# SOUTHWEST VIRGINIA
# COMPREHENSIVE REGIONAL WASTEWATER STUDY

**Funding provided by:**

Virginia Department of Environmental Quality

**Prepared for:**

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**Prepared by:**

**FEBRUARY 2023**

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**Seal and Signature Page**


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**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 |
| **Totals** | **58,964** | **29,352,786** | **15,552,384** | **44.5%** | **160** |

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 |
| **Average** | **$40.34** | **$39,701** | **1.30** |

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 |
| **Totals** | **81** | **56.977** | **28.098** |

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 |
| **Totals** | **$1,232,116,772** | **$ 58,996,400** | **$ 381,348,971** |

## 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

| **Cumberland Plateau PDC** | **Total Population** | **Population Change 2010-2020** | **Population 65 years and older** | **Median Household Income** |
|---|---|---|---|---|
| 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 |
| **LENOWISCO PDC** | **Total Population** | **Population Change 2010-2020** | **Population 65 years and older** | **Median Household Income** |
| 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 |
| **Mount Rogers PDC** | **Total Population** | **Population Change 2010-2020** | **Population 65 years and older** | **Median Household Income** |
| 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 |
| | **Total Population** | **Population Change 2010-2020** | **Population 65 years and older** | **Median Household Income** |
| **State of Virginia** | **8,631,393** | **7.9%** | **16.5%** | **$76,398** |

### 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 EJScreen Mapping Tool (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

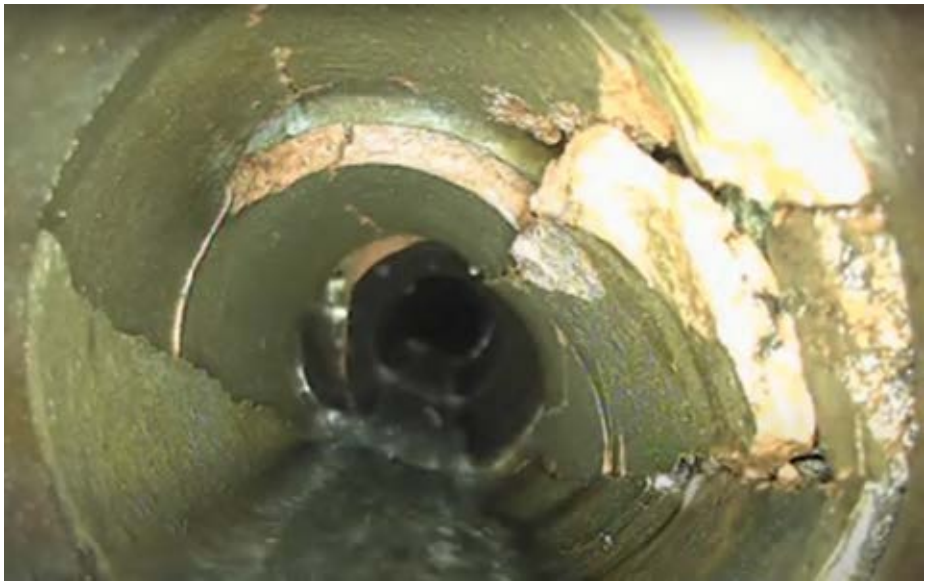


Figure 3.4.2 – Collapsed Section of Terracotta Sewer Line

### 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 |
| **Average** | **$40.34** | **$39,701** | **1.30** |

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), "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*

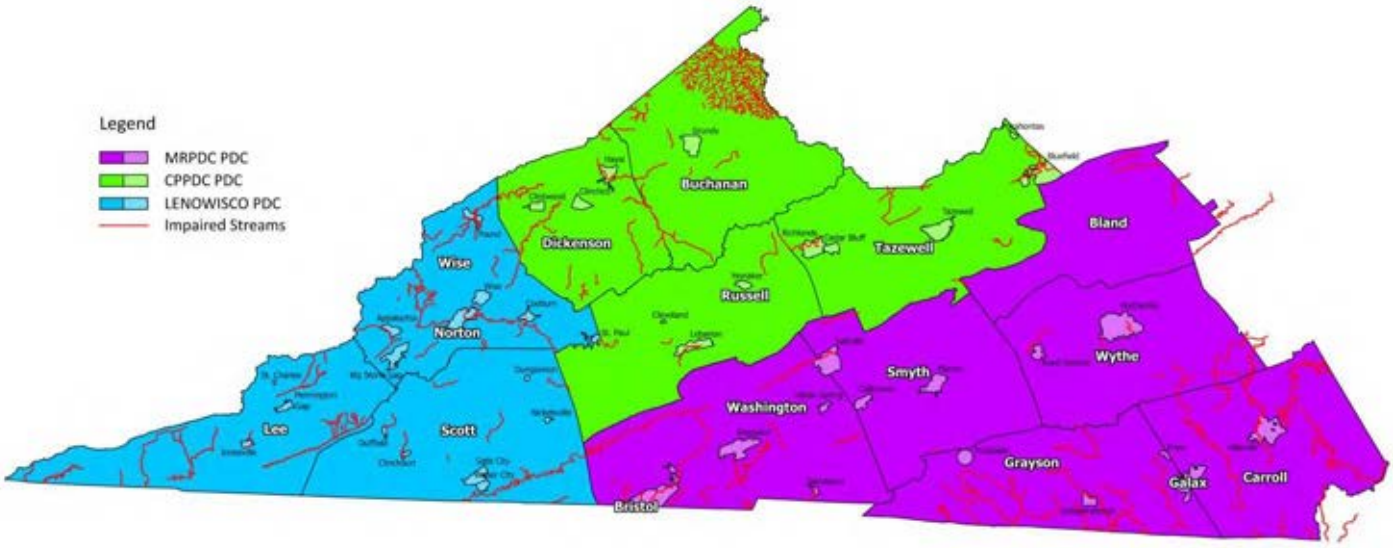
**Recreation Use:** *supports swimming, boating, and other water-contact recreational activities*

**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 |
| **Totals** | **58,964** | **29,352,786** | **15,552,384** | **44.5%** | **160** |

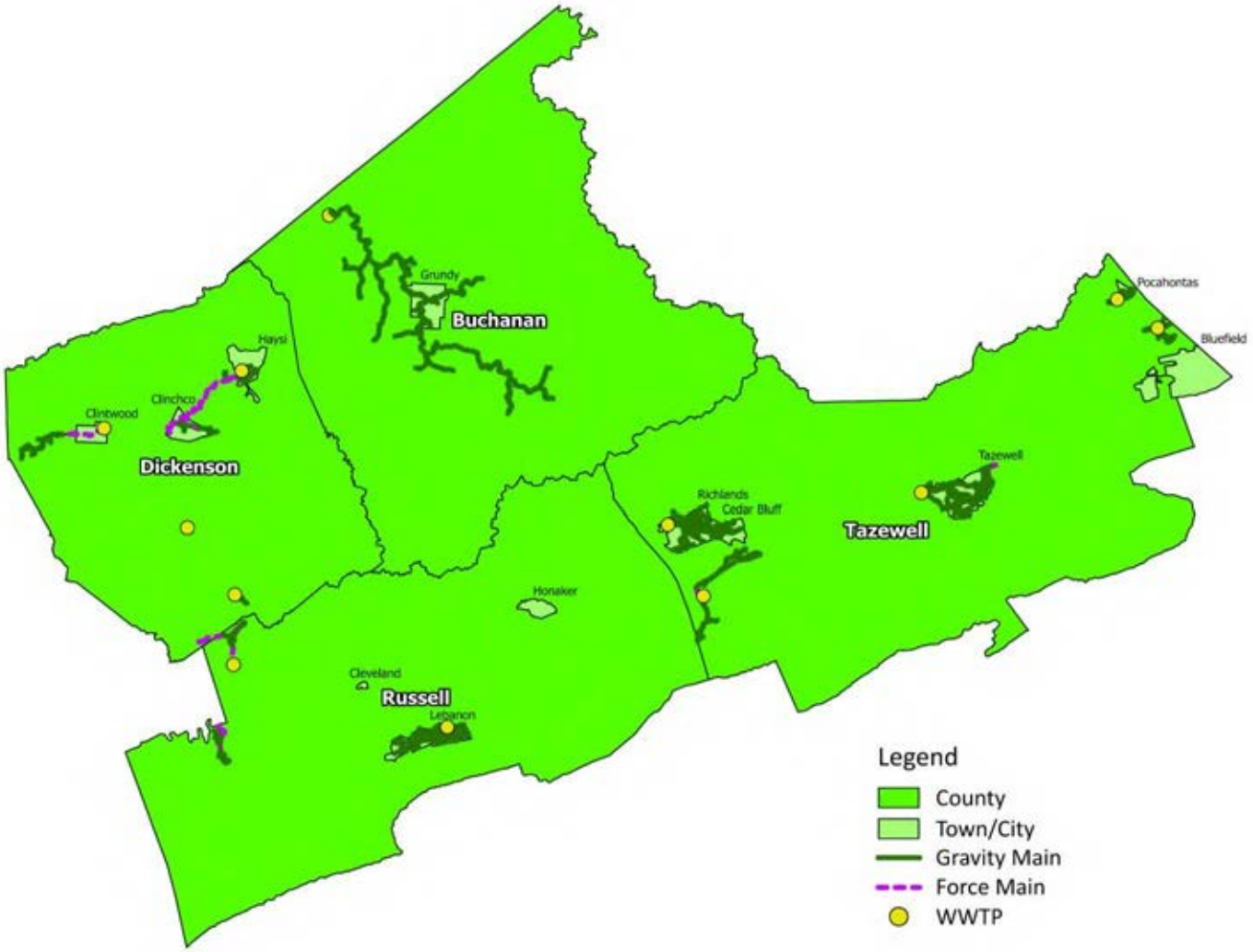
Collectively within the study area, there were found to be about seventy-one (71) existing collection systems operated by forty (40) public sewer service providers with a total of 58,964 customers. Within each of the three PDC's, sewer system accountability was found to be a widespread problem. Accountability 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**

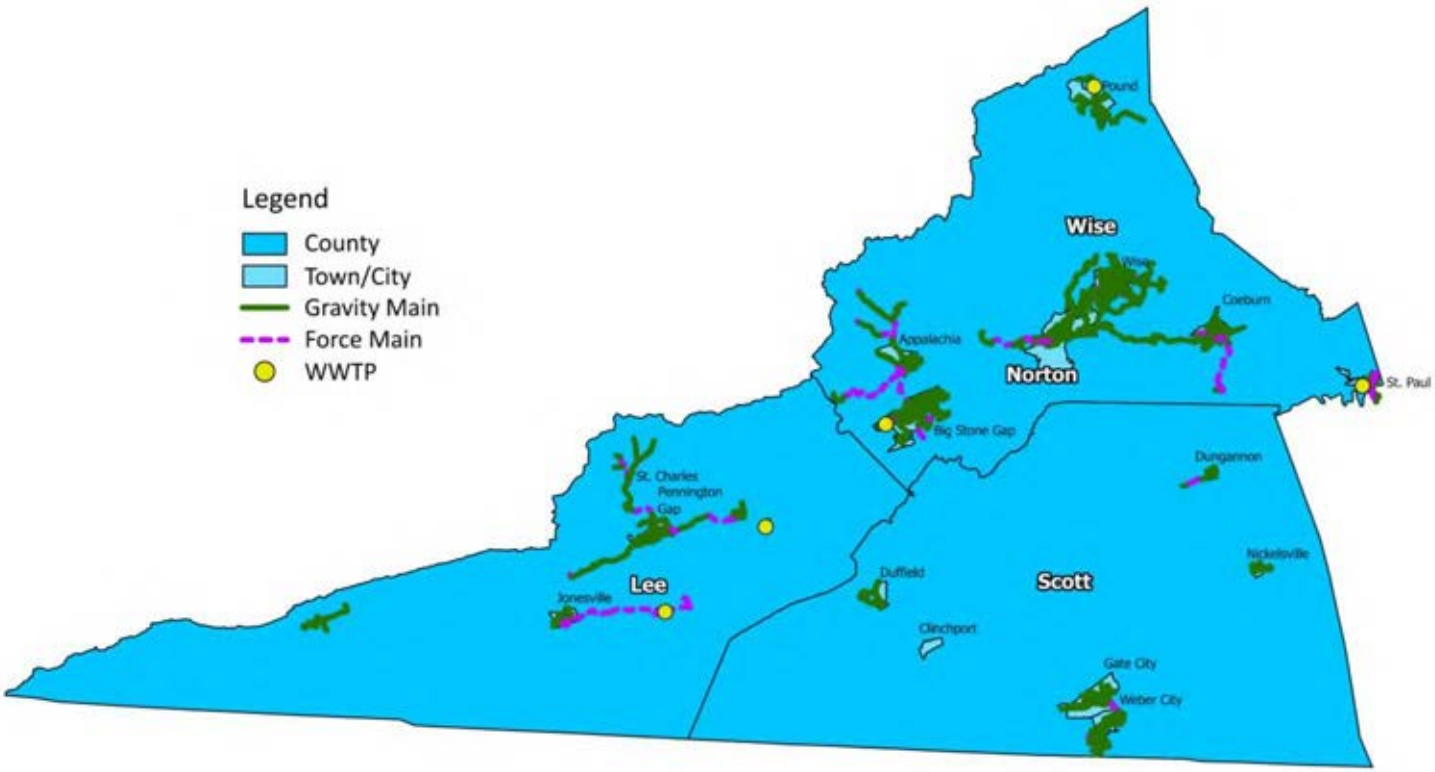
| | Primary Systems | | Secondary Systems | | | | |
|---|---|---|---|---|---|---|---|
| Sewer System | Number of Customers | Daily Gallons Treated, 2021 | Number of Customers | Daily Gallons Treated, 2021 | Daily Gallons Billed, 2021 | Percent Accountable | Overflows in 2021 |
| Buchanan County PSA - 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 |
| **Totals** | **10,613** | **6,352,047** | **0** | **0** | **1,695,213** | **26.7%** | **28** |



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**

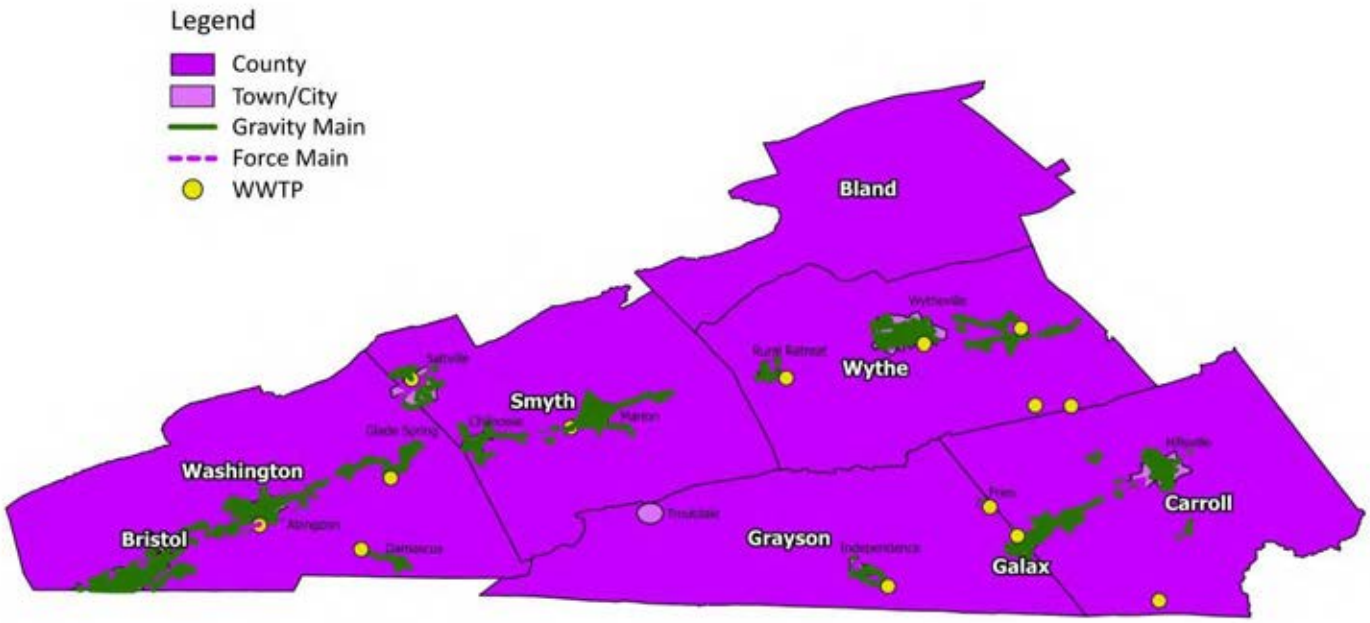
| | Primary Systems | | Secondary Systems | | | | |
|---|---|---|---|---|---|---|---|
| Sewer System | Number of Customers | Daily Gallons Treated, 2021 | Number of Customers | Daily Gallons Treated, 2021 | Daily Gallons Billed, 2021 | Percent Accountable | Overflows in 2021 |
| Town of Appalachia | | | 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 - Hamiliton 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 |
| **Totals** | **6,508** | **6,562,597** | **9,042** | **4,376,240** | **5,646,750** | **51.6%** | **35** |



