have sponsorship programs but they have not been used for decentralized projects
<b>Co-funding</b>	The CWSRF co-finances projects with another funding entity.	Every state does this, but may not have used this approach for financing decentralized projects.

## 3

### Options for Loan Repayment

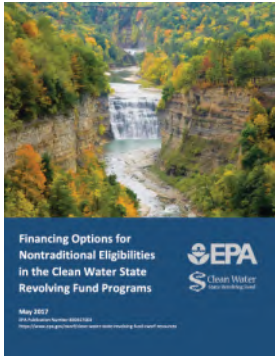
Federal statutes require that borrowers have a viable source of loan repayment. The three most common forms of repayment for decentralized system projects include:

- **Property Tax Assessment Financing (PTAF):** A commonly used tool to help avoid high upfront costs with decentralized system projects. This approach allows the homeowner to pay for the project through a long-term, fixed-cost financing option underwritten by the value of the property.

- **Septic Utility Fees:** A cluster system or group of households may collect fees to pay for O&M. This fee can be used as a potential repayment source for the installation, repair, or replacement costs of decentralized systems.



• **Homeowners Association Dues:** The CWSRF can make loans directly to homeowner’s associations (HOAs), which are then repaid with revenues from HOA dues. Maryland has used this approach for several types of nonpoint source projects and could also include decentralized system projects.



In addition to these options, the [Financing Options for Non-Traditional Eligibilities in the CWSRF](#) report features a variety of additional potential repayment sources.

## 4 Initiating a Financing Program for Decentralized Wastewater Systems with the CWSRF

Stakeholders may approach a CWSRF with a decentralized system financing proposal if the CWSRF does not already offer decentralized financing or if a different mechanism than what is offered would be a better fit. The Guide provides a roadmap for how a decentralized system program can be successfully financed by the CWSRF.

- 1. Identify the Problem and Technical Solution.** Issues are determined by public health, environmental, and economic impacts. Technical solutions include community engagement as well as consulting engineers/designers early in the process.
- 2. Review CWSRF Financing Options.** These include eligibility, repayment, and types of financing mechanisms.
- 3. Identify Potential Partners.** Partnering organizations must be eligible CWSRF participants.
- 4. Meet with CWSRF Staff.** CWSRF program staff can discuss proposed projects and identify the best financing mechanism.
- 5. Develop an O&M Plan.** These activities are not eligible expenses for CWSRF financing, yet property owners should be equipped with appropriate education and training tools.

- 6. Communicate Potential Costs and Benefits.** Meet with community members to discuss the potential costs, benefits, timelines, and plans.
- 7. Put Together a CWSRF Financing Proposal.** Identify the financing mechanism and tailor the CWSRF application to suit it.
- 8. Sign Financing Agreements.** This arrangement is dependent on the type of financing mechanism selected.
- 9. Implement Decentralized System Projects.** These can include construction, repair, and replacement of a septic system.

Finally, for a decentralized system financing program to thrive, communication to stakeholders about financing options available is critical. The Guide provides several outreach examples for reaching potential borrowers.

### MORE INFORMATION

CWSRF State Program Contacts: [www.epa.gov/cwsrf/state-cwsrf-program-contacts](http://www.epa.gov/cwsrf/state-cwsrf-program-contacts)

Financing Decentralized Wastewater Treatment Systems: Pathways to Success with the Clean Water State Revolving Fund Program: [www.epa.gov/system/files/documents/2022-02/financing-dwts.pdf](http://www.epa.gov/system/files/documents/2022-02/financing-dwts.pdf)

Financing Options for Nontraditional Eligibilities in the Clean Water State Revolving Fund Programs: [epa.gov/cwsrf/financing-options-nontraditional-eligibilities-cwsrf](http://epa.gov/cwsrf/financing-options-nontraditional-eligibilities-cwsrf)





## DECENTRALIZED WASTEWATER TREATMENT CAN PROTECT THE ENVIRONMENT, PUBLIC HEALTH, AND WATER QUALITY



*Decentralized wastewater treatment systems can protect the environment, public health, and water quality in homes and communities by:*

- *providing reliable wastewater treatment,*
- *reducing conventional pollutants, nutrients, and emerging contaminants, and*
- *mitigating contamination and health risks associated with wastewater.*

### HOW CAN DECENTRALIZED WASTEWATER TREATMENT PROTECT THE ENVIRONMENT, PUBLIC HEALTH, AND WATER QUALITY?

#### Providing reliable wastewater treatment

– Decentralized wastewater treatment systems can offer as much public health and environmental protection as centralized treatment systems. Like centralized treatment, decentralized treatment systems must be properly designed and constructed and well maintained. More than ever, these systems typically include good monitoring and backup that help prevent adverse discharges. The modern decentralized treatment system is as reliable as other wastewater treatment alternatives, and it is also a cost-effective and sustainable method of treatment for communities.

#### Reducing conventional pollutants, nutrients, and emerging contaminants

– Decentralized treatment can produce effluent quality that is equal to or higher than other wastewater disposal options. These decentralized systems use the same advanced treatment technologies as discharging systems. Since they use the treatment capacity of the soil, they achieve high quality treatment at a lower cost than other options. Cluster systems, also called community systems, allow for centralized management of the wastewater via contract by a third party – a Responsible Management Entity (RME). Communities can enter into agreements with nearby public utilities or local cooperatives to create public private partnerships to provide management for decentralized wastewater treatment.

#### Mitigating contamination and health risks associated with wastewater

– Sewage pathogens cause many human illnesses, including aseptic meningitis, cholera, dysentery, encephalitis, gastroenteritis, infectious hepatitis, and typhoid fever. Using decentralized systems allows for multiple layers of treatment including, advanced treatment and disinfection which can help mitigate the risk of human exposure and disease transmission. Small systems in single family homes can include secondary treatment from a variety of treatment technologies (e.g., aerobic treatment, recirculating filters, etc.). Larger neighborhood systems may be designed using high-level treatment and pressure dispersal of highly treated wastewater to utilize marginal soils. Therefore, decentralized systems can be designed to overcome the potential health risks posed by septic systems in areas often considered unsuitable for development because of limited permeability, limited vertical depths and high water tables.

*The EPA Decentralized Wastewater Memorandum of Understanding (MOU) Partnership, created in 2005, has served as an ongoing cooperative relationship between the EPA and Signatory Organizations to effectively and collaboratively address management and performance issues pertaining to decentralized systems.*



## WHERE IT'S WORKED

### Caroline County, VA

In the late 1990s, the Virginia Department of Health noted public health issues arising in the Dawn area of Caroline County, Virginia. Residents were suffering from failing or unreliable drain fields due to poor soils in the area. The County sought a declaration of "public health emergency" from the Virginia Department of Health. Early plans to connect with a centralized wastewater treatment plan proved cost-prohibitive, so the County turned to a decentralized solution. To finance the Dawn Project, non-local funding sources were pursued, including Community Development Block Grant funds, an EPA State and Territorial Assistance Grant, as well as other grants and loans. Three years later in the summer of 2007, the first homes were fully connected to the working decentralized system (including advanced control units, septic tank effluent pumping (STEP) tanks, and fixed activated flood treatment (FAST) units; see photo). Within the next 18 months, 182 homes and businesses were connected to the Dawn Decentralized Wastewater Treatment System, thereby eliminating reliance upon conventional septic systems and the health risks of failing systems. More than half the connected homes are owned

*Bio-Microbics FAST unit, courtesy KOWA*



by low-to-moderate income deed holders. The community was fully engaged throughout the project, through surveying and construction. By the completion of the project, the community felt its needs were addressed. For more information: [http://www.foresterpress.com/ow\\_0701\\_taming.html](http://www.foresterpress.com/ow_0701_taming.html)

## ADDITIONAL RESOURCES

U.S. Environmental Protection Agency's Source Water Protection Practices Bulletin: Managing Septic Systems to Prevent Contamination of Drinking Water – <http://www.epa.gov/safewater/sourcewater/pubs/fs-supp-septic.pdf>

Centers for Disease Control and Prevention's Healthy Septic Systems – <http://www.cdc.gov/healthyplaces/hia.htm>

U.S. Environmental Protection Agency's Onsite Wastewater Treatment Systems Manual. – [http://www.epa.gov/owm/septic/pubs/septic\\_2002\\_osdm\\_all.pdf](http://www.epa.gov/owm/septic/pubs/septic_2002_osdm_all.pdf)

Crites, Ronald and George Tchobanoglous. 1998. Small and Decentralized Wastewater Management Systems. McGraw-Hill.

For more information on the individual MOU Partners, click on the logos below or go to <http://www.epa.gov/owm/septic>.