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**

| | Primary Systems | | Secondary Systems | | | | |
|---|---|---|---|---|---|---|---|
| Sewer System | Number of Customers | Daily Gallons Treated, 2021 | Number of Customers | Daily Gallons Treated, 2021 | Daily Gallons Billed, 2021 | Percent Accountable | Overflows in 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 |
| **Totals** | **30,186** | **16,438,142** | **2,615** | **1,230,895** | **8,210,421** | **46.5%** | **97** |



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 |
| **Totals** | **81** | **56.977** | **28.098** |

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**

| Facility | Permit No. | Permitted Flow Capacity, MGD | Average Daily Flow for 2021, MGD | Maximum Daily Flow for 2021, MGD | Highest 3-Consecutive Month Avg. Flow, MGD |
|---|---|---|---|---|---|
| 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 | 2.000 | 0.893 | 1.809 | 1.514 |
| ***Combined Systems Totals, MGD*** | | ***19.946*** | ***10.297*** | ***19.567*** | ***15.624*** |

** 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**

| Facility | Permit No. | Permitted Flow Capacity, MGD | Yearly Average Flow, MGD | Yearly Maximum Flow, MGD | Highest 3-Consecutive Month Avg. Flow, MGD |
|---|---|---|---|---|---|
| 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 |
| ***Combined Systems Totals, MGD*** | | ***14.832*** | ***7.357*** | ***15.669*** | ***10.603*** |

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**

| Facility | Permit No. | Permitted Flow Capacity, MGD | Yearly Average Flow, MGD | Yearly Maximum Flow, MGD | Highest 3-Consecutive Month Avg. Flow, MGD |
|---|---|---|---|---|---|
| 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 | 4.000 | 2.070 | 3.152 | 3.066 |
| ***Combined Systems Totals, MGD*** | | ***22.199*** | ***10.444*** | ***18.304*** | ***14.562*** |

### 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 2022, 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).

- 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.

| Projects Completed from the 2005 Southwest Virginia Regional Wastewater Study | | |
|---|---|---|
| **County** | **PDC** | **Project** |
| 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 |

| Projects Partially Completed from the 2005 Southwest Virginia Regional Wastewater Study | | | |
|---|---|---|---|
| **County** | **PDC** | **Project** | **Status** |
| 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 Sstudy, 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).

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

**Overall Project Ranking - Centralized Projects Cumberland Plateau Planning District**

| County | Project Name | Health Hazards, & Water Quality Problems | Affordable/ Project Cost/ Connection | Regional Effort | Equiv. # of Residential Connections Served | Avg Sewer Bill as a % of Project Area's MHI | Environment. Justice - EPA EJScreen Report for Project Area | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| 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 (Cliffield 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 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 436,482,917** |

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:

**Overall Project Ranking - Existing System Upgrade Projects Cumberland Plateau Planning District**

| County | Project Name | Targeted Project Types & Outcomes | Environment. Concerns - Priority Watersheds | Enforcement / Compliance History | COLG Composite Fiscal Stress Index | Potential Bonus Points for Towns or Cities | Readiness to Proceed | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 140,068,456** |

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:

**Overall Project Ranking - Decentralized Projects - Cumberland Plateau Planning District**

| County | Project Name | Health Hazards, & Water Quality Problems | Affordable/ Project Cost/ Connection | Community Involvement & Willingness | Responsible Management Entity | Avg Sewer Bill as a % of Project Area's MHI | Environment. Justice - EPA EJScreen Report for Project Area | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 28,637,600** |

### 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:

**Overall Project Ranking - Centralized Projects LENOWISCO Planning District**

| County | Project Name | Health Hazards, & Water Quality Problems | Affordable/ Project Cost/ Connection | Regional Effort | Equiv. # of Residential Connections Served | Avg Sewer Bill as a % of Project Area's MHI | Environment. Justice - EPA EJScreen Report for Project Area | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 423,925,775** |

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:

**Overall Project Ranking - Existing System Upgrade Projects LENOWISCO Planning District**

| County | Project Name | Targeted Project Types & Outcomes | Environment. Concerns - Priority Watersheds | Enforcement / Compliance History | COLG Composite Fiscal Stress Index | Potential Bonus Points for Towns or Cities | Readiness to Proceed | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| 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 | Appalchia 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 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 104,542,800** |

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:

**Overall Project Ranking - Decentralized Projects - LENOWISCO Planning District**

| County | Project Name | Health Hazards, & Water Quality Problems | Affordable/ Project Cost/ Connection | Community Involvement & Willingness | Responsible Management Entity | Avg Sewer Bill as a % of Project Area's MHI | Environment. Justice - EPA EJScreen Report for Project Area | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 9,357,500** |

### 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:

**Overall Project Ranking - Centralized Projects Mount Rogers Planning District**

| County | Project Name | Health Hazards, & Water Quality Problems | Affordable/ Project Cost/ Connection | Regional Effort | Equiv. # of Residential Connections Served | Avg Sewer Bill as a % of Project Area's MHI | Environment. Justice - EPA EJScreen Report for Project Area | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| 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 | Cana 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 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 371,708,080** |

A total of thirty-two (32) potential Existing System Upgrade projects were identified within the Mount Rogers Planning District. Descriptions of these projects are provided in Appendix C. A summary table of the project ranking follows:

**Overall Project Ranking - Existing System Upgrades Projects Mount Rogers Planning District**

| County | Project Name | Targeted Project Types & Outcomes | Environment. Concerns - Priority Watersheds | Enforcement / Compliance History | COLG Composite Fiscal Stress Index | Potential Bonus Points for Towns or Cities | Readiness to Proceed | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| Bristol City | Beaver Creek Sewer Interceptor Rehabilitation | 33 | 15 | 2 | 17 | 4 | 8 | 79 | 9,532,000 |
| Bristol City | Beaver Creek Flow Equalization Basin | 33 | 15 | 2 | 17 | 4 | 8 | 79 | 7,294,000 |
| Bristol City | BC-1568 Sewer System Rehabilitation Project | 33 | 15 | 2 | 17 | 4 | 2 | 73 | 5,253,543 |
| Bristol City | BC-1301 Sewer System Rehabilitation Project | 33 | 15 | 2 | 17 | 4 | 0 | 71 | 2,867,800 |
| Bristol City | Beaver Creek Interceptor Rehabilitation Phase 2 | 33 | 15 | 2 | 17 | 4 | 0 | 71 | 15,000,000 |
| Bristol City | Little Creek Interceptor Improvements Project | 25 | 15 | 1 | 17 | 4 | 0 | 62 | 3,250,000 |
| Bristol City | Sinking Creek Rehabilitation Project | 16 | 15 | 1 | 17 | 4 | 4 | 57 | 2,867,800 |
| Bristol City | Gate City Highway Rehabilitation Project | 16 | 15 | 1 | 17 | 4 | 4 | 57 | 1,526,850 |
| Carroll | I-77 Exit 1 Sewer System Improvements | 25 | 10 | 2 | 12 | 0 | 1 | 50 | 2,632,033 |
| Smyth | Marion SSES Rehabilitation | 17 | 15 | 1 | 12 | 4 | 1 | 50 | 1,300,488 |
| Wythe | Rural Retreat SSES Rehabilitation | 17 | 15 | 1 | 12 | 4 | 1 | 50 | 430,224 |
| Wythe | Wytheville SSES Rehabilitation | 17 | 15 | 1 | 12 | 4 | 1 | 50 | 1,967,137 |
| Smyth | Staley Creek SSES Rehabilitation | 17 | 15 | 1 | 12 | 0 | 1 | 46 | 500,000 |
| Smyth | Saltville Phase 2 SSES Rehabilitation | 17 | 15 | 1 | 12 | 0 | 1 | 46 | 1,476,000 |
| Bland | Bastian SSES Rehabilitation | 17 | 15 | 1 | 12 | 0 | 1 | 46 | 810,000 |
| Galax City | Galax Collection System I/I Reductions | 8 | 15 | 1 | 17 | 4 | 0 | 45 | 10,875,000 |
| Washington | Abingdon Phase 1 Sewer System Improvements | 16 | 15 | 4 | 5 | 2 | 2 | 44 | 3,314,000 |
| Washington | Abingdon Phase 2 Sewer System Improvements | 16 | 15 | 4 | 5 | 2 | 2 | 44 | 9,502,000 |
| Smyth | Chilhowie System Wide Sewer Improvements | 8 | 15 | 4 | 12 | 4 | 1 | 44 | 3,200,000 |
| Washington | Abingdon - Walden Road Sewer Improvements | 8 | 15 | 4 | 5 | 2 | 8 | 42 | 2,663,000 |
| Washington | Abingdon Phase 3 Sewer System Improvements | 16 | 15 | 4 | 5 | 2 | 0 | 42 | 5,000,000 |
| Washington | Abingdon Phase 4 Sewer System Improvements | 16 | 15 | 4 | 5 | 2 | 0 | 42 | 5,000,000 |
| Washington | Abingdon Phase 5 Sewer System Improvements | 16 | 15 | 4 | 5 | 2 | 0 | 42 | 10,000,000 |
| Wythe | Fort Chiswell WWTP Expansion | 8 | 15 | 1 | 12 | 0 | 4 | 40 | 8,185,000 |
| Wythe | Rural Retreat WWTP Expansion | 8 | 15 | 1 | 12 | 4 | 0 | 40 | 2,500,000 |
| Smyth | Saltville WWTP Improvements | 8 | 15 | 1 | 12 | 4 | 0 | 40 | 2,500,000 |
| Grayson | Independence Sewer Line CIPP & Manhole Rehab | 8 | 15 | 1 | 12 | 0 | 1 | 37 | 1,010,840 |
| Wythe | Max Meadows SSES Rehabilitation | 8 | 15 | 1 | 12 | 0 | 1 | 37 | 1,209,000 |
| Washington | Abingdon - Wolf Creek WRF Improvements | 8 | 15 | 4 | 5 | 2 | 0 | 34 | 5,000,000 |
| Washington | Abingdon - Sewer Lift Station Improvements | 8 | 15 | 4 | 5 | 2 | 0 | 34 | 3,000,000 |
| Grayson | Fries Wastewater Treatment Plant Improvements | 8 | 10 | 1 | 12 | 2 | 1 | 34 | 1,471,000 |
| Carroll | Town of Hillsville - SSES | 8 | 0 | 1 | 12 | 4 | 1 | 26 | 5,600,000 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 136,737,715** |

Within the Mount Rogers Planning District, there were five (5) potential decentralized community wastewater projects identified; three (3) of which are uncompleted from the 2005 Study and two (2) new projects. A summary table of the project ranking follows:

**Overall Project Ranking - Decentralized Projects - Mount Rogers Planning District**

| County | Project Name | Health Hazards, & Water Quality Problems | Affordable/ Project Cost/ Connection | Community Involvement & Willingness | Responsible Management Entity | Avg Sewer Bill as a % of Project Area's MHI | Environment. Justice - EPA EJScreen Report for Project Area | Total Points | Estimated Project Cost |
|---|---|---|---|---|---|---|---|---|---|
| Smyth | St. Clairs Creek | 30 | 20 | 0 | 0 | 8 | 3 | **61** | 7,067,600 |
| Wythe | Ivanhoe | 30 | 10 | 0 | 0 | 8 | 4 | **52** | 6,812,800 |
| Washington | Clinchburg | 20 | 10 | 0 | 10 | 5 | 5 | **50** | 1,884,800 |
| Wythe | Speedwell | 20 | 20 | 0 | 0 | 5 | 3 | **48** | 3,364,700 |
| Wythe | Crockett | 30 | 10 | 0 | 0 | 5 | 2 | **47** | 1,871,400 |
| | | | | | | | | | |
| | | | | | | | | **Total** | **$ 21,001,300** |

### 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 EJScreen Report for Project Area (10 points maximum)***The USEPA's EJScreen 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 EJScreen Report for Project Area (10 points maximum)***

The EJScreen 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 NOVs = 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 |
| **Totals** | **$1,232,116,772** | **$ 58,996,400** | **$ 381,348,971** |

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).

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. Th e 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:

| | |
|---|---|
| 1,205 | Residential Customers |
| 38 | Commercial Customers |
| 155 | Industrial Customers |
| 0 | Other Municipal Systems |
| **1,398** | **Total Number of Customers** |

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:

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

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 |
| **Total** | **$5,600,000** |

# 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:

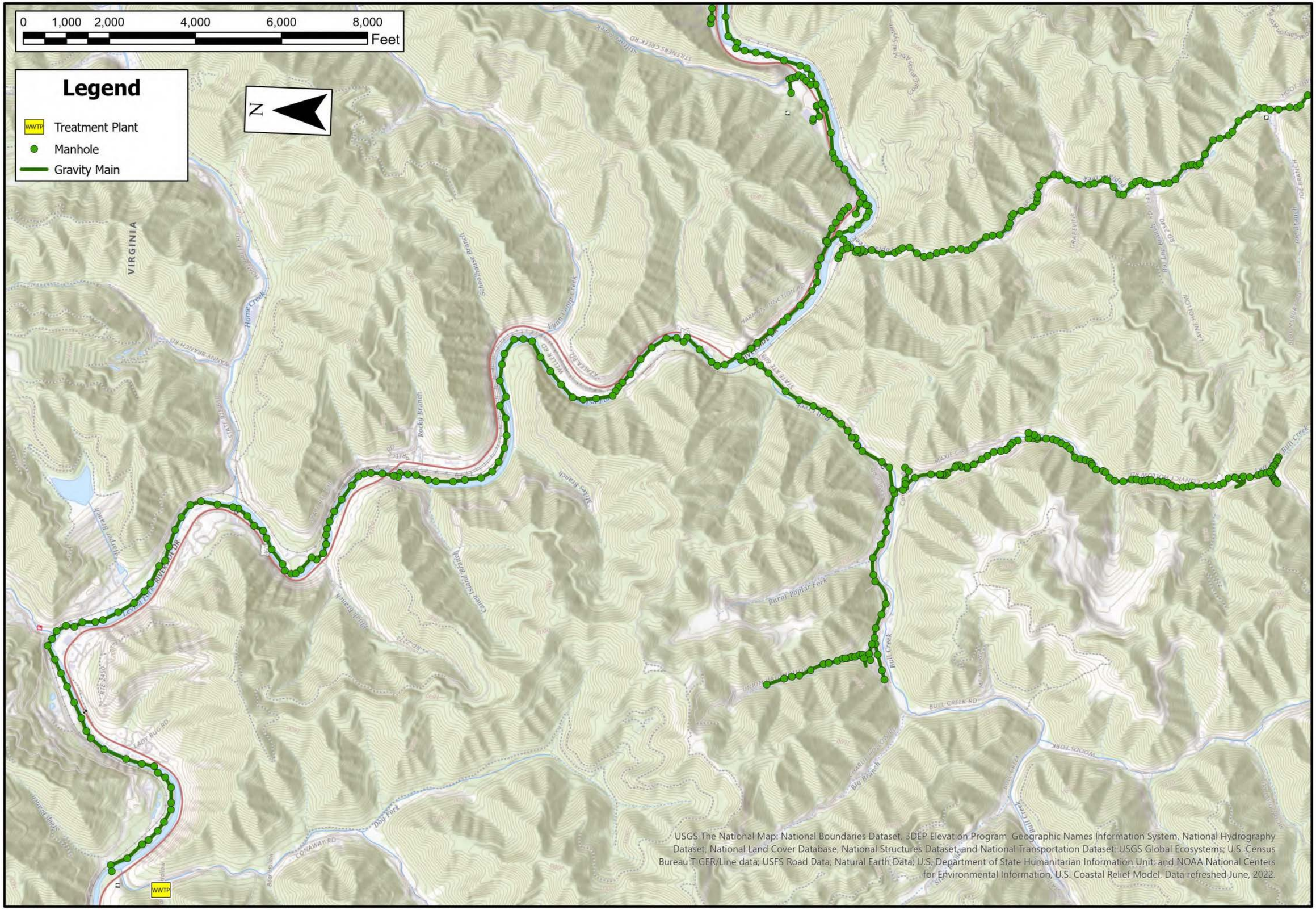
- Aged equipment,
- Aged pipes,
- Aged equipment and parts,
- High flows,
- Aging electrical issues.