**Contact Information:** [tooke.maureen@epa.gov](mailto:tooke.maureen@epa.gov) or 202-564-1162



# DECENTRALIZED WASTEWATER TREATMENT: A SENSIBLE SOLUTION



*Many communities are considering decentralized wastewater treatment and the economic and environmental advantages these types of systems can offer. Today, decentralized treatment can provide the safety and reliability of conventional large-scale treatment, and can also offer many additional benefits to communities.*

## WHAT IS DECENTRALIZED WASTEWATER TREATMENT?

Decentralized wastewater treatment consists of a variety of approaches for collection, treatment, and dispersal/reuse of wastewater for individual dwellings, industrial or institutional facilities, clusters of homes or businesses, and entire communities. An evaluation of site-specific conditions is performed to determine the appropriate type of treatment system for each location. These systems are a part of permanent infrastructure and can be managed as stand-alone facilities or be integrated with centralized sewage treatment systems. They provide a range of treatment options from simple, passive treatment with soil dispersal, commonly referred to as septic or onsite systems, to more complex and mechanized approaches such as advanced treatment units that collect and treat waste from multiple buildings and discharge to either surface waters or the soil. They are typically installed at or near the point where the wastewater is generated. Systems that discharge to the surface (water or soil surfaces) require a National Pollutant Discharge Elimination System (NPDES) permit.

These systems can:

- Serve on a variety of scales including individual dwellings, businesses, or small communities;
- Treat wastewater to levels protective of public health and water quality;
- Comply with municipal and state regulatory codes; and
- Work well in rural, suburban and urban settings.

## WHY DECENTRALIZED WASTEWATER TREATMENT?

Decentralized wastewater treatment can be a smart alternative for communities considering new systems or modifying, replacing, or expanding existing wastewater treatment systems. For many communities, decentralized treatment can be:

- **Cost-effective and economical**
  - Avoiding large capital costs
  - Reducing operation and maintenance costs
  - Promoting business and job opportunities
- **Green and sustainable**
  - Benefiting water quality and availability
  - Using energy and land wisely
  - Responding to growth while preserving green space

- **Safe in protecting the environment, public health, and water quality**
  - Protecting the community's health
  - Reducing conventional pollutants, nutrients, and emerging contaminants
  - Mitigating contamination and health risks associated with wastewater

## THE BOTTOM LINE

Decentralized wastewater treatment can be a sensible solution for communities of any size and demographic. Like any other system, decentralized systems must be properly designed, maintained, and operated to provide optimum benefits. Where they are determined to be a good fit, decentralized systems help communities reach the triple bottom line of sustainability: good for the environment, good for the economy, and good for the people.

*The EPA Decentralized Wastewater Memorandum of Understanding (MOU) Partnership, created in 2005, has served as an ongoing cooperative relationship between the EPA and Signatory Organizations to effectively and collaboratively address management and performance issues pertaining to decentralized systems.*



## WHERE IT'S WORKED

### Loudoun County, VA

Loudoun Water, in Loudoun County, Virginia (a Washington, D.C., suburb), has adopted an integrated approach to wastewater management that includes purchased capacity from a centralized plant, a satellite water reclamation facility, and several small, community cluster systems. The approach has allowed the county to maintain its rural character and created a system in which growth pays for growth. Developers design and construct cluster wastewater facilities to Loudoun Water standards at their own cost and transfer ownership of the system to Loudoun Water for continued maintenance. The program is financially self-sustaining via rates that cover expenses. For more information: <http://www.loudounwater.org/>

### Rutherford County, TN

Consolidated Utility District (CUD) of Rutherford County, Tennessee, provides sewer services to many of its outlying customers through an innovative system. The system being used is often referred to as a septic tank effluent pumping (STEP) system which consists of approximately 50 subdivision wastewater systems, all of which contain a STEP system, a recirculating sand filter, and a large effluent drip dispersal system. All of the systems are owned and managed by the Rutherford County CUD. The system allows for high density development (subdivisions) in areas of the county where city sewer is not available or soil types are not conducive to conventional septic tank and drain field lines. The 1,500-gallon septic tank is equipped with a pump and control panel located at each residence for controlled discharge of wastewater to a centralized wastewater collection system. For more information: <http://www.cudrc.com/Departments/Waste-Water.aspx>

Package plant



Drip irrigation field



## ADDITIONAL RESOURCES

U.S. Environmental Protection Agency Office of Wastewater Management Decentralized Program – [www.epa.gov/owm/onsite](http://www.epa.gov/owm/onsite)

Water Environment Research Foundation Decentralized Systems – <http://www.werf.org/!a/k/DecentralizedSystems.aspx>

For more information on the individual MOU Partners, click on the logos below or go to <http://www.epa.gov/owm/septic>.



Contact Information: [tooke.maureen@epa.gov](mailto:tooke.maureen@epa.gov) or 202-564-1162

APPENDIX H

DEQ VIRGINIA CWFAP SOUTHWEST VIRGINIA PILOT PROGRAM





# Virginia Clean Water Financing and Assistance Program Southwest Virginia Pilot Program

## Overview

DEQ's Clean Water Financing and Assistance Program (CWFAP) is offering loan forgiveness to localities in Southwest Virginia to address critical wastewater infrastructure challenges through a new pilot program. Localities within DEQ's Southwest Regional Office boundary are encouraged to apply. These are the counties of Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe and the cities of Bristol, Galax and Norton.

This pilot program will use financial incentives to fund these types of critical projects: sewer system evaluation surveys, inflow and infiltration (I/I) studies, collection system repair projects to reduce I/I and/or sanitary sewer overflows (SSO), and projects that eliminate straight pipe, gray water, and discharges of partially treated wastewater to surface waters in the region. In addition to improving and protecting water quality, the program will foster asset management and promote fiscal sustainability.

This pilot program is especially important to Southwest Virginia, in which many localities have difficulty funding certain types of projects that do not increase revenue streams. In addition to demographic challenges, the region is home to several ecologically important watersheds like the Clinch, Powell and Holston River Watersheds. These river systems support the highest number of rare and imperiled fish and freshwater mussel species in North America, and provide a critical water supply for several communities in Southwest Virginia.

## Phase 1

### Goal: Reduce inflow and infiltration and eliminate sanitary sewer overflows

Sewer system evaluation surveys and collection system repairs are necessary to reduce I/I that cause sanitary sewer overflows. In addition to SSOs, I/I can adversely affect hydraulic capacity in wastewater treatment plants and cause permit violations. Collection system rehabilitation projects contribute to lower operational costs and reduced environmental and public health impacts in the communities where these projects are undertaken. Through Phase 1 of the pilot program DEQ will:

- Fund sanitary sewer evaluation study (SSES) and collection system repairs to reduce I/I, eliminate SSOs and reduce hydraulic overload in wastewater treatment plants.
- Encourage applications using incentives of principal forgiveness and favorable loan terms.

## Steps to Participate Phase 1 Step 1

1. Political subdivision (county/city/service authority) submits application to fund SSES if initial screening criteria show one or more of the following:
  - a. Under current enforcement action for violation of 95% flow policy as stated in the VPDES permit for the facility
  - b. Flows exceeding 125 gpcd during periods of high groundwater
  - c. Flows exceeding 275 gpcd during precipitation events
  - d. Multiple reported rainfall-induced SSOs in six months prior to application submittal
2. DEQ-CWFAP reviews application and determines if minimum criteria are met

3. DEQ-CWFAP closes loan or funding agreement (assuming financial capability is met) and provides up to 75% principle forgiveness for SSES (study and report). Recipient provides 25% match (using cash, other agency grant, or VCWRLF loan) and has 18 months from loan closing to complete SSES.
4. Applicant submits SSES report (with Asset Management Plan, cost-effective analysis, and list of priority repairs) to DEQ for review.
5. DEQ and the applicant meet to discuss the SSES report, outcomes and recommendations and determine list of highest priority repairs.

## **Steps to Participate Phase 1 Step 2**

6. Political subdivision (county/city/political subdivision) submits application for highest priority repairs as determined by DEQ (1st solicitation or cycle after SSES review meeting).
7. DEQ-CWFAP closes loan (assuming financial capability is met) and provides up to 50% principal forgiveness to address highest priority repairs as determined by DEQ and based upon availability of principal forgiveness funds.
8. Applicant completes repair work within 15 months of loan closing.
9. Applicant has or develops sewer use ordinance that prohibits connections to the sanitary sewer system from stormwater sources such as downspouts, basement drains, yard drains, conveyance systems (drop inlets, catch basins, etc.) and DEQ approves before final disbursement.