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 |
| **Total** | **$7,850,000** |

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SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

BUCHANAN COUNTY PUBLIC SERVICE AUTHORITY

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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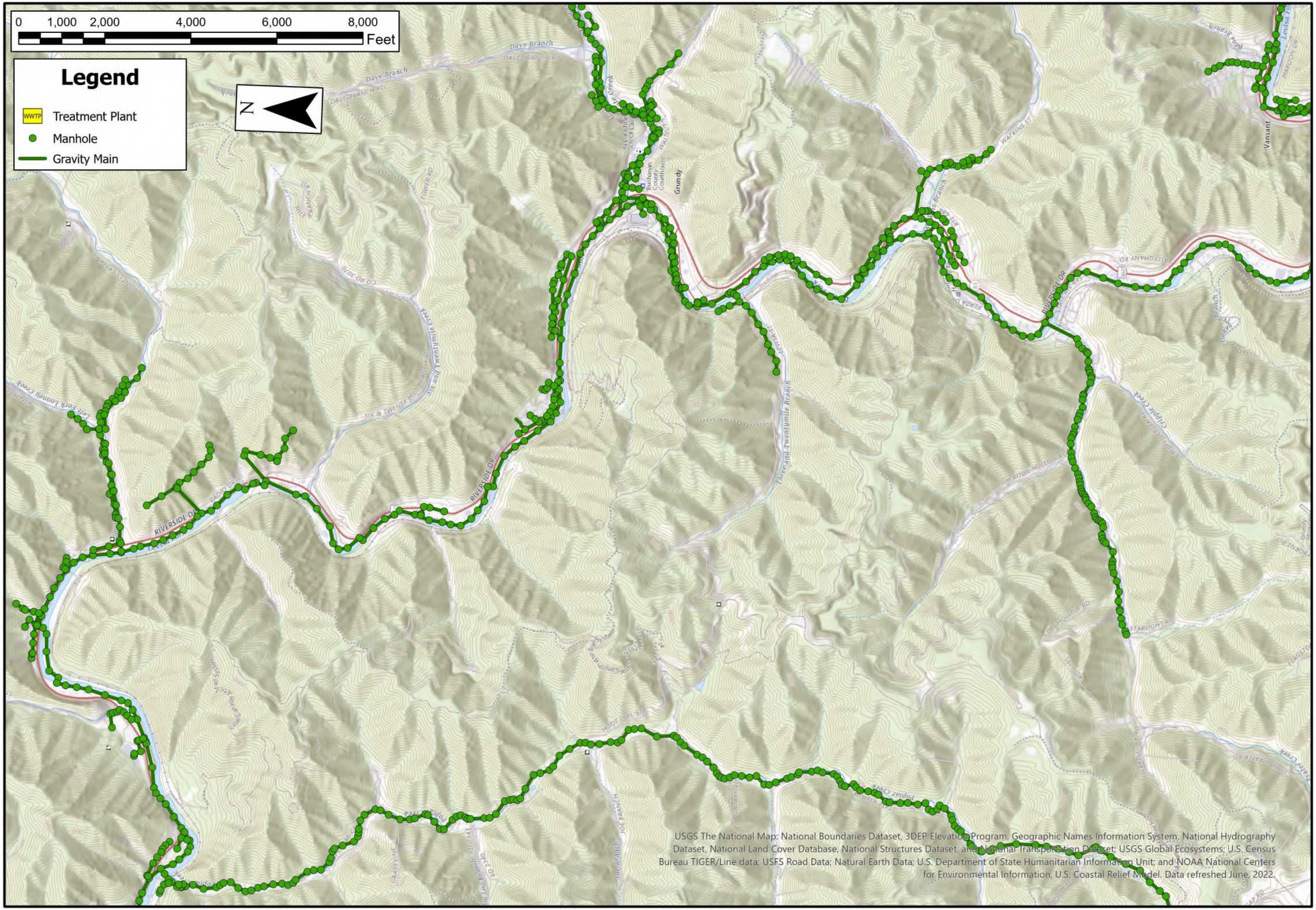


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SEWER STUDY 2022

BUCHANAN COUNTY
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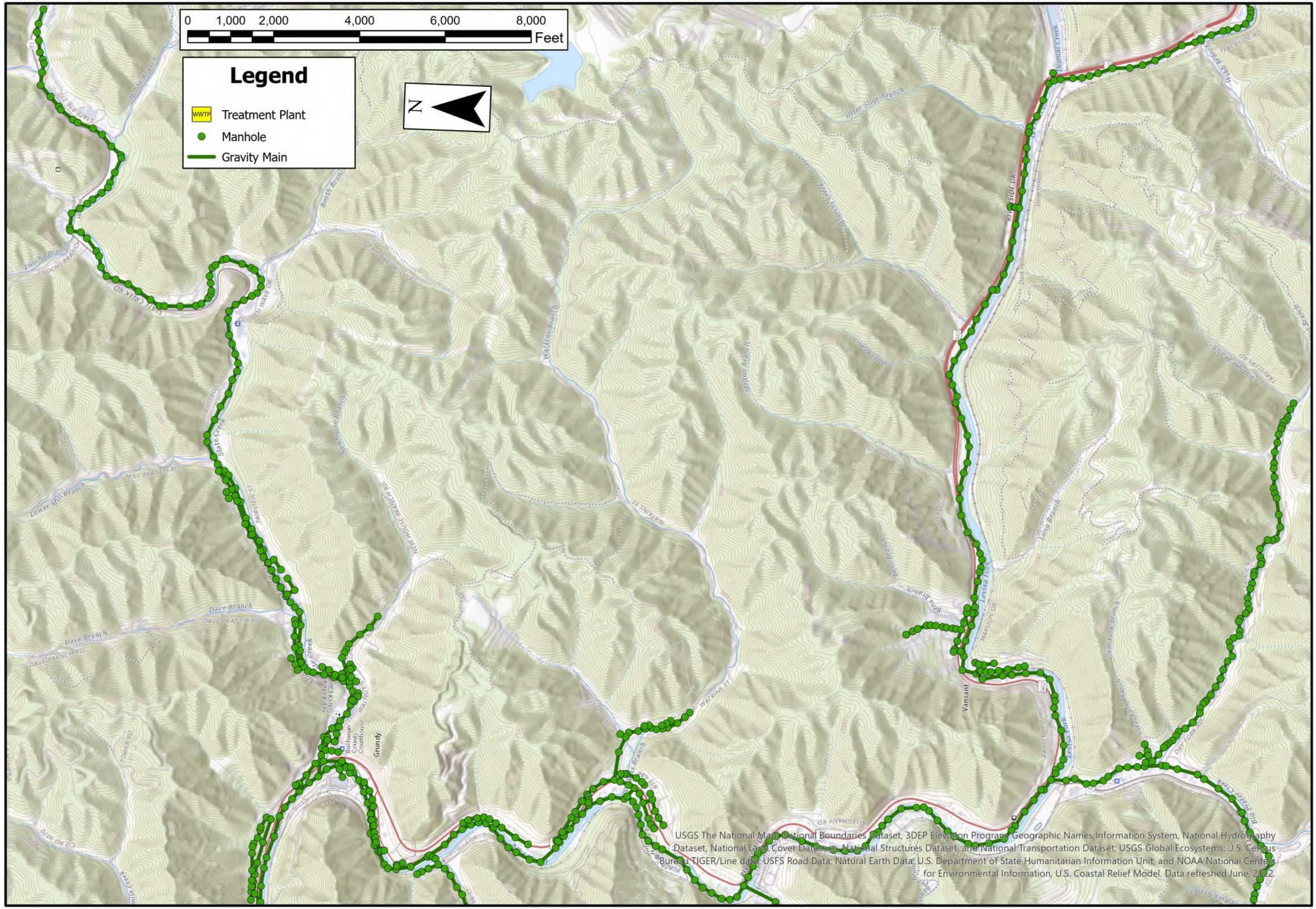


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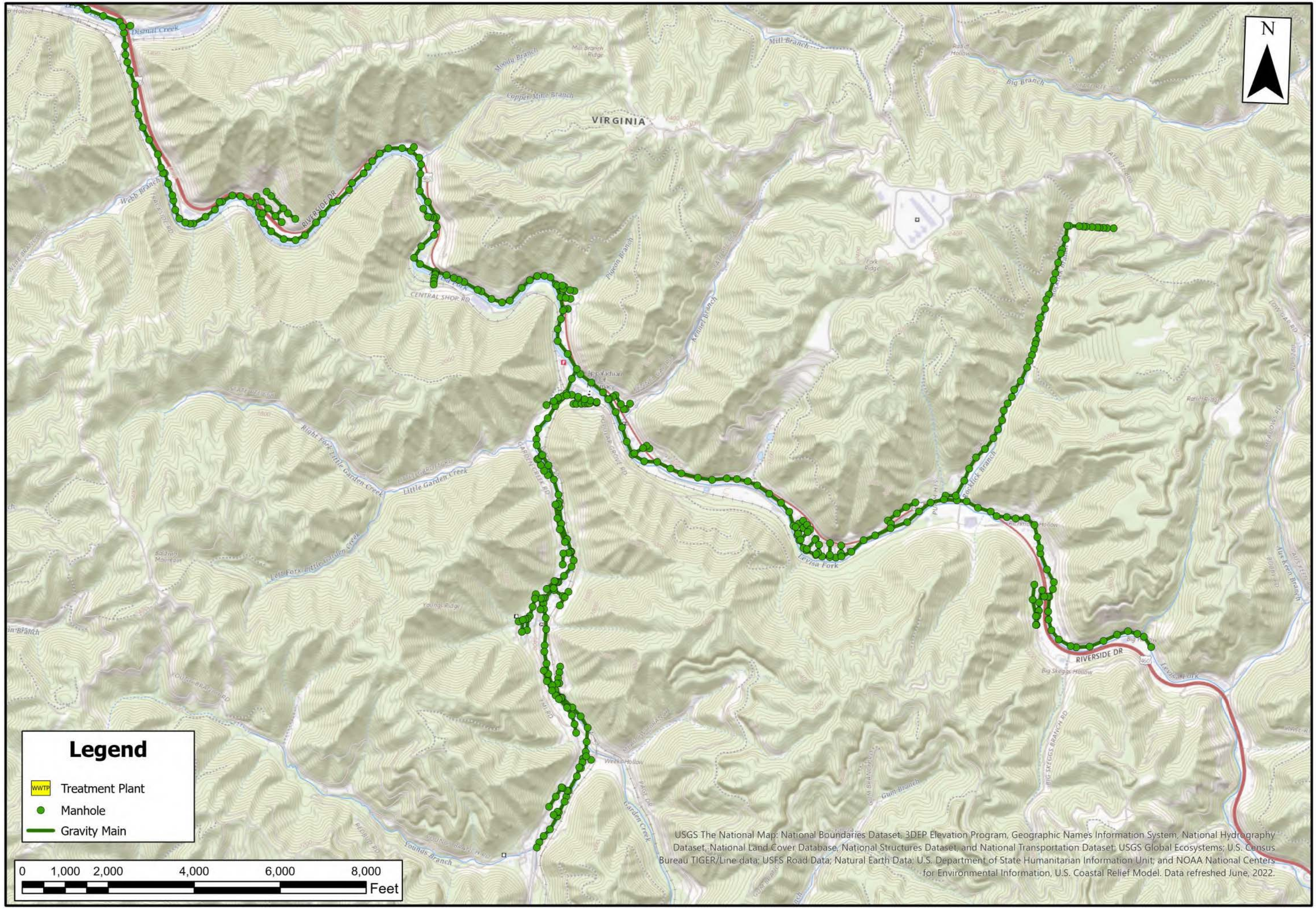


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COMPREHENSIVE REGIONAL
SEWER STUDY 2022

BUCHANAN COUNTY
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AUTHORITY

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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:

| | |
|---|---|
| 781 | Residential Customers |
| 131 | Commercial Customers |
| 1 | Other Municipal Systems |
| **913** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **6,013,358** | **3,553,800** | **59%** |
| **Daily Average** | **197,699** | **116,837** | **59%** |
| **Avg / Customer** | **123** | **126** | |

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.

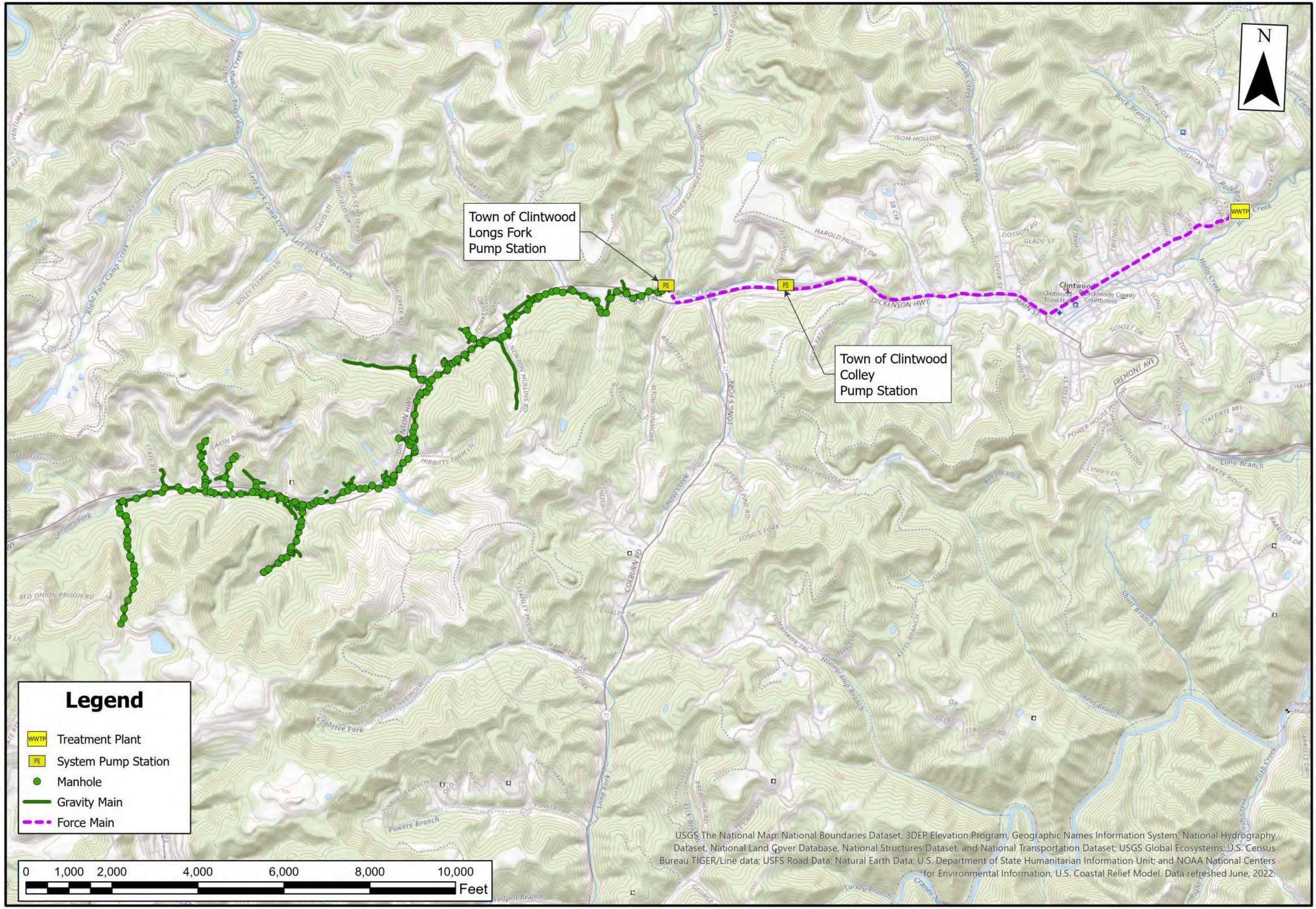
Sewer Rate Structure

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

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SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

DICKENSON COUNTY
PUBLIC SERVICE
AUTHORITY -
GEORGES FORK

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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# DICKENSON COUNTY PUBLIC SERVICE AUTHORITY HAYSI (VA0067571)

**DICKENSON COUNTY PUBLIC SERVICE AUTHROITY**

*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.