## **Expected Outcomes**

- Recipients are expected to report all sanitary sewer overflows (SSOs). This demonstrates the existence of SSOs. Communities with reported rainfall-induced SSOs will get priority funding over those who do not report.
- Applicants conduct SSES that culminates in a report to include:

### **Report and Analysis**

- a. I/I amounts
- b. Hydraulic analysis (if warranted)
- c. Cost-effective analysis
- d. Rehabilitation plan by priority phases (an outline is sufficient)
- e. Up-to-date maps (GIS if available) that show collection system and deficiency locations
- f. Basic Asset Management Plan (AMP) – AMP requirements listed below
- g. Priority list of repairs (SSES priority list can be used as basis for next CWSRF loan application). This can be in the form of a Capital Improvements Plan and utilize information from AMP.

### **Asset Management Plan**

- a. Inventory of collection system
- b. Age of inventoried units
- c. Useful life, and remaining useful life
- d. Current value (depreciated value of the asset)
- e. Present cost (value of the asset today if it is replaced)
- f. Replacement cost (expected cost when the life of the asset expires)
- g. Projected revenues, expenses, and change in net position

For more information about the program, please contact DEQ Regional Project Manager Allen Cornett at [James.Cornett@DEQ.Virginia.gov](mailto:James.Cornett@DEQ.Virginia.gov) or (276) 676-4813.



### FY 21 Phase 1, Step 1 Applications

- Total application amount = \$1,117,875 (75%) All closed.
- Each community provided the 25% local match.

<u>Name of Applicant / Project / VCWRLF amount</u>	<u>Engineer</u>	<u>Local Share</u>
○ Abingdon (Phase 1 –east end) (\$75,000)	CHA	\$25,000
○ Big Stone Gap (Cadet) \$75,000	TLG	\$25,000
○ Bland County-Bastian (\$82,500)	CHA	\$27,500
○ Buchanan Co. PSA (\$75,000)	T+L	\$25,000
○ BVUA (Basin Area 1568) (\$225,000)	TLG	\$75,000
○ Chilhowie (Phase 1) (\$67,500)	H&P	\$22,500
○ Gate City (\$75,000)	M&C	\$25,000
○ Hillsville (\$75,000)	T+L	\$25,000
○ Independence (\$56,250)	TLG	\$18,750
○ Saltville (Plasterco/McHenry Cr.) (\$75,000)	TLG	\$25,000
○ TCPSA (Falls Mills) (\$45,000)	T+L	\$15,000
○ Wythe Co. (Max Meadows area) (\$116,625)	Thrasher	\$25,000
○ Wytheville (\$75,000)	H&P	\$25,000

### FY 22 Phase 1, Step 1 Applications

- Total application amount = \$1,141,125 (75%) All closed.
- Each community provided the 25% match.

<u>Name of Applicant / Project / VCWRLF amount</u>	<u>Engineer</u>	<u>Local Share</u>
○ Abingdon (Porterfield Hwy) (\$75,000)	CHA	\$25,000
○ Cedar Bluff (\$57,000)	Crossroads	\$19,000
○ Chilhowie (Phase 2-Interceptor) (\$64,125)	H&P	\$21,375
○ DCPSA (Haysi) (\$67,500)	T+L	\$22,500
○ Honaker (\$75,000)	M&C	\$25,000
○ LCPSA (Dryden & Rose Hill) (\$75,000)	TLG	\$25,000
○ Lebanon (\$75,000)	TLG	\$25,000
○ Marion (\$52,500)	TLG	\$17,500
○ Norton (\$75,000)	M&C	\$25,000
○ Pennington Gap (\$75,000)	M&C	\$25,000
○ Richlands (\$75,000)	T+L	\$25,000
○ Rural Retreat (Northern End) (\$75,000)	TLG	\$25,000
○ Saltville (Government Plant Road) (\$75,000)	TLG	\$25,000
○ Smyth Co. (Staley Creek) (\$75,000)	Draper Aden	\$25,000
○ St. Paul (\$75,000)	TLG	\$25,000
○ Tazewell (\$75,000)	T+L	\$25,000

**CWFAP FY (22) SW Phase 1 Step 2 - Authorized Funding Amounts**

Town of Chilhowie	<b>\$2,069,974.00</b>
Wythe County	<b>\$1,209,000.00</b>
Town of Independence	<b>\$1,010,840.00</b>
Town of Wytheville	<b>\$1,967,137.00</b>
Town of Saltville	<b>\$349,800.00</b>
Town of Abingdon	<b>\$3,336,800.00</b>
Town of Big Stone Gap	<b>\$2,965,566.00</b>
<b>Total</b>	<b>\$12,909,117.00</b>



**CWFAP FY 23 SW Phase 1 Step 2 (Authorized Funding Amounts)**

<b>FY 21 SSES Projects</b>	
Town of Hillsville	<b>\$1,265,000.00</b>
Buchanan County PSA	<b>\$1,811,380.00</b>
Tazewell County PSA	<b>\$3,520,690.00</b>
BVU Authority	<b>\$5,253,700.00</b>
Bland County	<b>\$810,000.00</b>
Abingdon (Phase 2)	<b>\$9,502,000.00</b>
Big Stone Gap (Phase 2)	<b>\$11,869,198.00</b>
<b>FY 22 SSES Reports</b>	
Town of Chilhowie Phase 2	<b>\$1,248,531.00</b>
Town of Rural Retreat	<b>\$430,224.00</b>
Town of ST. Paul	<b>\$892,300.00</b>
Town of Marion	<b>\$1,300,488.00</b>
Town of Saltville Phase 2	<b>\$1,476,000.00</b>
Lee County PSA	<b>\$739,200.00</b>
Town of Lebanon	<b>\$2,921,700.00</b>
Smyth County	<b>\$500,000.00</b>
<b>FY 23 Phase 1 Step 2 Request</b>	<b>\$43,540,411.00</b>

Appendix I

DEQ Virginia Clean Water Revolving Loan Fund Information



# Financing to build Virginia Communities



## Typical Loan Security

General obligation, revenue, or double-barrel.

## Contacts

DEQ: Karen Doran, Program Manager,  
[karen.doran@deq.virginia.gov](mailto:karen.doran@deq.virginia.gov), 804.698.4133

VRA: Shawn B. Crumlish, Director of Financial  
Services, [scrumlish@virginiaresources.org](mailto:scrumlish@virginiaresources.org),  
804.644.3100.

## About the Virginia Resources Authority

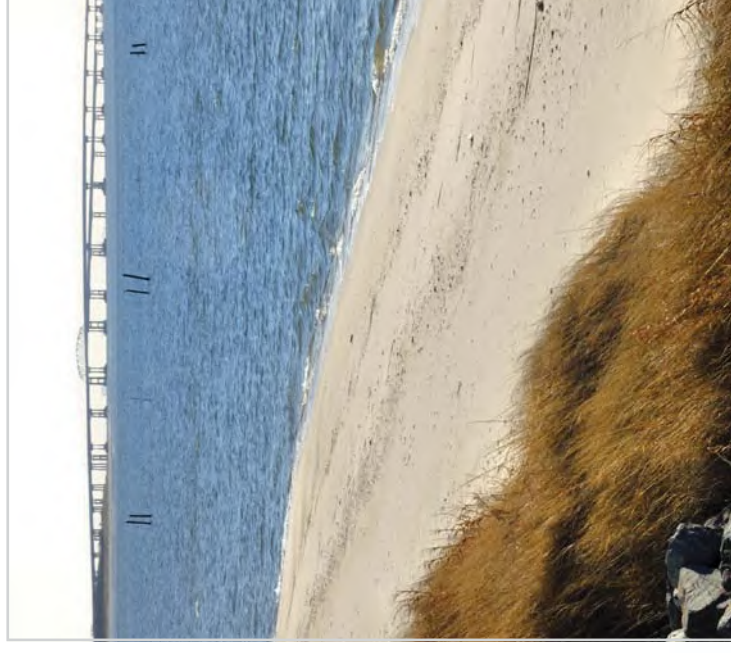
Created in 1984, the Virginia Resources Authority (VRA) provides innovative, cost-effective and sustainable financial solutions to build vibrant and healthy communities in Virginia. Since its inception, VRA has supported over 1,800 infrastructure projects with over \$8.5 billion in financing.