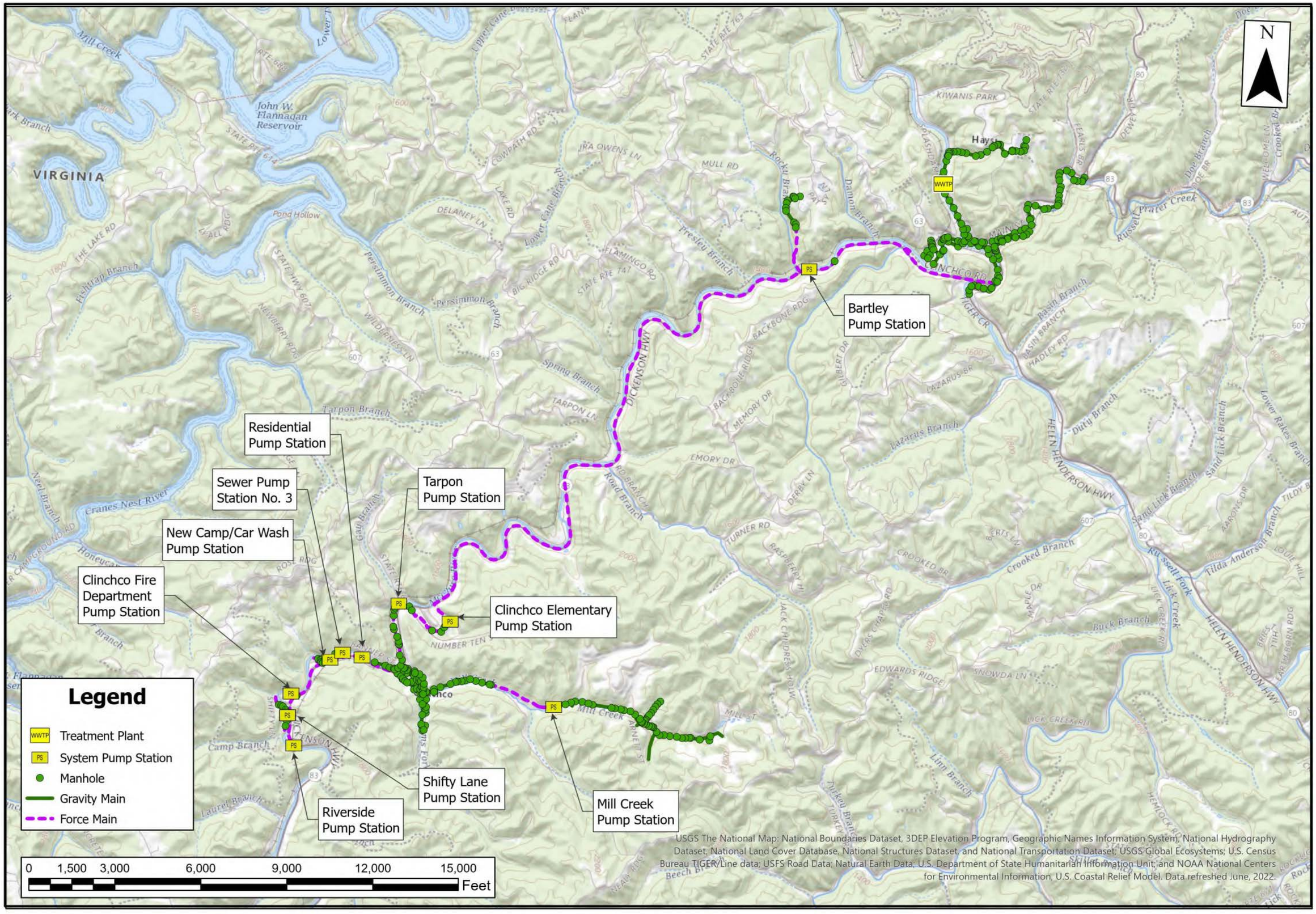
Flow Characteristics – The treatment facility receives sewage from the Dickenson County Haysi, Clinchco, and Centennial Height collection system(s). The facility does receive and treat septage. The permitted capacity of the facility is 0.1 MGD. The average daily flow treated at the facility during calendar 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

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SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

DICKENSON COUNTY
PUBLIC SERVICE
AUTHORITY -
CLINCHCO / HAYSI

DEQ
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# DICKENSON COUNTY PUBLIC SERVICE AUTHORITY TRAMMEL

**DICKENSON COUNTY PUBLIC SERVICE AUTHROITY**

*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


THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

DICKENSON COUNTY PUBLIC SERVICE AUTHORITY - NORA

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

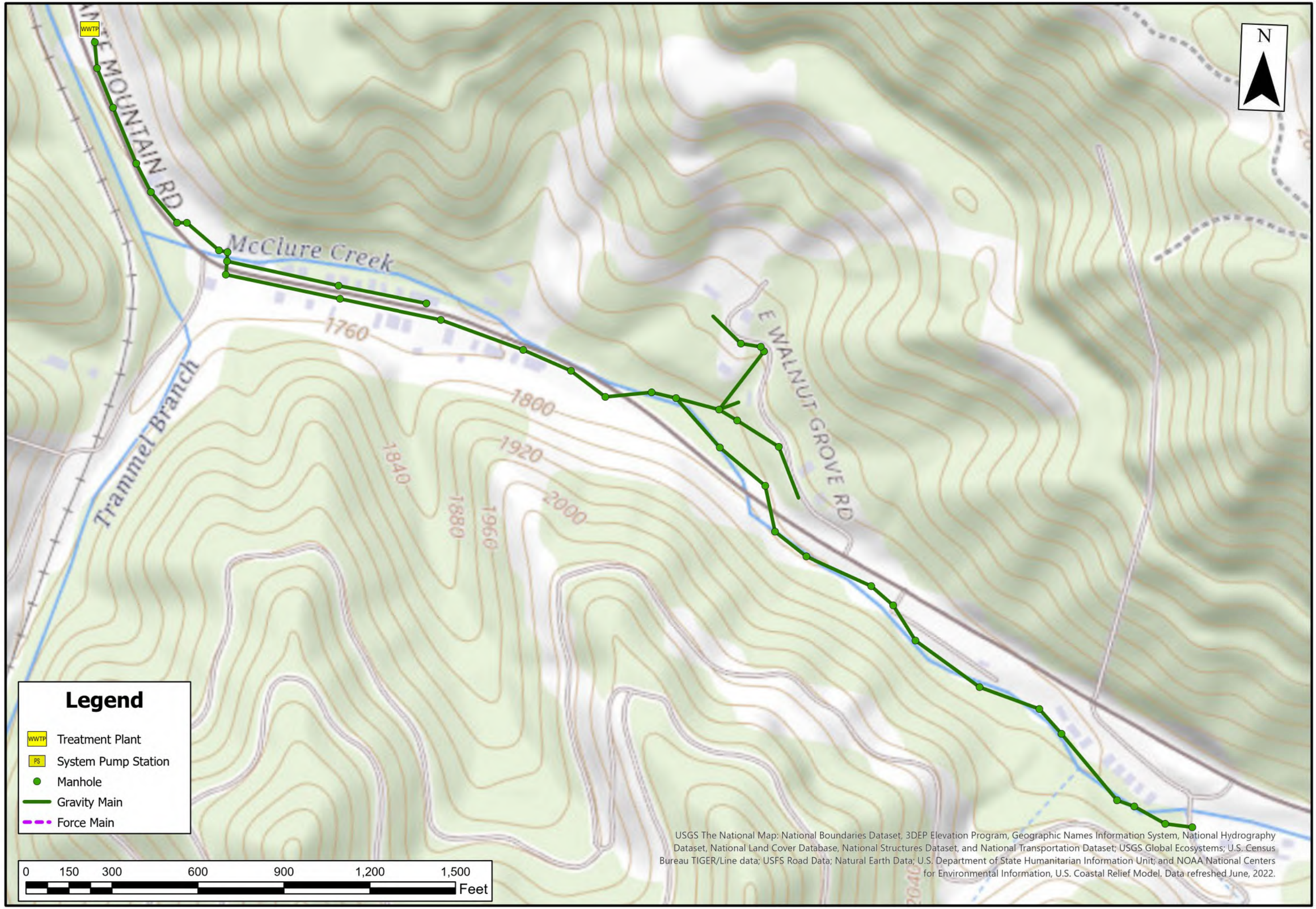
DATE: xx/xx/xxxx

SHEET:

SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx




THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

DICKENSON COUNTY PUBLIC SERVICE AUTHORITY - TRAMMEL

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:

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PROJECT NO. xxxx

# 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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **3,436,333** | **3,986,333** | **116%** |
| **Daily Average** | **112,975** | **131,074** | **116%** |
| **Avg / Customer** | **179** | **208** | |

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.

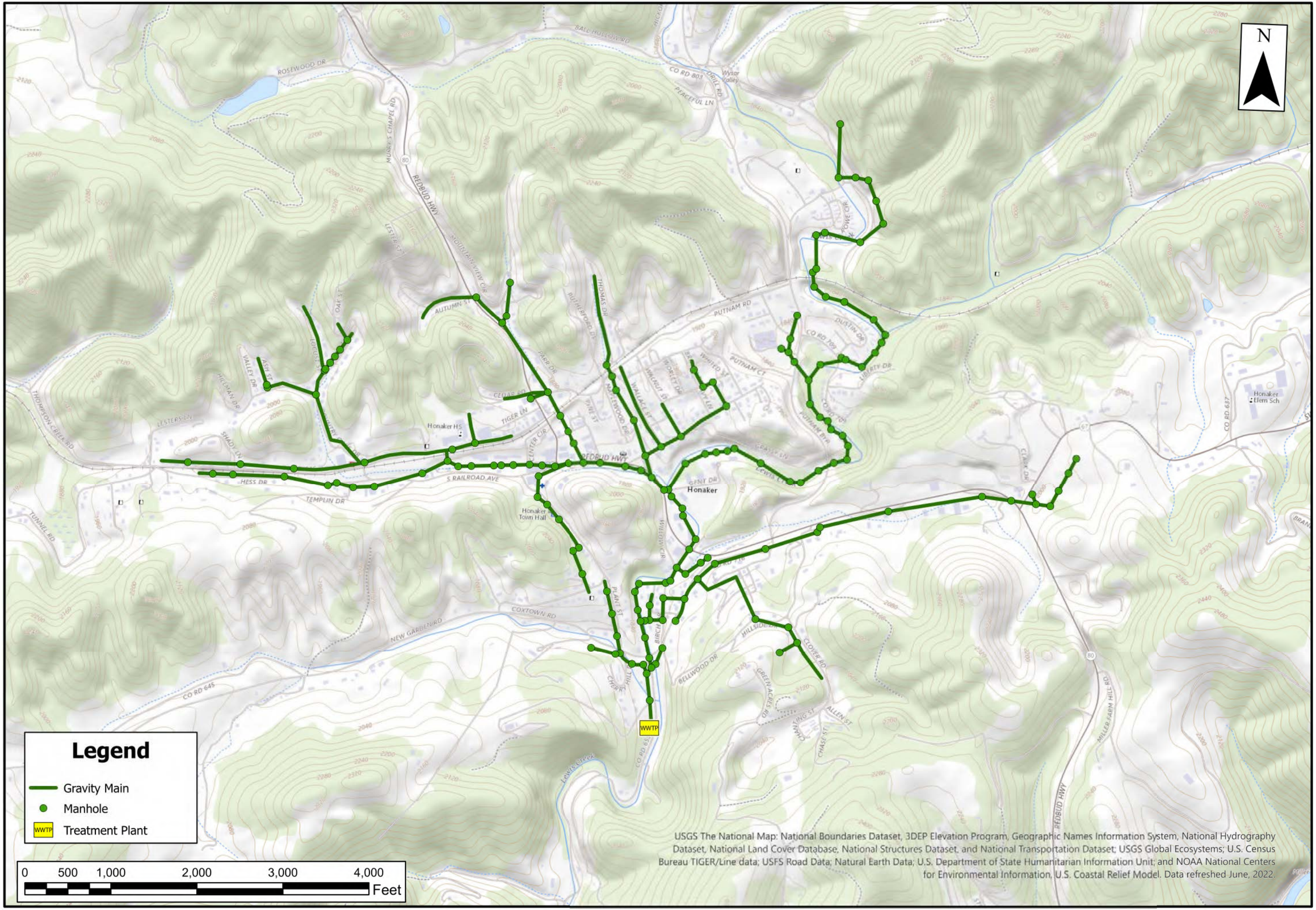
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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.




THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TOWN OF
HONAKER

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

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DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# TOWN OF LEBANON COLLECTION SYSTEM

**TOWN OF LEBANON, VIRIGNIA**

*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 int eh 1970's.

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

| | |
|---|---|
| 1406 | Residential Customers |
| 247 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **1653** | **Total Number of Customers** |

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 stations 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 form 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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **17,100,810** | **6,996,631** | **40.9%** |
| **Daily Average** | **570,027** | **233,221** | **40.9%** |
| **Avg / Customer** | **344.8** | **141** | |

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.

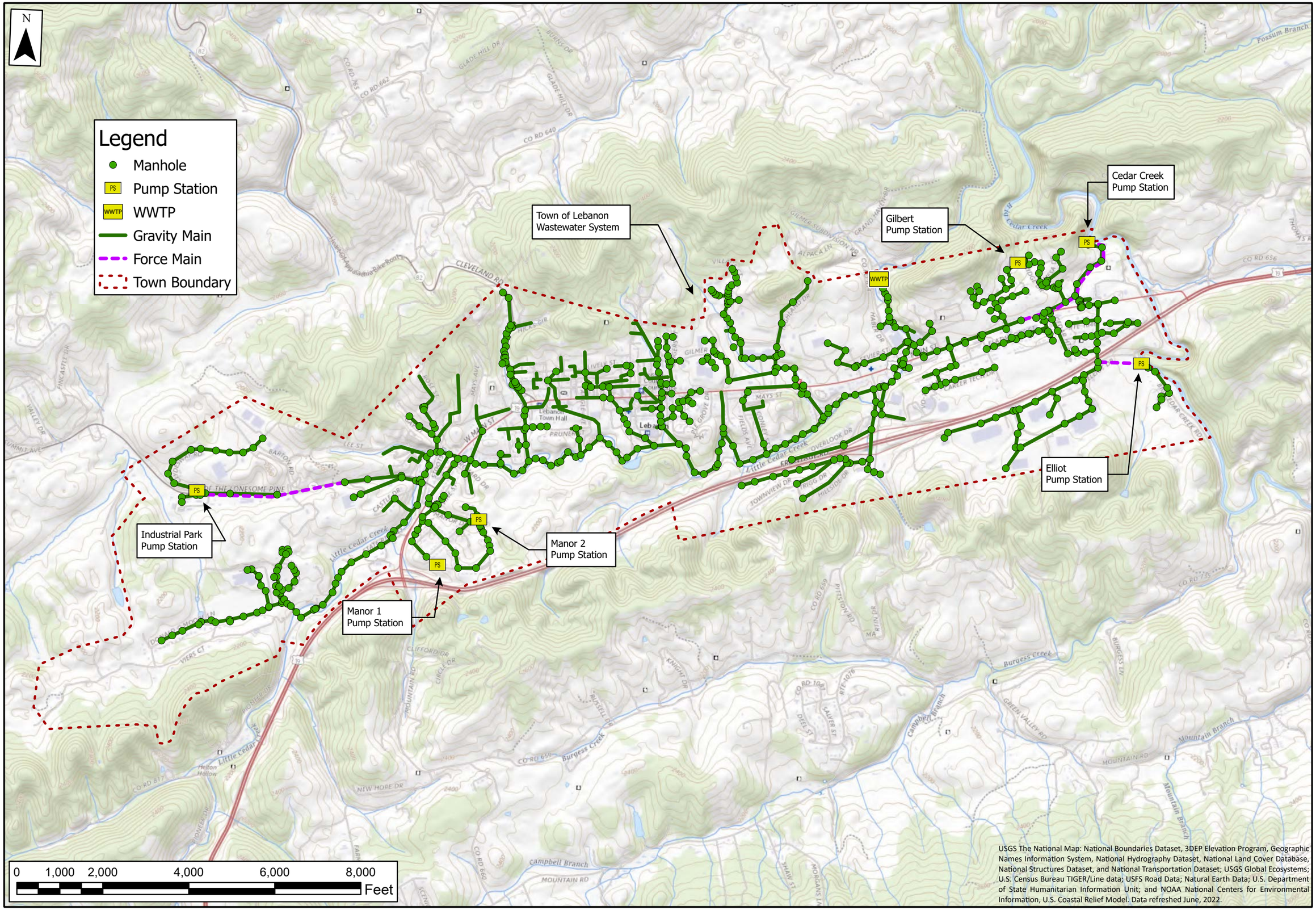
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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)




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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

TOWN OF LEBANON WASTEWATER SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR

CHECKED BY

PROJECT NO. 2248

# 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

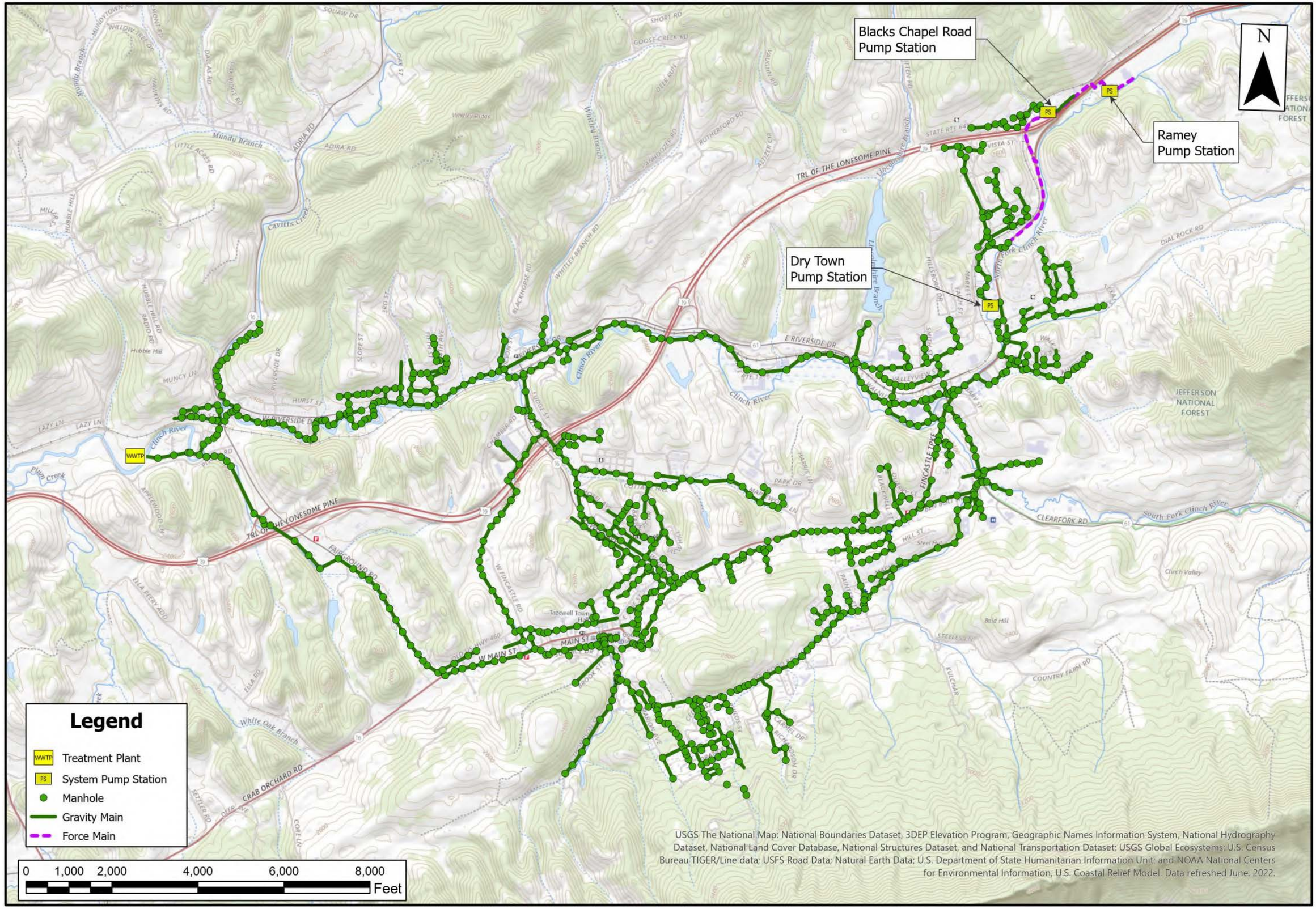
Facility Needs – Identified facility (identified in CIP, PER, etc..) needs are as follows:

- 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 |

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SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TOWN OF
TAZEWELL

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:

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PROJECT NO. xxxx

# 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.

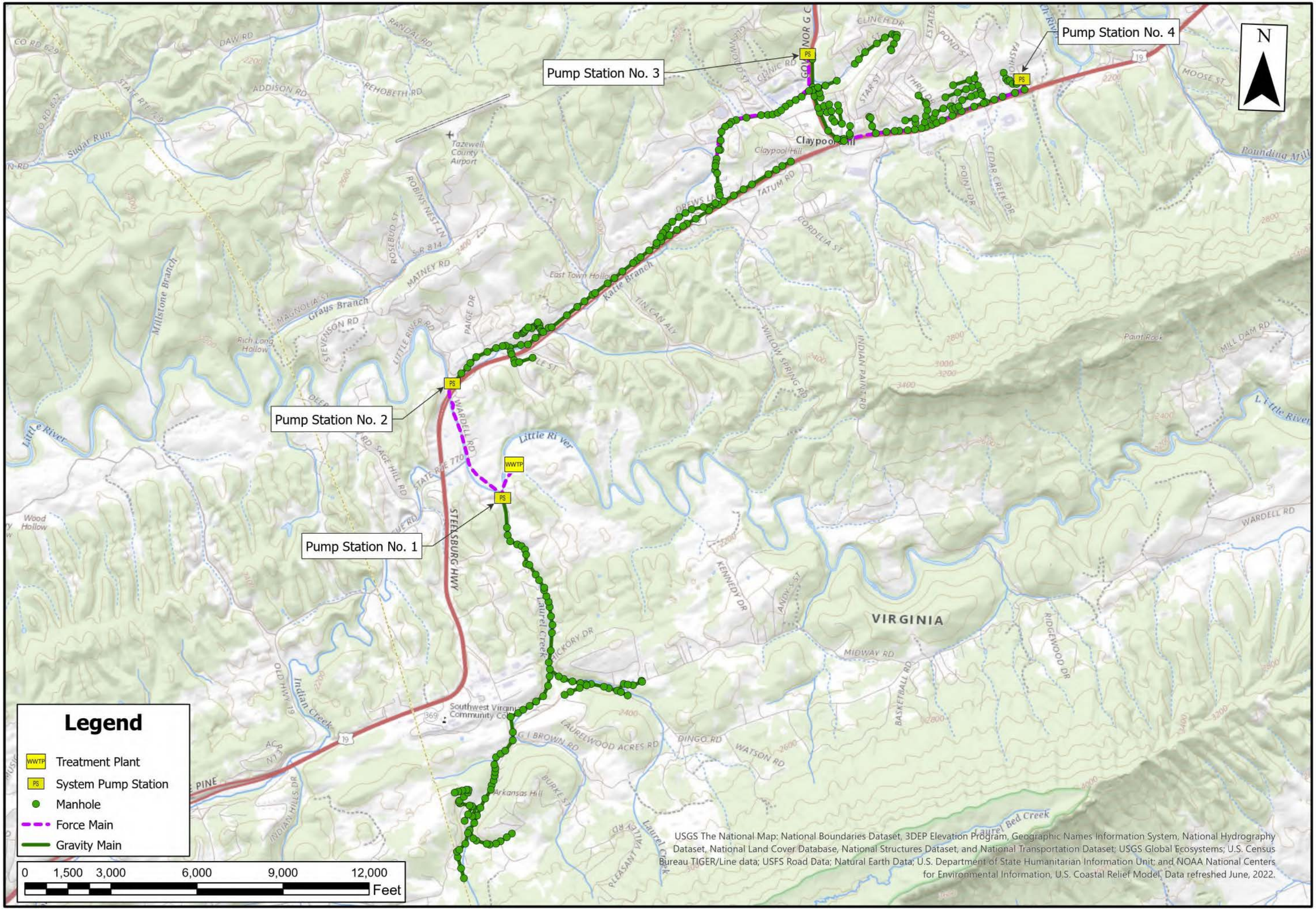
Permit Violations – The facility has had 0 permit violations over the past 2 years.

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.




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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY - CLAYPOOL HILL

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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:

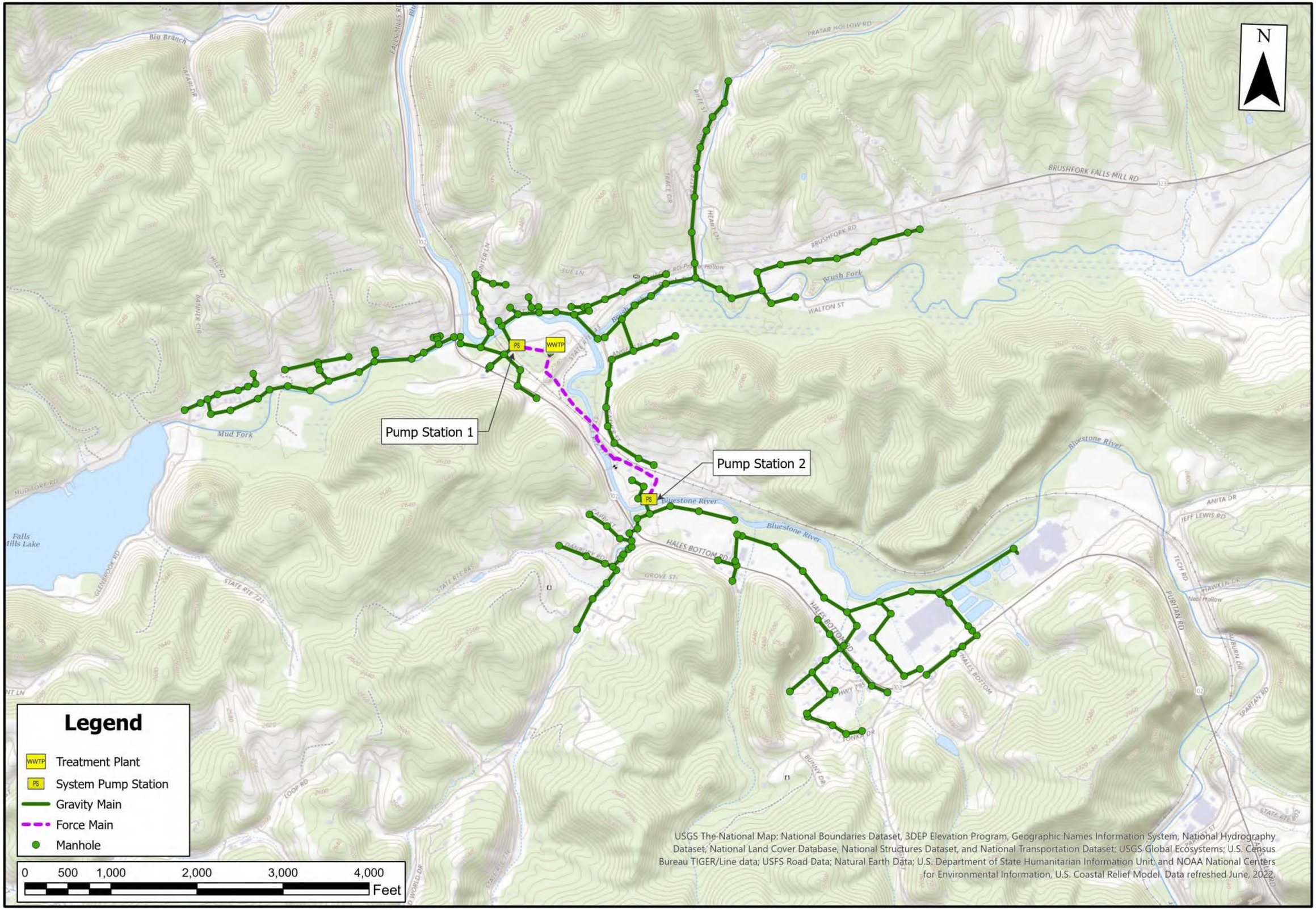
- Pump failure,
- Metal deterioration.

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 |




THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

TAZEWELL COUNTY PUBLIC SERVICE AUTHORITY - FALLS MILLS

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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.

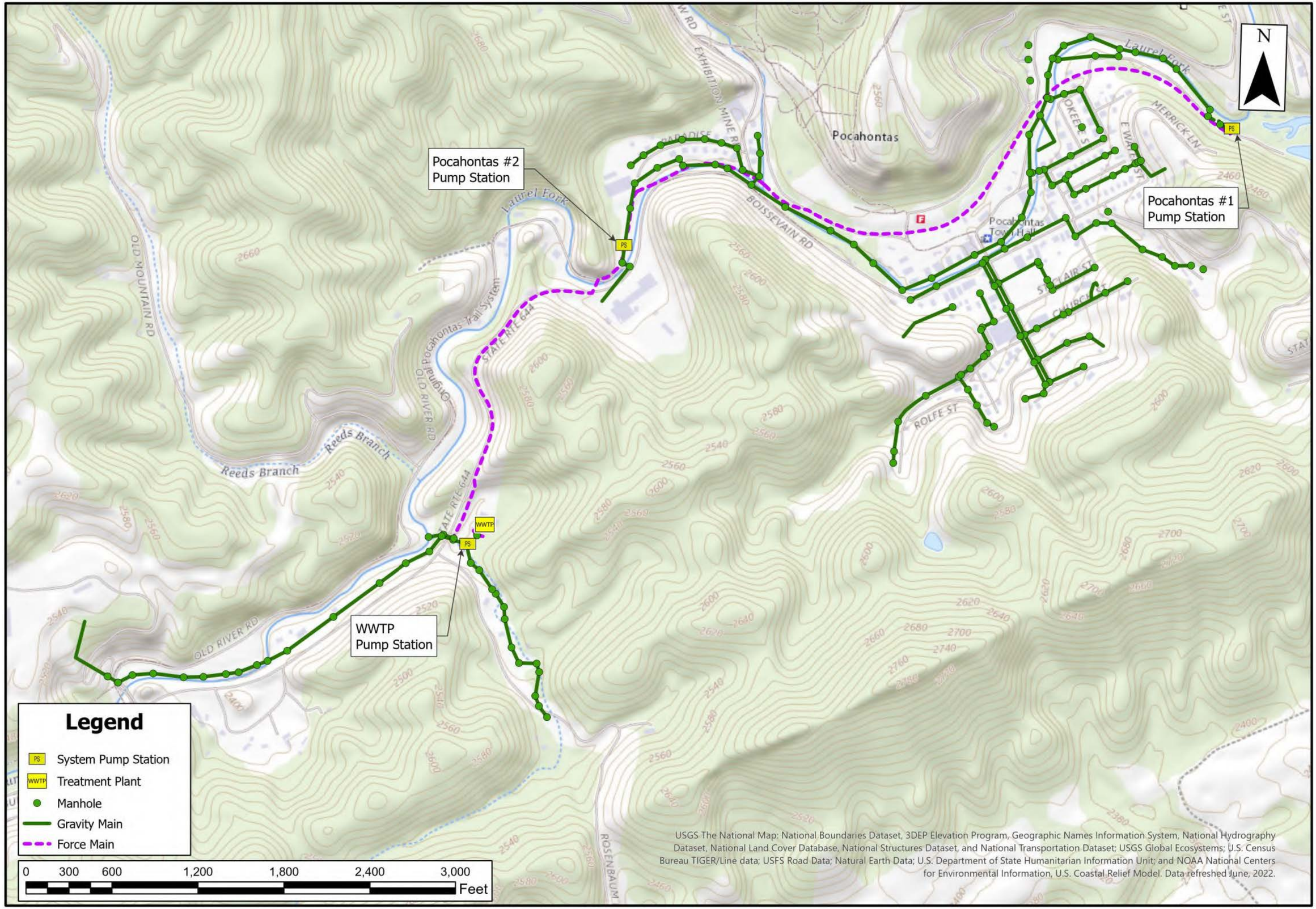
Permit Violations – The facility has had 0 permit violations over the past 2 years.