1111 E. Main Street  
Richmond, VA 23219

[www.deq.virginia.gov](http://www.deq.virginia.gov)

[www.virginiaresources.org](http://www.virginiaresources.org)



## Virginia Clean Water Revolving Loan Fund

Cost-Effective Infrastructure  
Financing



## Virginia Clean Water Revolving Loan Fund

The Virginia Clean Water State Revolving Loan Fund (VCWRLF) is a state financing assistance program. It is administered in the Commonwealth by the Virginia Department of Environmental Quality (DEQ) on behalf of the State Water Control Board. Since its creation in Virginia in 1987, the Virginia Resources Authority (VRA) has served as the VCWRLF's financial manager. VCWRLF receives some federal funding though the U.S. Environmental Protection Agency but is mainly supported by the payment stream of the existing loan portfolio.

The VCWRLF provides low-interest loans to local governments for the planning, design and construction of wastewater and stormwater treatment facilities and implementation of nonpoint source pollution control. Over the years the scope of activities under the VCWRLF has expanded and additional programs have been established to address agriculture, land conservation, brownfield remediation and other non-point water quality issues.

The State Water Control Board (SWCB) is responsible for developing the policies and procedures for VCWRLF, determining who will receive funds, at what interest rates and terms, and for ensuring that the administration of the Fund complies with applicable federal and state laws and regulations. DEQ manages the day-to-day operation of the VCWRLF on behalf of the SWCB.

As the VCWRLF's financial manager, VRA negotiates individual loans, makes disbursements to loan recipients, collects loan payments, and invests any uncommitted VCWRLF monies.

Since 1987 the VCWRLF has provided over \$3 billion in low interest loans for clean water projects throughout Virginia.

## VCWRLF Programs

- Wastewater Loan Program
- Agricultural BMP Loan Program
- Brownfield Remediation Loan Program
- Land Conservation Loan Program
- Stormwater Loan Program
- Living Shorelines Loan Program



Eligible applicants varies under each VCWRLF program. For the Wastewater and Stormwater Loan Programs, eligible applicants are counties, cities, towns, districts, authorities, or other public bodies. For further program information, please contact Karen Doran, Program Manager, Department of Environmental Quality, karen.doran@deq.virginia.gov, 804.698.4133.

## Eligible Projects

- New, expanded or rehabilitated wastewater treatment facilities
- Sewer rehabilitation and infiltration/inflow correction
- Expansion, upgrade, repairs to system
- Septage handling
- Water reuse distribution lines and systems
- Sludge treatment and disposal facilities
- Collector, trunk and interceptor sewers
- Stormwater BMPs
- Land Conservation
- Agricultural BMPs
- Brownfield Remediation
- Living Shorelines

## Loan Interest Rate

VCWRLF allows loans to be made to communities at rates equal to or below current market interest rates. DEQ, following consultation with VRA, establishes the interest rate for loans.

## VCWRLF Terms

- Disbursements of loan proceeds made on a reimbursement basis
- First payment made 6 months after project completion
- 20, 25, or 30 year repayment schedules available, depending on the project type.

## Application Process

- Submit application to DEQ
  - Accepted annually (July)
  - Projects prioritized by DEQ
  - SWCB adopts funding list (September)
  - Public Meeting (November)
  - SWCB authorizes loan amounts and rates (December)
- Approved and prioritized project listing forwarded to VRA
  - Financial capability analysis performed by VRA
  - VRA Credit Committee reviews
  - Commitment letter issued for approved funding
- Loan approval provided by DEQ following approved VRA analysis
  - Project bids and other DEQ conditions satisfied prior to loan closing
  - Loan closing completed by VRA



### **CWFAP VCWRLF Affordability Criteria**

Virginia’s Clean Water Revolving Loan Fund has established the following affordability criteria, used to evaluate applications to the program. Applications are assigned a score out of a maximum of 100 points.

**Median Household Income (maximum 80 points)** – DEQ has established guidelines for determining a reasonable sewer cost per household based on the median household income<sup>1</sup> (MHI) of the applicant. The reasonable sewer cost is calculated by multiplying the applicant’s MHI by the appropriate percentage in the chart below:

Median Household Income of Applicant	Percentage of MHI Devoted to the Sewer Bill
\$0 - \$43,099	0.75%
\$43,100 - \$54,999	1.00%
\$55,000 - \$76,999	1.25%
\$77,000 and above	1.50%

Projects with existing sewer costs in excess of the reasonable cost will be given points under this affordability criterion as shown below:

Sewer Cost per Household Relative to Reasonable Cost	# Points
< 100%	0
100% to 125%	20
125% to 150%	40
150% to 175%	60
>175%	80

**Unemployment Rate (maximum 10 points)** – For all project types, the unemployment rate<sup>2</sup> (UR) will be determined for each qualified applicant and each applicant will be given points as follows:

Locality’s Unemployment Rate	# Points
UR < Virginia UR	0
UR 0-3% above Virginia UR	5
UR > 3% above Virginia UR	10

**Population Trends (maximum 10 points)** – For all project types, population data<sup>3</sup> for the previous 3-year period will be evaluated for each qualified applicant and each applicant will be given points as follows:

Change in Population	# Points
>+3%	0
0 to +3%	5
<0%	10

<sup>1</sup> Median Household Income for the applicant can be found of the U.S. Census Bureau website, <https://www.census.gov/quickfacts/fact/table/US/PST045219>

<sup>2</sup> Unemployment rate for the applicant can be found on the website for the U.S. Bureau of Labor Statistics, <https://data.bls.gov/lausmap/showMap.jsp>

<sup>3</sup> University of Virginia Weldon Cooper Center, Demographics Research Group. (2020). Virginia Population Estimates. Retrieved from <https://demographics.coopercenter.org/virginia-population-estimates>

APPENDIX J

PROJECT SCORING MATRICES



APPENDIX J

CUMBERLAND PLATEAU PLANNING DISTRICT  
CENTRALIZED EXTENSIONS

<b>Potential Project: Buchanan - Lynn Camp/Looney Creek Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>52</b>



<b>Potential Project: Buchanan - Leemaster/Lovers Gap/Dry Fork Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	4
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>50</b>

<b>Potential Project: Buchanan - Lower Mill Branch/Elkins Branch Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>46</b>



<b>Potential Project: Dickenson - Lockhart Flats Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>51</b>

<b>Potential Project: Russell - Dante to St. Paul</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		<b>30</b>
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		<b>25</b>
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		<b>8</b>
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		<b>6</b>
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		<b>10</b>
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		<b>4</b>
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>83</b>



<b>Potential Project: Russell - Swords Creek Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>58</b>

<b>Potential Project: Russell - Castlewood Sewer Project - Phase II (Mew Road)</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	8
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>56</b>



<b>Potential Project: Russell - Drill Mountain Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>51</b>

<b>Potential Project: Tazewell - Abbs Valley Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>59</b>



<b>Potential Project: Tazewell - Bluefield to Divides Sewer Extension Phases 2 and 3</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>58</b>

<b>Potential Project: Tazewell - Route 639 (Clifffield to Baptsit Valley) Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>54</b>



<b>Potential Project: Tazewell - Baptist Valley West Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>53</b>

<b>Potential Project: Tazewell - Red Ash Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>51</b>



<b>Potential Project: Tazewell - Wrights Valley/ Witten Mill to Tiptop Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>49</b>

<b>Potential Project: Tazewell - Jewell Ridge Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>48</b>



<b>Potential Project: Tazewell - Tazewell to Claypool Hill Sewer Extension Alternative 1</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>48</b>

**Potential Project: Tazewell - Wrights Valley/ Tiptop to St. Clair's Crossing Sewer**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>47</b>



<b>Potential Project: Tazewell - Forest Hills Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>

<b>Potential Project: Tazewell - Kents Ridge North Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>



<b>Potential Project: Tazewell - Kents Ridge South Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>

<b>Potential Project: Tazewell - Mill Creek Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>



<b>Potential Project: Tazewell - Road Ridge Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>

<b>Potential Project: Tazewell - Willow Springs Sewer Extension Phase III</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>



<b>Potential Project: Tazewell - Witten Valley (Bundys Chapel - Tazewell) Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>

<b>Potential Project: Tazewell - Route 637 Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>43</b>



<b>Potential Project: Tazewell - Wardell Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	4
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>43</b>

<b>Potential Project: Tazewell - Green's Chapel Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>



<b>Potential Project: Tazewell - Route 699 Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>

<b>Potential Project: Tazewell - Willow Springs Sewer Extension Phase II</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>



<b>Potential Project: Tazewell - Witten Valley (Bundys Chapel - Liberty) Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>

<b>Potential Project: Tazewell - Witten Valley (Bundys Chapel - Wardell) Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>