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.




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

TAZEWELL COUNTY
PUBLIC SERVICE
AUTHORITY -
NORTHERN TAZEWELL
COUNTY

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:
SHEET

DRAWN BY: DRW | CHECKED BY: CHK

PROJECT NO: xxxx

Town of Richlands
Wastewater System

N

## Legend

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

0 500 1,000 2,000 3,000 4,000 5,000 Feet



THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TOWN OF
CEDAR BLUFF

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

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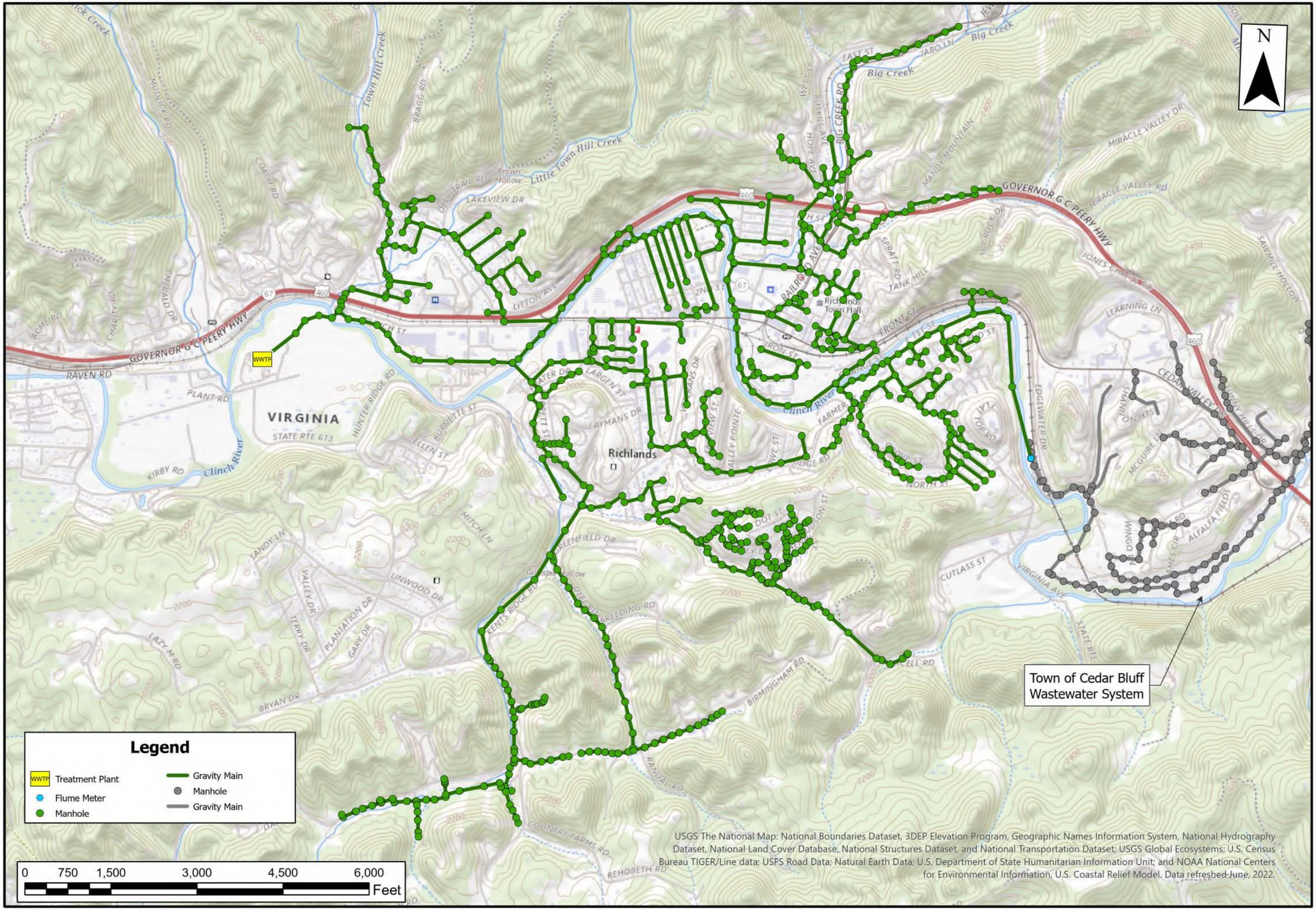
DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx




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
RICHLANDS

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

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DRAWN BY DRW CHECKED BY CHK

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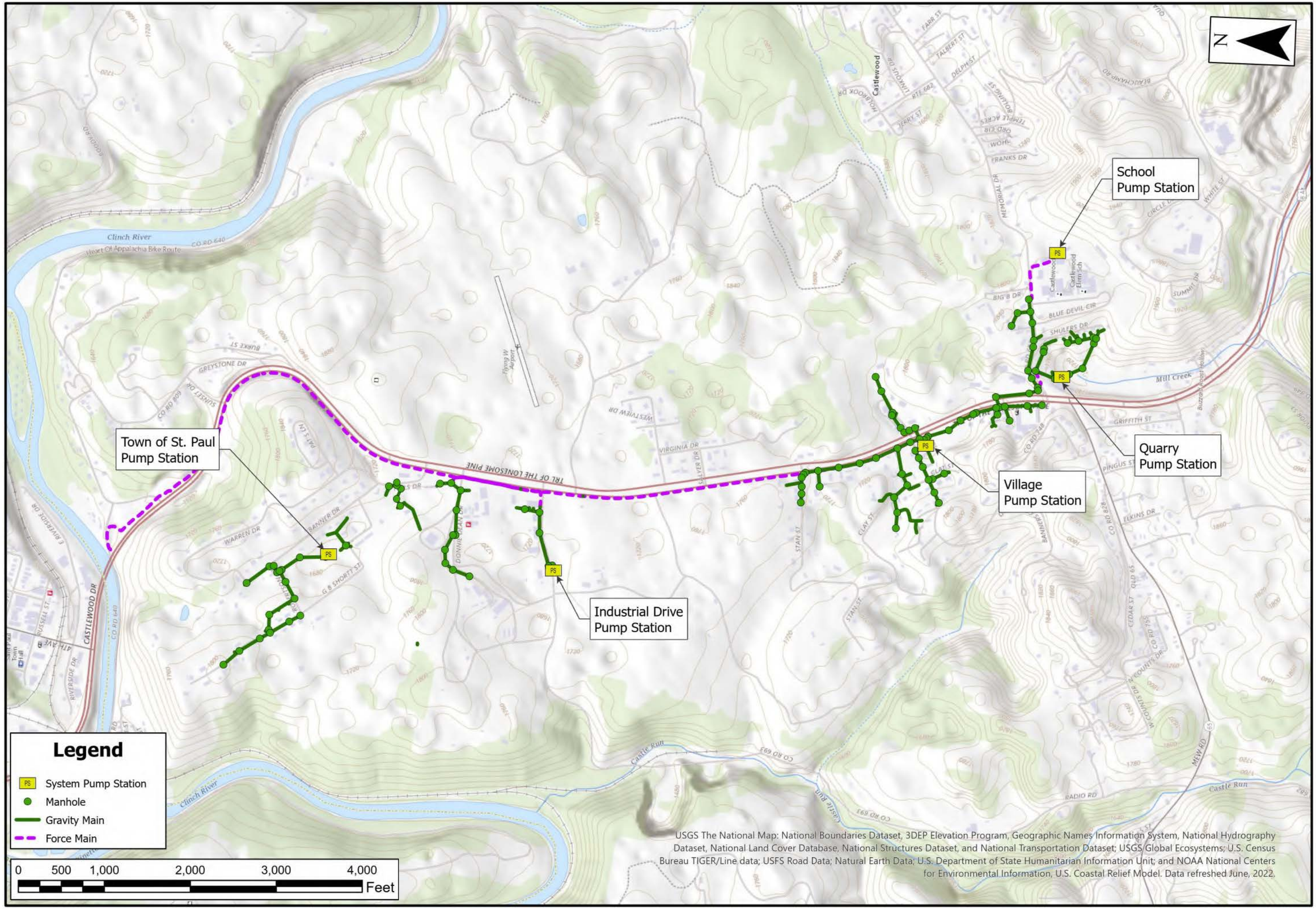


USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS 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.

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SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

RUSSELL COUNTY PUBLIC
SERVICE AUTHORITY -
CASTLEWOOD

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:
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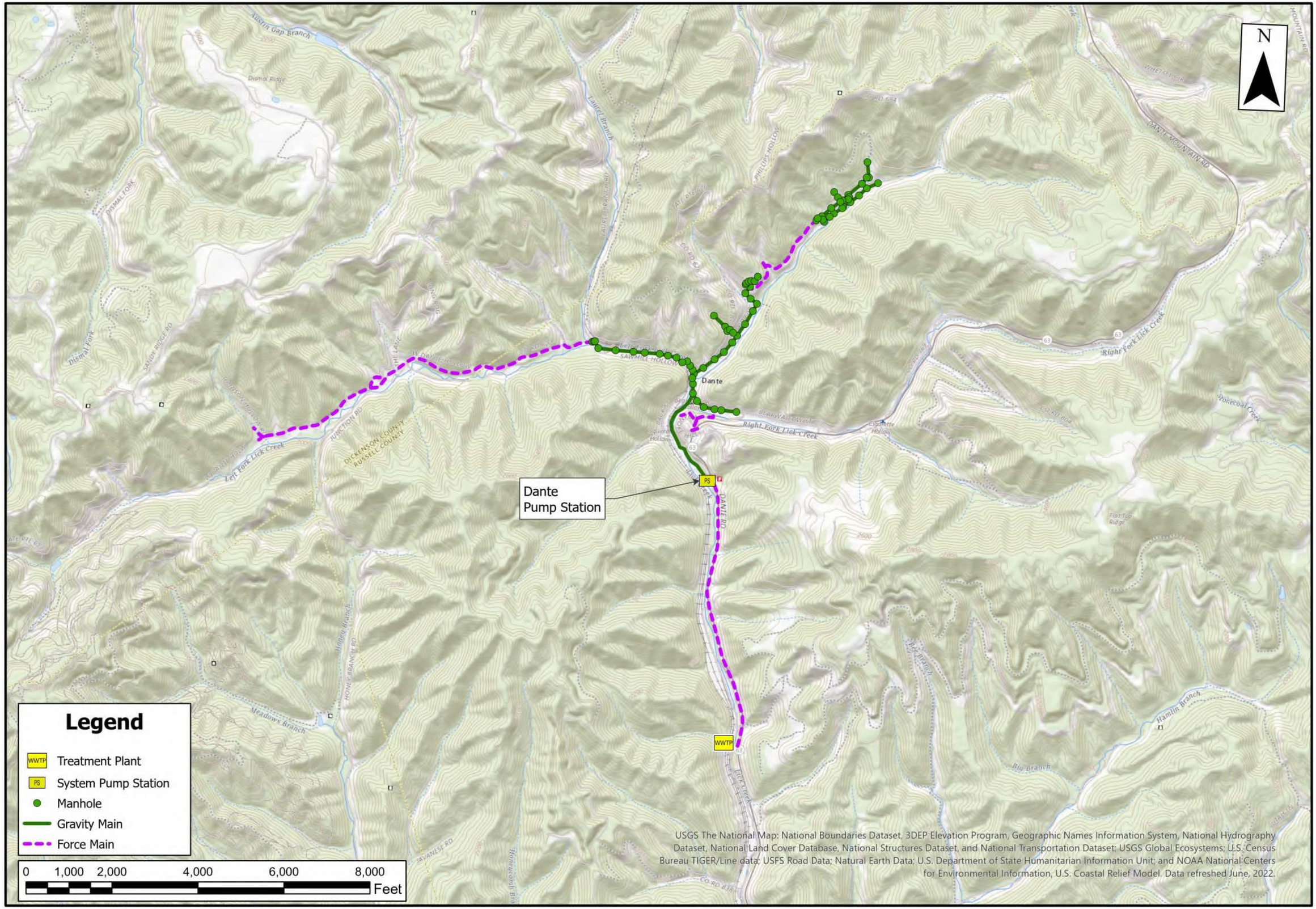
DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx




THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

RUSSELL COUNTY PUBLIC SERVICE AUTHORITY - DANTE

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

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DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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:

| | |
|---|---|
| 671 | Residential Customers |
| 38 | Commercial Customers |
| 0 | Industrial Customers |
| 1 | Other Municipal Systems |
| **710** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |

| | | | |
|---|---|---|---|
| **Monthly Average** | **4,092,101** | **2,463,310** | **60%** |
| **Daily Average** | **134,535** | **80,985** | **60%** |
| **Avg / Customer** | **189** | **114** | |

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

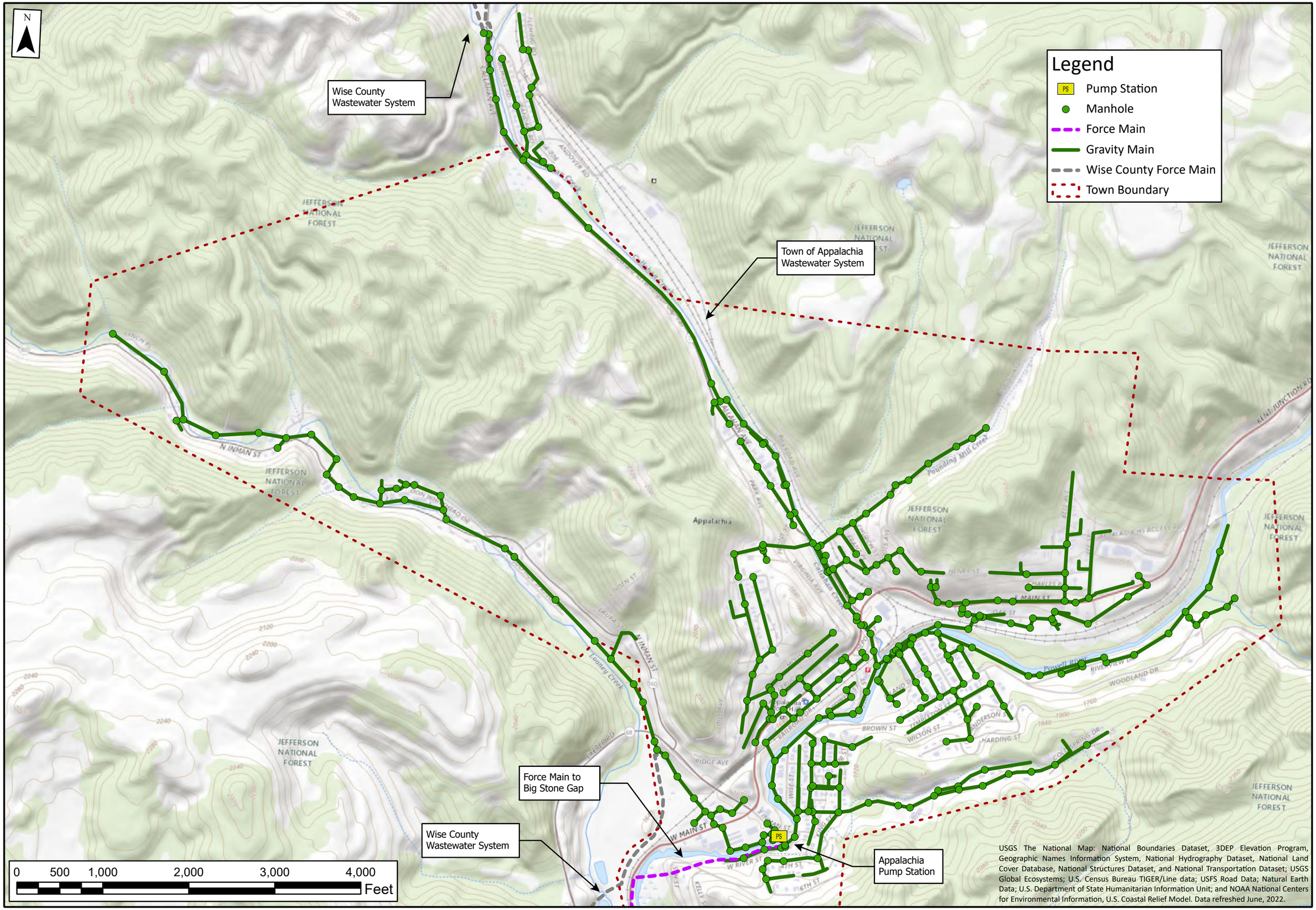
The following sewer rate structure was last modified in June 2021:

| Inside Town Limits | Outside Town Limits |
|---|---|
| Water - $15.25 (First 1,000 gallons) | Water - $20.60 (First 1,000 gallons) |
| Each additional 1,000 gallons - $5.90 | Each additional 1,000 gallons - $9.15 |
| Sewer Rate – 135% of Water Fee | 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.




THOMPSON & LITTON

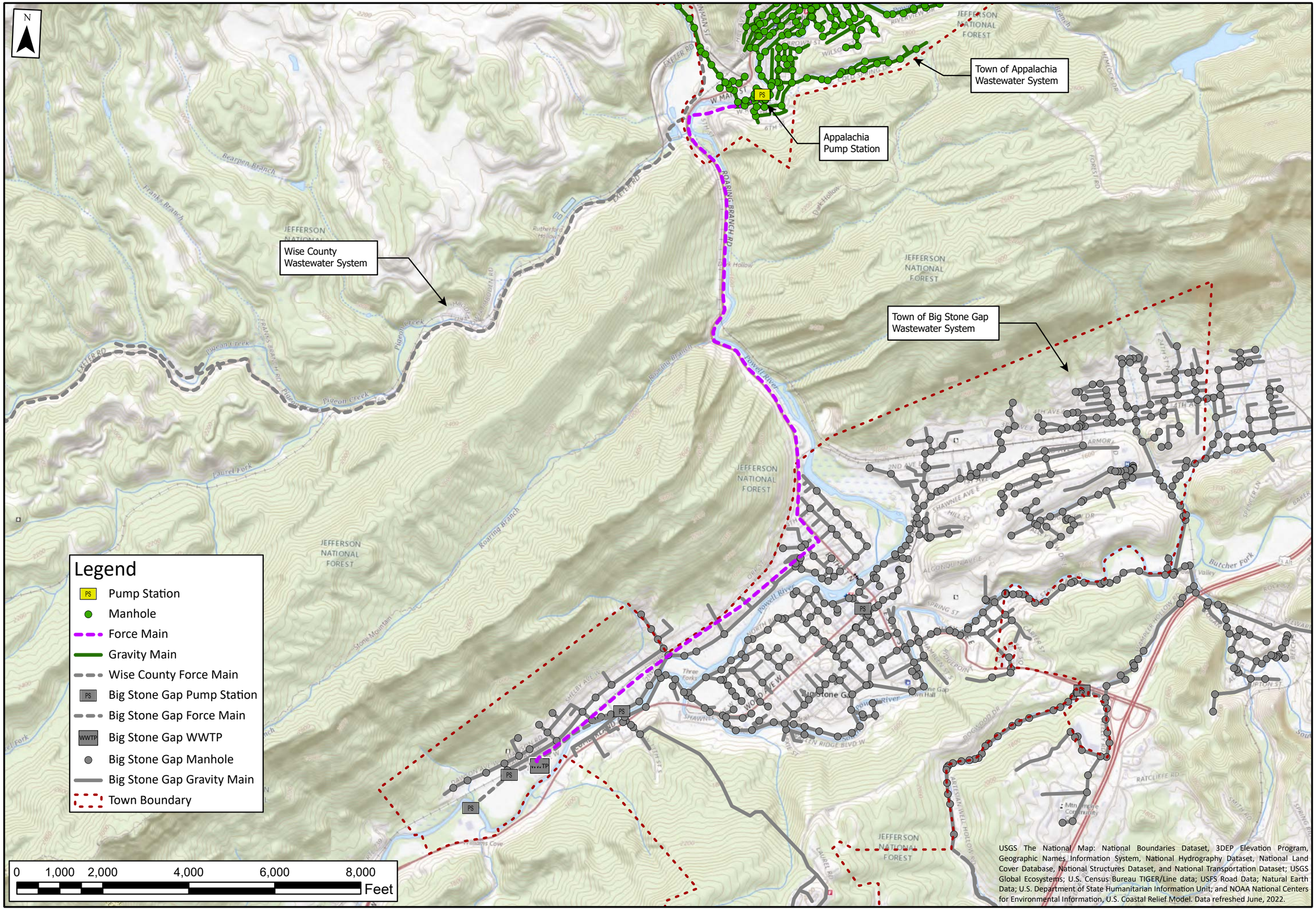
the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF APPALCHIA WASTEWATER SYSTEM - NORTH AREA

DEQ Virginia Department of Environmental Quality

| | |
|---|---|
| DATE: | 12/15/2022 |
| SHEET: | |
| DRAWN BY | CHECKED BY |
| IJR | |
| PROJECT NO. | 2248 |




THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF APPALACHIA WASTEWATER SYSTEM - SOUTH AREA

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/15/2022

SHEET:

DRAWN BY: JJR | CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 2,332 | Residential Customers |
| 240 | Commercial Customers |
| 0 | Industrial Customers |
| 1 | Other Municipal Systems |
| **2,573** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **37,693,911** | **11,020,637** | **29.2%** |
| **Daily Average** | **1,239,252** | **362,322** | **29.2%** |
| **Avg / Customer** | **482** | **141** | |

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:

| Inside Town Limits | Outside Town Limits |
|---|---|
| 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 2nd 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 aeriation and effluent.

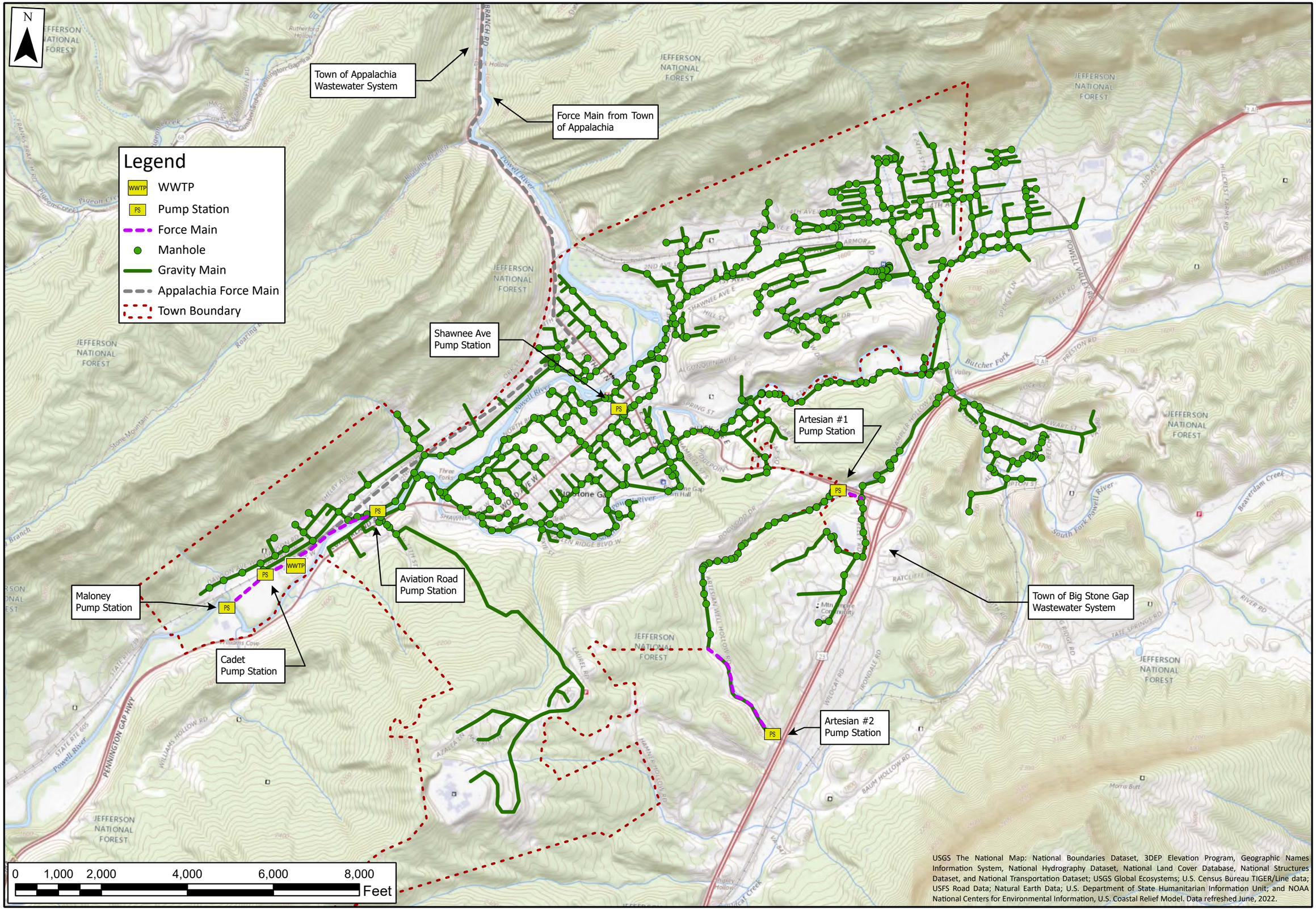
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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.




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF BIG STONE GAP WASTEWATER SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY: IJR | CHECKED BY:

PROJECT NO.: 2248

# 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:

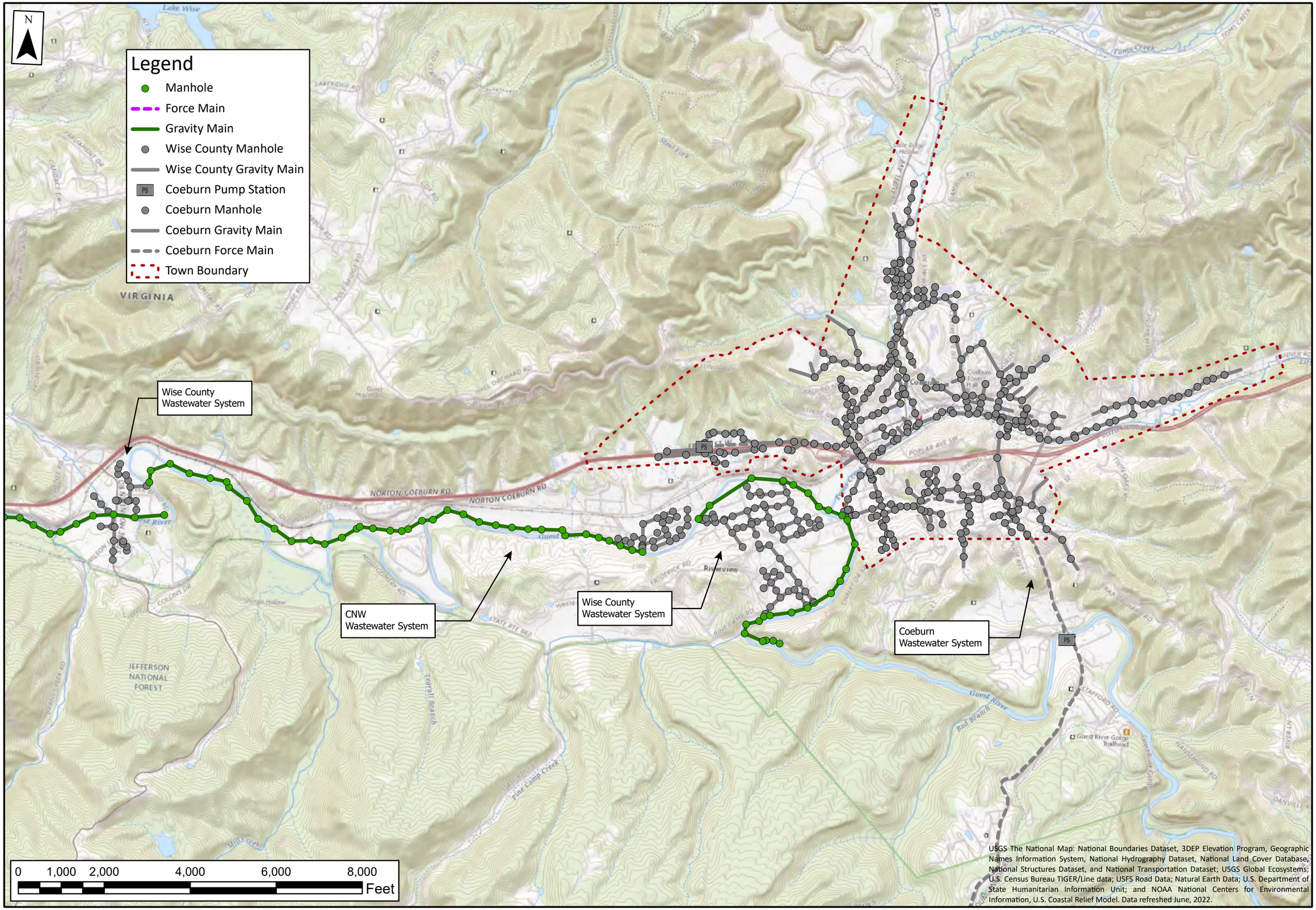
- Increasing difficulty in obtaining repair parts for existing equipment, especially for items manufactured in foreign countries.
- Increasing difficulty in obtaining operational chemicals and other supplies.

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)




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CNW WASTEWATER SYSTEM - EAST

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/28/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

N

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

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CNW WASTEWATER SYSTEM - NORTH

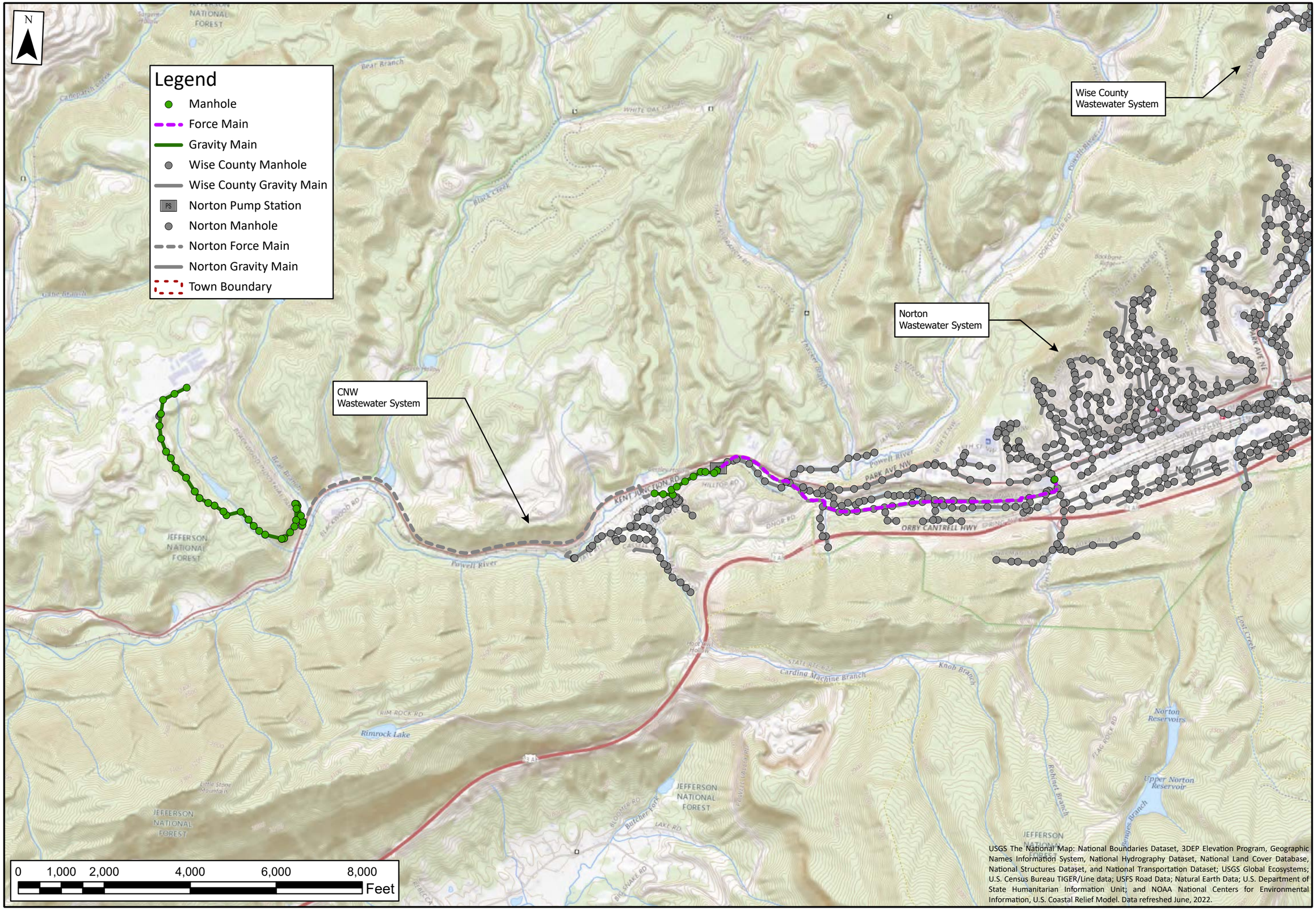
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/28/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CNW WASTEWATER SYSTEM - WEST

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/28/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# TOWN OF COEBURN COLLECTION SYSTEM

**TOWN OF COEBURN, VIRIGNIA**

*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:

| | |
|---|---|
| 865 | Residential Customers |
| 131 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **996** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **19,905,583** | **3,242,247** | **16.2%** |
| **Daily Average** | **663,519** | **108,074** | |

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

N

Town of Coeburn
Wastewater System

Sheffield #2
Pump Station

Sheffield #1
Pump Station

Cordertown
Pump Station

CNW
Wastewater System

Wise County
Wastewater System

Marty
Pump Station

CNW
Wastewater System

## 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

0 1,000 2,000 4,000 6,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF COEBURN WASTEWATER SYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 12/15/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 228 | Residential Customers |
| 3 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **231** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **0** | **597,144** | N/A |
| **Daily Average** | **0** | **19,905** | N/A |
| **Avg / Customer** | **0** | **87** | |

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, **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**.