<b>Potential Project: Tazewell - Bishop Sewer Extension</b>				
<b>New Centralized Collection System Extension Type Project</b>				
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>	
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>		
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30		
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25		
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20		
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15		
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15		
	<i>Subtotal</i>		0	
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>		
	< \$20,000 per Equivalent Residential Connection	25		
	\$20,000 - \$30,000 per Equivalent Residential Connection	21		
	\$30,000 - \$45,000 per Equivalent Residential Connection	16		16
	\$45,000 - \$60,000 per Equivalent Residential Connection	10		
	\$60,000 - \$75,000 per Equivalent Residential Connection	7		
	> \$75,000 per Equivalent Residential Connection	5		
	<i>Subtotal</i>		16	
<b>Regionalization</b>		<i>(15 points maximum)</i>		
	Project Involves Four or More Localities / Utility Providers	15		
	Project Involves Three or More Localities / Utility Providers	12		
	Project Involves Two or More Localities / Utility Providers	8		
	<i>Subtotal</i>		0	
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>		
	> 300 Equivalent Residential Connections	10		
	200 - 300 Equivalent Residential Connections	8		
	100 - 200 Equivalent Residential Connections	6		6
	< 100 Equivalent Residential Connections	4		
	<i>Subtotal</i>		6	
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>		
	> 2.0 % of Median Household Income	10		
	1.5 % - 2.0 % of Median Household Income	8		
	1.0 % - 1.5 % of Median Household Income	5		5
	0.75 % - 1.0 % of Median Household Income	2		
	<i>Subtotal</i>		5	
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2		
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5		
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4		
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3		3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2		
	<i>Subtotal</i>		3	
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>30</b>	

<b>Potential Project: Tazewell - Tazewell to Claypool Hill Sewer Extension Alternative 2</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		0
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>23</b>



APPENDIX J

CUMBERLAND PLATEAU PLANNING DISTRICT  
EXISTING SYSTEM UPGRADES

**Potential Project: Buchanan - Conaway WWTP Upgrades**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		0
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		0
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>0</b>



**Potential Project: Buchanan County PSA SSES Rehabilitation**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		0
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		0
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		0
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>0</b>

**Potential Project: Dickenson - Haysi Sewer Replacement Project**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>			<i>(30 points maximum)</i>
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		0
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>			<i>(25 points total)</i>
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		0
<b>Regionalization</b>			<i>(15 points maximum)</i>
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>			<i>(10 points maximum)</i>
	> 300 Equivalent Residential Connections	10	
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>			<i>(10 points maximum)</i>
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		0
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>			<i>(10 points maximum)</i>
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>0</b>



<b>Potential Project: Russell - Town of Cleveland WWTP Expansion Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	25
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>53</b>

<b>Potential Project: Russell - Town of Lebanon SSES Rehabilitation Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>40</b>



**Potential Project: Russell - Town of Lebanon WWTP Improvements Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>40</b>

<b>Potential Project: Russell - Town of Honaker SSES Rehabilitations Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>37</b>



**Potential Project: Russell - Town of Honaker WWTP Improvements Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	0
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		0
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>22</b>

## Potential Project: Tazewell - Town of Richlands WWTP Upgrades and Improvements

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		0
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>



**Potential Project: Town of Tazewell WWTP Upgrades and Improvements**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		0
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>

<b>Potential Project: Tazewell - Town of Cedar Bluff SSES Rehabilitations</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>36</b>



## Potential Project: Tazewell County PSA Falls Mills SSES Rehabilitations

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		0
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	1
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>32</b>

**Potential Project: Town of Tazewell SSES Rehabilitations**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	0
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		0
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>23</b>



<b>Potential Project: Tazewell - Town of Richlands SSES Rehabilitations</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		0
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>21</b>

APPENDIX J

LENOWISCO PLANNING DISTRICT  
CENTRALIZED EXTENSIONS



<b>Potential Project: Lee - Sandy Ridge/North Jonesville Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	8
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	6
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		6
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>73</b>

<b>Potential Project: Lee - Woodway/Hickory Flats Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	0
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	0
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>60</b>



**Potential Project: Lee - Dryden Heights Community Sewer Project**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<i>Subtotal</i>	4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>58</b>

<b>Potential Project: Lee - Western Lee Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>54</b>



**Potential Project: Lee - Cross Creek to Hickory Flats Sewer Project**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	15
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		15
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	8
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	6
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		6
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>48</b>

**Potential Project: Scott - Hiltons Community Sewer Project Phase 1-3**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<i>Subtotal</i>	4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>52</b>



**Potential Project: Scott - Yuma Community Sewer Project Phase 2-4**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<i>Subtotal</i>	5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>51</b>

**Potential Project: Scott - AP Carter Highway Community Sewer System**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<i>Subtotal</i>	4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>48</b>



**Potential Project: Scott - Duffield Route 871 Sewer Extension Project**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>47</b>

<b>Potential Project: Scott - Daniel Boone Sewer Project Phase 2-3</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>46</b>



**Potential Project: Scott - Reed Hollow Community Sewer System**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>43</b>

<b>Potential Project: Scott - Manville Community Sewer System</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<i>Subtotal</i>	4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>43</b>



<b>Potential Project: Wise - Riverview Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	21
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		21
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>65</b>

<b>Potential Project: Wise - East Stone Gap/Cracker Neck Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	10
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	10
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>63</b>



**Potential Project: Wise - Coeburn Mountain Community Sewer Project**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	0
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	0
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>63</b>

**Potential Project: Wise - South Coeburn Community Sewer Project**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>62</b>



<b>Potential Project: Wise - Cranesnest Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>60</b>

<b>Potential Project: Wise - Glamorgan Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>58</b>



<b>Potential Project: Wise - Dorchester Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>56</b>

<b>Potential Project: Wise - Powell Valley Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	10
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	10
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>54</b>



<b>Potential Project: Wise - Banner Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>54</b>

<b>Potential Project: Wise - Indian Creek (Wise to Pound) Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>53</b>



<b>Potential Project: Wise - Wildcat/Irondale Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	0
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	0
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>52</b>

<b>Potential Project: Wise - Crab Orchard/Dry Fork/Bull Run Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>51</b>



**Potential Project: Wise - Upper Guest River Community Sewer Project**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>51</b>

<b>Potential Project: Wise - Bold Camp Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>51</b>



<b>Potential Project: Wise - South Fork Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>49</b>

<b>Potential Project: Wise - Timberville Acres Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>49</b>



<b>Potential Project: Wise - North Fork Community Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>49</b>

<b>Potential Project: Wise - Hoot Owl Hollow Sewer Project</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>41</b>



APPENDIX J

LENOWISCO PLANNING DISTRICT  
EXISTING SYSTEM UPGRADES

<b>Potential Project: Lee - Pennington Gap Wastewater Treatment Plant Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	4
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		4
		<b>Potential Project Total Score (100 Points Maximum):</b>	
		<b>50</b>	



## Potential Project: Lee - Rose Hill Wastewater Treatment Plant Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>

## Potential Project: Lee - Pennington Gap SSES Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	1
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>



## Potential Project: Lee - Rose Hill Sewer SSES Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	2
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>41</b>

<b>Potential Project: Lee - Dryden Sewer SSES Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	2
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>41</b>



<b>Potential Project: Lee - Town of Jonesville I/I Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>41</b>

## Potential Project: Scott - Duffield Wastewater Treatment Plant Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	8
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>47</b>



<b>Potential Project: Scott - Duffield I&amp;I Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>

**Potential Project: Scott - Weber City I&I Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>



**Potential Project: Scott - Nickelsville I&I Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>

**Potential Project: Scott - Dungannon I&I Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>



**Potential Project: Scott - Holston Regional Wastewater Treatment Plant Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>

**Potential Project: Scott - Dungannon Wastewater Treatment Plant Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	2
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>



<b>Potential Project: Scott - Nickelsville Wastewater Treatment Plant Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
		<b>Potential Project Total Score (100 Points Maximum):</b>	
			<b>38</b>

**Potential Project: Scott - Gate City I&I Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	10
	<i>Subtotal</i>		10
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	1
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>37</b>



<b>Potential Project: Wise - Pound WWTP Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	29
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		29
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	25
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	2
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>76</b>

## Potential Project: Wise - Town of Pound I&I Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	25
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>67</b>



**Potential Project: Wise - Appalachia Elementary School WWTP to Forcemain Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	25
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	2
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>61</b>

## Potential Project: Wise - Town of Coeburn I&I Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	20
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>54</b>



## Potential Project: Wise - Town of Big Stone Gap SSES Improvement Project Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	4
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>48</b>

<b>Potential Project: Wise - City of Norton SSES Improvements Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>47</b>



<b>Potential Project: Wise - Big Stone Gap WWTP Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>45</b>

**Potential Project: Wise - Town of Appalachia I&I Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>



**Potential Project: Wise - St Paul SSES Rehabilitation Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	1
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>40</b>

<b>Potential Project: Wise - CNW I&amp;I Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>



<b>Potential Project: Wise - St Paul WWTP Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>

**Potential Project: Wise - CNW WWTP Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>



APPENDIX J

MOUNT ROGERS PLANNING DISTRICT  
CENTRALIZED EXTENSIONS

<b>Potential Project: Bland - Rocky Gap Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>43</b>



<b>Potential Project: Bland - Bland Sewer System</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>

<b>Potential Project: Carroll - Cana Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<i>Subtotal</i>	4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>32</b>



<b>Potential Project: Grayson - Stevens Creek / Eagle Bottom Extensions</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	8
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	2
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		2
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>50</b>

<b>Potential Project: Grayson - Providence Extensions</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	8
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	8
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		8
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	2
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		2
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>48</b>



<b>Potential Project: Grayson - Independence North / South Extensions</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		21
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>36</b>

<b>Potential Project: Grayson - Fairview Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>31</b>



<b>Potential Project: Grayson - Elk Creek System</b>				
<b>New Centralized Collection System Extension Type Project</b>				
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>	
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>		
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30		
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25		
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20		
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15		
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15		
	<i>Subtotal</i>			0
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>		
	< \$20,000 per Equivalent Residential Connection	25		
	\$20,000 - \$30,000 per Equivalent Residential Connection	21		
	\$30,000 - \$45,000 per Equivalent Residential Connection	16		
	\$45,000 - \$60,000 per Equivalent Residential Connection	10		
	\$60,000 - \$75,000 per Equivalent Residential Connection	7		
	> \$75,000 per Equivalent Residential Connection	5		5
	<i>Subtotal</i>		5	
<b>Regionalization</b>		<i>(15 points maximum)</i>		
	Project Involves Four or More Localities / Utility Providers	15		
	Project Involves Three or More Localities / Utility Providers	12		
	Project Involves Two or More Localities / Utility Providers	8		
	<i>Subtotal</i>		0	
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>		
	> 300 Equivalent Residential Connections	10		
	200 - 300 Equivalent Residential Connections	8		
	100 - 200 Equivalent Residential Connections	6		
	< 100 Equivalent Residential Connections	4		4
	<i>Subtotal</i>		4	
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>		
	> 2.0 % of Median Household Income	10		
	1.5 % - 2.0 % of Median Household Income	8		
	1.0 % - 1.5 % of Median Household Income	5		5
	0.75 % - 1.0 % of Median Household Income	2		
	<i>Subtotal</i>		5	
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3		3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2		
	<i>Subtotal</i>		3	
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>17</b>	

**Potential Project: Washington - Benhams Road**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	0
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
			5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>59</b>



**Potential Project: Washington - Mock Hollow**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>57</b>

**Potential Project: Washington - Lee Highway**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	8
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		8
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>56</b>



**Potential Project: Washington - East Central**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	7
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		7
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	10
	200 - 300 Equivalent Residential Connections	8	10
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>55</b>

**Potential Project: Washington - Larwood**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
			5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>55</b>



**Potential Project: Washington - High Meadows**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	16
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		16
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	6
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		6
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>54</b>





**Potential Project: Washington - Buchanan Road**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	4
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>50</b>

<b>Potential Project: Washington - Old Mill Road</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>47</b>



**Potential Project: Washington - Spoon Gap**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>46</b>

**Potential Project: Washington - Rush Creek**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>



**Potential Project: Washington - Seven Springs**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>

<b>Potential Project: Washington - Wyndale</b>				
<b>New Centralized Collection System Extension Type Project</b>				
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>	
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>		
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30		
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25		
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20		
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15		
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15		
	<i>Subtotal</i>			0
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>		
	< \$20,000 per Equivalent Residential Connection	25		
	\$20,000 - \$30,000 per Equivalent Residential Connection	21		
	\$30,000 - \$45,000 per Equivalent Residential Connection	16		16
	\$45,000 - \$60,000 per Equivalent Residential Connection	10		
	\$60,000 - \$75,000 per Equivalent Residential Connection	7		
	> \$75,000 per Equivalent Residential Connection	5		
	<i>Subtotal</i>		16	
<b>Regionalization</b>		<i>(15 points maximum)</i>		
	Project Involves Four or More Localities / Utility Providers	15		
	Project Involves Three or More Localities / Utility Providers	12		
	Project Involves Two or More Localities / Utility Providers	8		8
	<i>Subtotal</i>		8	
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>		
	> 300 Equivalent Residential Connections	10		
	200 - 300 Equivalent Residential Connections	8		
	100 - 200 Equivalent Residential Connections	6		
	< 100 Equivalent Residential Connections	4		4
	<i>Subtotal</i>		4	
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>		
	> 2.0 % of Median Household Income	10		
	1.5 % - 2.0 % of Median Household Income	8		8
	1.0 % - 1.5 % of Median Household Income	5		
	0.75 % - 1.0 % of Median Household Income	2		
	<i>Subtotal</i>		8	
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2		2
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2		2
	<i>Subtotal</i>		4	
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>40</b>	



<b>Potential Project: Washington - Damascus Area</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>20</b>

**Potential Project: Wythe - Wytheville East Sewer Extension**

**New Centralized Collection System Extension Type Project**

Inputs	Criteria	Score	Points
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	0
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		0
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	4
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		6
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>35</b>



<b>Potential Project: Wythe - Route 21 South Sewer Extension</b>			
<b>New Centralized Collection System Extension Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15	
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15	
	<i>Subtotal</i>		
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>	
	< \$20,000 per Equivalent Residential Connection	25	5
	\$20,000 - \$30,000 per Equivalent Residential Connection	21	
	\$30,000 - \$45,000 per Equivalent Residential Connection	16	
	\$45,000 - \$60,000 per Equivalent Residential Connection	10	
	\$60,000 - \$75,000 per Equivalent Residential Connection	7	
	> \$75,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		5
<b>Regionalization</b>		<i>(15 points maximum)</i>	
	Project Involves Four or More Localities / Utility Providers	15	0
	Project Involves Three or More Localities / Utility Providers	12	
	Project Involves Two or More Localities / Utility Providers	8	
	<i>Subtotal</i>		0
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>	
	> 300 Equivalent Residential Connections	10	4
	200 - 300 Equivalent Residential Connections	8	
	100 - 200 Equivalent Residential Connections	6	
	< 100 Equivalent Residential Connections	4	
	<i>Subtotal</i>		4
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	0
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		0
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	3
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>34</b>

<b>Potential Project: Wythe - Cripple Creek Sewer Extension</b>				
<b>New Centralized Collection System Extension Type Project</b>				
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>	
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>		
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30		
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25		
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20		
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15		
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15		
	<i>Subtotal</i>			0
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>		
	< \$20,000 per Equivalent Residential Connection	25		
	\$20,000 - \$30,000 per Equivalent Residential Connection	21		
	\$30,000 - \$45,000 per Equivalent Residential Connection	16		
	\$45,000 - \$60,000 per Equivalent Residential Connection	10		
	\$60,000 - \$75,000 per Equivalent Residential Connection	7		
	> \$75,000 per Equivalent Residential Connection	5		5
	<i>Subtotal</i>		5	
<b>Regionalization</b>		<i>(15 points maximum)</i>		
	Project Involves Four or More Localities / Utility Providers	15		
	Project Involves Three or More Localities / Utility Providers	12		
	Project Involves Two or More Localities / Utility Providers	8		
	<i>Subtotal</i>		0	
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>		
	> 300 Equivalent Residential Connections	10		
	200 - 300 Equivalent Residential Connections	8		
	100 - 200 Equivalent Residential Connections	6		
	< 100 Equivalent Residential Connections	4		4
	<i>Subtotal</i>		4	
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>		
	> 2.0 % of Median Household Income	10		
	1.5 % - 2.0 % of Median Household Income	8		
	1.0 % - 1.5 % of Median Household Income	5		
	0.75 % - 1.0 % of Median Household Income	2		
	<i>Subtotal</i>		0	
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3		8
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2		
	<i>Subtotal</i>		8	
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>17</b>	



<b>Potential Project: Wythe - Barren Springs Sewer Extension</b>				
<b>New Centralized Collection System Extension Type Project</b>				
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>	
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>		
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30		
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25		
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20		
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15		
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15		
	<i>Subtotal</i>		0	
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>		
	< \$20,000 per Equivalent Residential Connection	25		
	\$20,000 - \$30,000 per Equivalent Residential Connection	21		
	\$30,000 - \$45,000 per Equivalent Residential Connection	16		
	\$45,000 - \$60,000 per Equivalent Residential Connection	10		
	\$60,000 - \$75,000 per Equivalent Residential Connection	7		7
	> \$75,000 per Equivalent Residential Connection	5		
	<i>Subtotal</i>		7	
<b>Regionalization</b>		<i>(15 points maximum)</i>		
	Project Involves Four or More Localities / Utility Providers	15		
	Project Involves Three or More Localities / Utility Providers	12		
	Project Involves Two or More Localities / Utility Providers	8		
	<i>Subtotal</i>		0	
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>		
	> 300 Equivalent Residential Connections	10		
	200 - 300 Equivalent Residential Connections	8		
	100 - 200 Equivalent Residential Connections	6		6
	< 100 Equivalent Residential Connections	4		
	<i>Subtotal</i>		6	
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>		
	> 2.0 % of Median Household Income	10		
	1.5 % - 2.0 % of Median Household Income	8		
	1.0 % - 1.5 % of Median Household Income	5		
	0.75 % - 1.0 % of Median Household Income	2		
	<i>Subtotal</i>		0	
<b>Environmental Justice - EPA EJScreen Report for Project Area</b>		<i>(10 points maximum)</i>		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3		
	EJScreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3		
	EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2		2
	<i>Subtotal</i>		2	
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>15</b>	

<b>Potential Project: Wythe - Poplar Camp/Foster Falls Sewer Extension</b>				
<b>New Centralized Collection System Extension Type Project</b>				
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>	
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>		
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30		
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25		
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20		
	Project Consolidates One or More Permitted Discharging Systems into a Centralized Collection System	15		
	Project Consolidates One or More Decentralized Systems into a Centralized Collection System	15		
	<i>Subtotal</i>			0
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(25 points total)</i>		
	< \$20,000 per Equivalent Residential Connection	25		
	\$20,000 - \$30,000 per Equivalent Residential Connection	21		
	\$30,000 - \$45,000 per Equivalent Residential Connection	16		
	\$45,000 - \$60,000 per Equivalent Residential Connection	10		
	\$60,000 - \$75,000 per Equivalent Residential Connection	7		
	> \$75,000 per Equivalent Residential Connection	5		5
	<i>Subtotal</i>		5	
<b>Regionalization</b>		<i>(15 points maximum)</i>		
	Project Involves Four or More Localities / Utility Providers	15		
	Project Involves Three or More Localities / Utility Providers	12		
	Project Involves Two or More Localities / Utility Providers	8		
	<i>Subtotal</i>		0	
<b>Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)</b>		<i>(10 points maximum)</i>		
	> 300 Equivalent Residential Connections	10		
	200 - 300 Equivalent Residential Connections	8		
	100 - 200 Equivalent Residential Connections	6		6
	< 100 Equivalent Residential Connections	4		
	<i>Subtotal</i>		6	
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>		
	> 2.0 % of Median Household Income	10		
	1.5 % - 2.0 % of Median Household Income	8		
	1.0 % - 1.5 % of Median Household Income	5		
	0.75 % - 1.0 % of Median Household Income	2		
	<i>Subtotal</i>		0	
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 - 70	4		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 - 60	3		
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2		
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5		
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4		
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3		3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2		
	<i>Subtotal</i>		3	
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>14</b>	



APPENDIX J

MOUNT ROGERS PLANNING DISTRICT  
EXISTING SYSTEM UPGRADES

<b>Potential Project:</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		<i>0</i>
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		<i>0</i>
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		<i>0</i>
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		<i>0</i>
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		<i>0</i>
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		<i>0</i>
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>0</b>



<b>Potential Project: Bland - Bastian SSES Rehabilitation Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	17
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		17
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
		<b>Potential Project Total Score (100 Points Maximum):</b>	
		<b>46</b>	

<b>Potential Project:</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		<i>0</i>
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		<i>0</i>
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		<i>0</i>
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		<i>0</i>
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		<i>0</i>
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		<i>0</i>
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>0</b>



**Potential Project: Carroll - I-77 Exit 1 Wastewater Improvements Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	25
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	10
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		10
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>50</b>

## Potential Project: Galax - Collection System I/I Reductions

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>45</b>



**Potential Project: Carroll - Town of Hillsville SSES Rehabilitation**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	0
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		0
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>26</b>

<b>Potential Project: Grayson - Independence Sewer Line CIPP &amp; Manhole Rehabilitation Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	1
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>37</b>



**Potential Project: Grayson - Fries WWTP Improvements**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	10
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		10
	Fries WWTP		
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>34</b>

## Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	25
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		33
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	2
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>79</b>



## Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	25
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		33
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	2
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>79</b>

## Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	25
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		33
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	2
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	2
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>73</b>



<b>Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	25
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		33
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>71</b>

## Potential Project: Bristol - Beaver Creek Interceptor Rehabilitation - Phase 2

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	25
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		33
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	2
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>71</b>



**Potential Project: Bristol - Little Creek Interceptor Improvements Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	17
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>62</b>

<b>Potential Project: Bristol - Sinking Creek Sewer System Rehabilitation Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	4
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>57</b>



## Potential Project: Bristol - Gate City Highway Sewer System Rehabilitation Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	4
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>57</b>

## Potential Project: Washington - Abingdon Phase 1 Sewer Improvements Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	2
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>



## Potential Project: Washington - Abingdon Phase 2 Sewer Improvements Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	2
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>44</b>

## Potential Project: Washington - Abingdon Walden Road Sewer Improvements Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	8
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>



**Potential Project: Washington - Abingdon Phase 3 Sewer Improvements Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>

## Potential Project: Washington - Abingdon Phase 4 Sewer Improvements Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>



## Potential Project: Washington - Abingdon Phase 5 Sewer Improvements Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	8
	<i>Subtotal</i>		16
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>

**Potential Project: Washington - Wolf Creek Water Reclamation Facility Improvements Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>34</b>



**Potential Project: Washington - Abingdon Sewer Lift Station Improvements Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	5
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		5
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>34</b>

<b>Potential Project: Wise - Pound WWTP Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	29
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		29
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	25
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	2
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>76</b>



## Potential Project: Wise - Town of Pound I&I Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	25
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>67</b>

**Potential Project: Wise - Appalachia Elementary School WWTP to Forcemain Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	25
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		25
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	2
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		2
		<b>Potential Project Total Score (100 Points Maximum):</b>	
			<b>61</b>

## Potential Project: Wise - Town of Coeburn I&I Improvement Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	20
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	8
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		8
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>54</b>



## Potential Project: Wise - Town of Big Stone Gap SSES Improvement Project Project

### Existing Wasterwater Collection or Treatment System Upgrades Type Project

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	4
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>48</b>

<b>Potential Project: Wise - City of Norton SSES Improvements Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	17
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		17
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>47</b>

<b>Potential Project: Wise - Big Stone Gap WWTP Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	20
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		20
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	2
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		2
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>45</b>



**Potential Project: Wise - Town of Appalachia I&I Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		2
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>42</b>

<b>Potential Project: Wise - St Paul SSES Rehabilitation Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>40</b>

<b>Potential Project: Wise - CNW I&amp;I Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>



<b>Potential Project: Wise - St Paul WWTP Improvement Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	4
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>

**Potential Project: Wise - CNW WWTP Improvement Project**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	4
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		4
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>39</b>

<b>Potential Project: Wythe - Rural Retreat SSES Rehabilitation</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	17
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH to Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		17
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	2
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>50</b>



<b>Potential Project: Wythe - Wytheville SSES Rehabilitation Project</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	17
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH to Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		17
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	1
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>50</b>

**Potential Project: Wythe - Fort Chiswell WWTP Expansion**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	0
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	4
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>40</b>

**Potential Project: Wythe - Rural Retreat WWTP Expansion**

**Existing Wasterwater Collection or Treatment System Upgrades Type Project**

Inputs	Criteria	Score	Points
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	8
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	15
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	1
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOV's	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	2
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	2
	<i>Subtotal</i>		4
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	0
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	
	<i>Subtotal</i>		0
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>40</b>



<b>Potential Project: Wythe - Max Meadows SSES Rehabilitation</b>			
<b>Existing Wasterwater Collection or Treatment System Upgrades Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Targeted Project Types / Outcomes</b>		<i>(42 points maximum)</i>	
	Needed to Meet New More Stringent Water Quality Standards of Regulations	33	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	29	
	Addresses Problems (Not Growth Related) That Have Been Referred to DEQ Enforcement	25	
	Addresses Potential Public Health Concerns Not Declared by VDH o Be Public Health Hazards	17	
	Addresses Problems (Growth Related) That Have Been Referred to DEQ Enforcement	17	
	Project to Rehabilitate, Refurbish, or Expand Existing Wastewater Facilities	8	8
	Sewer Service Extensions to Serve Previously Unsewered Areas	4	
	Bonus Points for Projects that Utilize Innovative Technologies to Address the Sewer Problems	8	
	<i>Subtotal</i>		8
<b>Environmental Concerns - Priority Watersheds</b>		<i>(25 points maximum)</i>	
	Addresses Reduction of a Dominant/Exclusive Pollution Source of a Listed 303(d) Impaired Water	25	
	Addresses Reduction of a Moderate Pollution Source of a Listed 303(d) Impaired or Threatened Water	20	
	Addresses Reduction of a Minor Pollution Source of a Listed 303(d) Impaired or Threatened Water	15	15
	Addresses Major Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	20	
	Addresses Minor Reduction of a Pollution Source of a Water Not Listed as 303(d) Impaired or Threatened	10	
	<i>Subtotal</i>		15
<b>Environmental Concerns - Enforcement / Compliance History</b>		<i>(4 points maximum)</i>	
	System Has No Recent (Last 12 Months) NOV's or Active Enforcement Actions	4	
	System Can Demonstrate Efforts Taken to Address DEQ Enforcement Action Requirements	2	
	System Can Demonstrate Physical Improvements Made to Address Problems Resulting in NOVs	2	
	Management Efforts Taken to Improve O&M Practices, Increase Revenues, Restrict Flows	1	1
	<i>Subtotal</i>		1
<b>Commission on Local Government Composite Fiscal Stress Index Ranking</b>		<i>(17 points maximum)</i>	
	Locality's Most Recent COLG Composite Stress Index is Classified as "High"	17	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Above Average"	12	12
	Locality's Most Recent COLG Composite Stress Index is Classified as "Below Average"	5	
	Locality's Most Recent COLG Composite Stress Index is Classified as "Low"	0	
	<i>Subtotal</i>		12
<b>Potential Bonus Points for Towns or Cities</b>		<i>(4 points maximum)</i>	
	Recent (Last 5 Years) Significant User Rate Increases	2	
	Recent (Last 5 Years) Tax Rate Increase for Capital Improvements	2	
	Recent (Last 5 Years) Significant Loss of Industry or Tax Base and/or Loss of User Revenues	2	
	<i>Subtotal</i>		0
<b>Readiness to Proceed with Project</b>		<i>(8 points maximum)</i>	
	Plans and Specifications Completed and All Regulatory Permits Secured	8	
	Plans and Specifications Completed and Being Reviewed by Regulatory Agencies	6	
	Plans and Specifications Being Prepared for Project and Expected to be Complete within 4 Months	4	
	Plans and Specifications Being Prepared for Project	2	
	Preliminary Engineering Report for Project Completed	1	1
	<i>Subtotal</i>		1
<b>Potential Project Total Score (100 Points Maximum):</b>			<b>37</b>

APPENDIX J

DECENTRALIZED PROJECTS

<b>Potential Project: Buchanan - Hurley</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
<i>Subtotal</i>			30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
<i>Subtotal</i>			20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
<i>Subtotal</i>			0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	10
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
<i>Subtotal</i>			10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
<i>Subtotal</i>			10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
<i>Subtotal</i>			3
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>73</b>



<b>Potential Project: Tazewell - Hillcrest</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	5
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		5
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	5
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>73</b>

<b>Potential Project: Russell - Carbo</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		6
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>69</b>

<b>Potential Project: Lee - Stone Creek</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		6
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>69</b>



<b>Potential Project: Russell - Old Castlewood</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	5
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		5
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	15
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>67</b>

<b>Potential Project: Dickenson - McClure/Stratton</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	5
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		5
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	10
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>65</b>

<b>Potential Project: Dickenson - Nora</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	5
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		5
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	10
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>65</b>



<b>Potential Project: Wise - Honey Branch</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	10
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>65</b>

<b>Potential Project: Buchanan - Greenbrier</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	10
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>63</b>

<b>Potential Project: Wise - Dunbar</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	25
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		25
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	5
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		5
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	0
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>61</b>



<b>Potential Project: Smyth - St. Clairs Creek</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	0
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>61</b>

<b>Potential Project: Russell - Rosedale</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		15
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>60</b>

<b>Potential Project: Wise - Russell Creek</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	10
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>59</b>



<b>Potential Project: Lee - Keokee</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	15
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	10
	1.5 % - 2.0 % of Median Household Income	8	10
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		10
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>58</b>

<b>Potential Project: Scott - Natural Tunnel Parkway</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
<i>Subtotal</i>			30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
<i>Subtotal</i>			10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
<i>Subtotal</i>			0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	5
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
<i>Subtotal</i>			5
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
<i>Subtotal</i>			8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	5
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
<i>Subtotal</i>			5
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>58</b>

<b>Potential Project: Russell - Clinchfield</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	15
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		6
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>56</b>



<b>Potential Project: Wise - Little League Road</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	15
	<i>Subtotal</i>		15
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	10
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	5
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		5
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	10
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	
	1.5 % - 2.0 % of Median Household Income	8	8
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	2
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	3
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		5
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>53</b>

<b>Potential Project: Tazewell - St. Clair Heights Subdivision</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	15
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>52</b>

<b>Potential Project: Tazewell - Ebenezer Subdivision</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	15
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	15
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		15
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>52</b>



<b>Potential Project: Wythe - Ivanhoe</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	0
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	8
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		8
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>52</b>

<b>Potential Project: Washington - Clinchburg</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	10
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		10
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
		<i>Subtotal</i>	5
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>50</b>

<b>Potential Project: Scott - Spring Valley Subdivision</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	0
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		4
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>49</b>



<b>Potential Project: Wythe - Speedwell</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	20
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		20
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	20
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		20
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	0
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	3
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		3
		<b>Potential Project Total Score (100 Point Maximum):</b>	<b>48</b>

<b>Potential Project: Wythe - Crockett</b>			
<b>New Decentralized Collection &amp; Treatment System Type Project</b>			
<b>Inputs</b>	<b>Criteria</b>	<b>Score</b>	<b>Points</b>
<b>Project Outcomes, Health Hazards, &amp; Water Quality Problems</b>		<i>(30 points maximum)</i>	
	Addresses a Severe or Urgent Public Health Hazard as Declared by Va Dept. of Health	30	30
	Eliminates Failing Septic Systems or Straight Pipes in Watershed of a Listed 303(d) Impaired Water	25	
	Eliminates Failing Septic Systems or Straight Pipes in a Water Not Listed as 303(d) Impaired or Threatened	20	
	Project Consolidates One or More Permitted Discharging Systems into a Decentralized System	15	
	<i>Subtotal</i>		30
<b>Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)</b>		<i>(20 points maximum)</i>	
	< \$20,000 per Equivalent Residential Connection	20	10
	\$20,000 - \$30,000 per Equivalent Residential Connection	15	
	\$30,000 - \$45,000 per Equivalent Residential Connection	10	
	> \$45,000 per Equivalent Residential Connection	5	
	<i>Subtotal</i>		10
<b>Community Involvement &amp; Willingness to Participate</b>		<i>(15 points maximum)</i>	
	Watershed Group Activities (Water Quality Monitoring, Water Surveys, User Agreements)	10	0
	Citizen Initiatives (Community Meetings, Petitions to Utility Providers)	5	
	Both Water Quality Activities & Citizen Initiatives	15	
	<i>Subtotal</i>		0
<b>Responsible Management Entity Considerations for Ownership and Operation</b>		<i>(15 points maximum)</i>	
	Existing Public Utility Provider Willing to Become the Responsible Management Entity (RME)	15	0
	Existing Citizen Group or Private Party Willing to Become the Responsible Management Entity (RME)	5	
	RME's Has Prior Experience in Owning & Operating > 4 Decentralized Wastewater Systems	10	
	RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems	5	
	<i>Subtotal</i>		0
<b>Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income</b>		<i>(10 points maximum)</i>	
	> 2.0 % of Median Household Income	10	5
	1.5 % - 2.0 % of Median Household Income	8	
	1.0 % - 1.5 % of Median Household Income	5	
	0.75 % - 1.0 % of Median Household Income	2	
	<i>Subtotal</i>		5
<b>Environmental Justice - EPA EJSscreen Report for Project Area</b>		<i>(10 points maximum)</i>	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes > 70	5	2
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 60 -70	4	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 50 -60	3	
	EJSscreen Composite State Percentile for 12 Pollution & Source Indexes in Range of 30 - 50	2	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators > 70	5	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 60 - 70	4	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 50 - 60	3	
	EJSscreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50	2	
	<i>Subtotal</i>		2
<b>Potential Project Total Score (100 Point Maximum):</b>			<b>47</b>