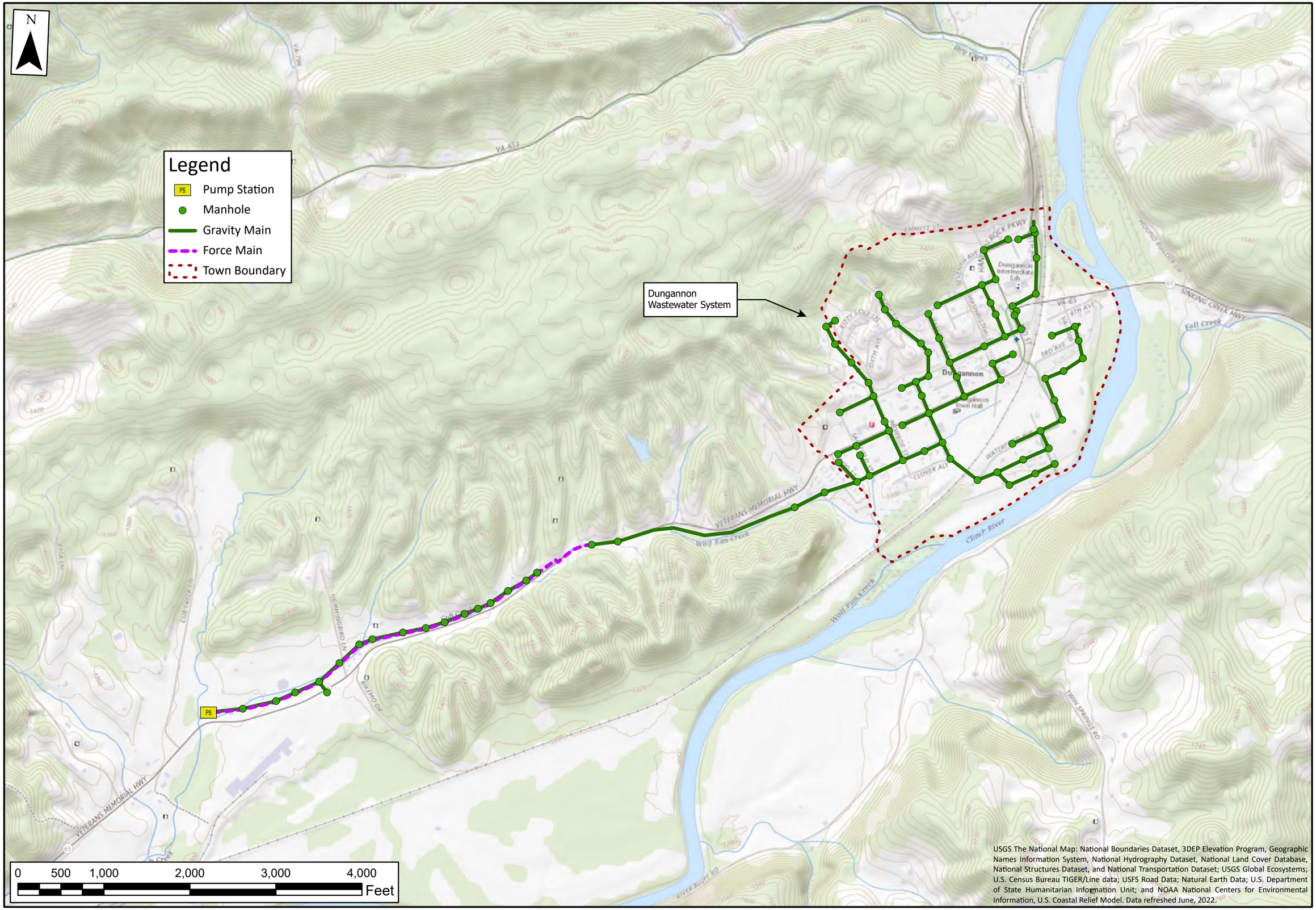
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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)




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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

TOWN OF DUNGANNON WASTEWATEER SYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 12/13/2022

SHEET:

DRAWN BY: IJR

CHECKED BY:

PROJECT NO.: 2248

# GATE CITY SANITATION AUTHORITY COLLECTION SYSTEM

**TOWN OF GATE CITY, VIRIGNIA**

*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:

| | |
|---|---|
| 803 | Residential Customers |
| 136 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **939** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **9,713,400** | **3,415,146** | **35.05%** |
| **Daily Average** | **323,780** | **113,838** | |
| **Avg / Customer** | **344.8** | **121** | |

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

N

## Legend

- Manhole
- Gravity Main
- Scott County Force Main
- Scott County Pump Station (PS)
- Town Boundary

Town of Gate City Wastewater System

Scott County Wastewater System

Scott County Wastewater System

0 500 1,000 2,000 3,000 4,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF GATE CITY WASTEWATER SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/12/2022

SHEET:

DRAWN BY: IJR

CHECKED BY:

PROJECT NO.: 2248

# TOWN OF JONESVILLE COLLECTION SYSTEM

**TOWN OF JONESVILLE, VIRIGNIA**

*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:

| | |
|---|---|
| 490 | Residential Customers |
| 20 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **510** | **Total Number of Customers** |

**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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **1,340,000** | TBD | TBD |
| **Daily Average** | **44,666** | TBD | TBD |
| **Avg / Customer** | **87.5** | 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.

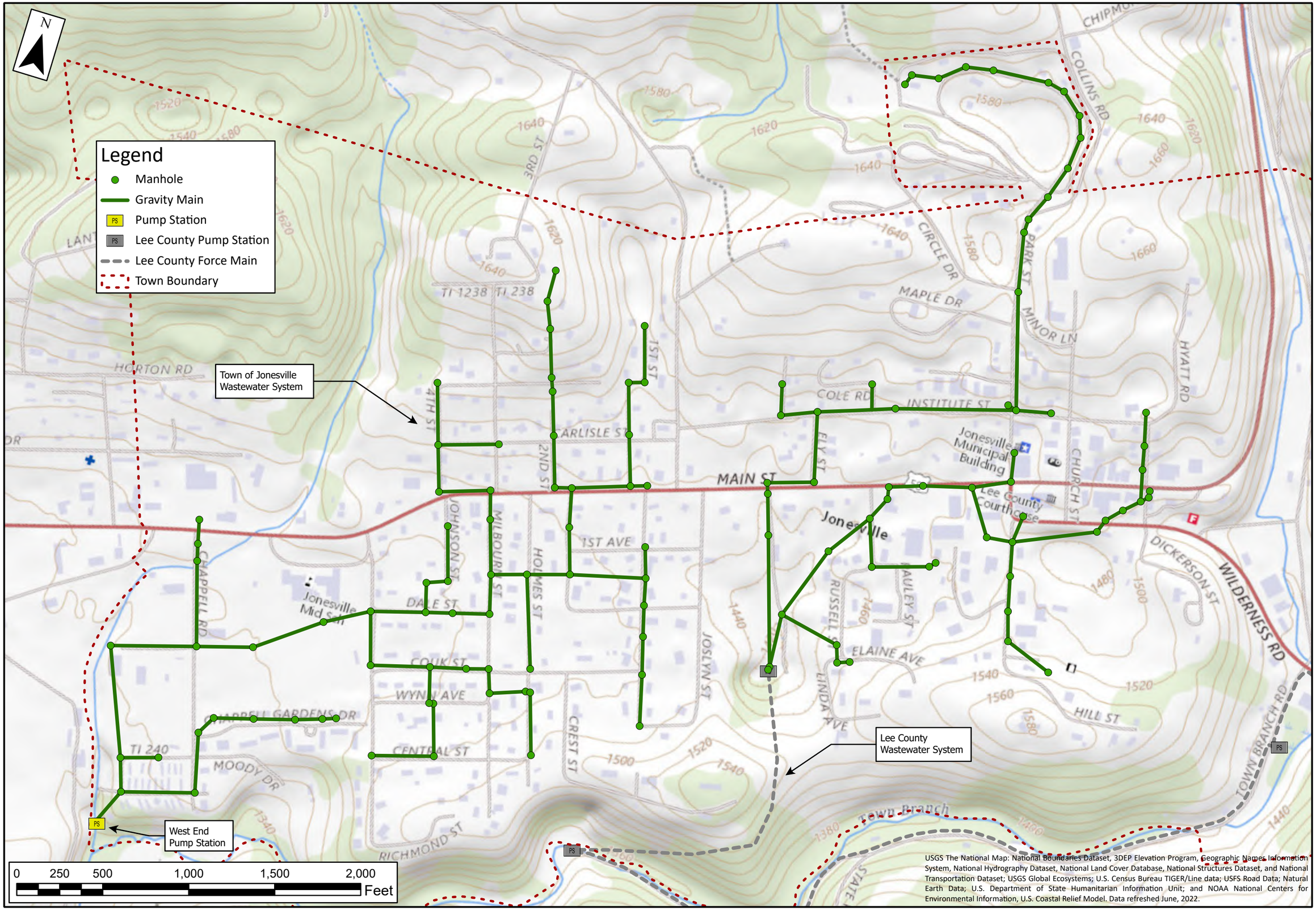
Asset Management Plan

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 every1,000 after
- Sewer is 87% of the total water bill
- $10.50 sewer maintenance fee

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THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF JONESVILLE WASTEWATER SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/16/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# BEN HUR COLLECTION SYSTEM
**LEE COUNTY PUBLIC SERVICE AUTHORITY**
*Lenowisco 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:

| | |
|---|---|
| 75 | Residential Customers |
| 12 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **87** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **1,672,917** | **711,525** | **43%** |
| **Daily Average** | **55,000** | **23,393** | **43%** |
| **Avg / Customer** | **632** | **269** | |

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.

N

## Legend

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

Town of Pennington Gap Wastewater System

Ben Hur Pump Station

Lee County - Ben Hur Subsystem

Stone Mountain Health Service - Private Pump Station

Central Lee Pump Station

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## LEE COUNTY WASTEWATER SYSTEM - BEN HUR

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 88 | Residential Customers |
| 0 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **88** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **300,000** | **N/A** | **N/A** |
| **Daily Average** | **10,000** | **N/A** | **N/A** |
| **Avg / Customer** | **113** | **N/A** | |

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 | Non-Residential Sewer |
|---|---|
| Base Rate (2000 Gallons) - $41.64 | Base Rate (2000 Gallons) - $42.44 |
| Per 1000 Gallons After - $11.27 | 2001-3499 Gallons - $18.60 |
| | 3500 – 42,499 Gallons - $14.00 |
| Flat Rate Sewer - $58.63 | 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 exceeded 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.

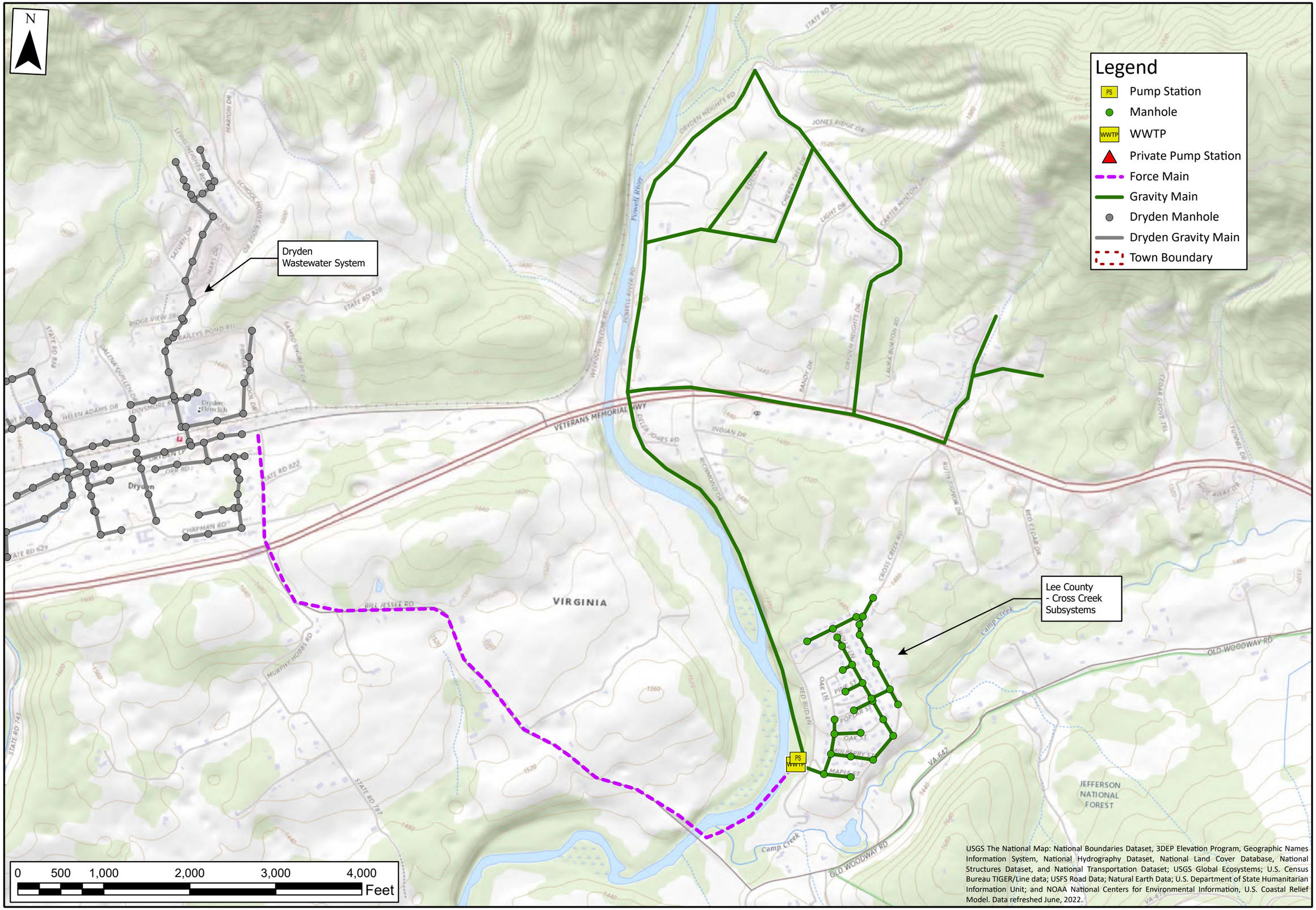
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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)




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## LEE COUNTY WASTEWATER SYSTEM - CROSS CREEEK RD

DEQ Virginia Department of Environmental Quality

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 211 | Residential Customers |
| 14 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **225** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **1,649,374** | **794,789** | **48%** |
| **Daily Average** | **54,225** | **26,130** | **48%** |
| **Avg / Customer** | **241** | **116** | |

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

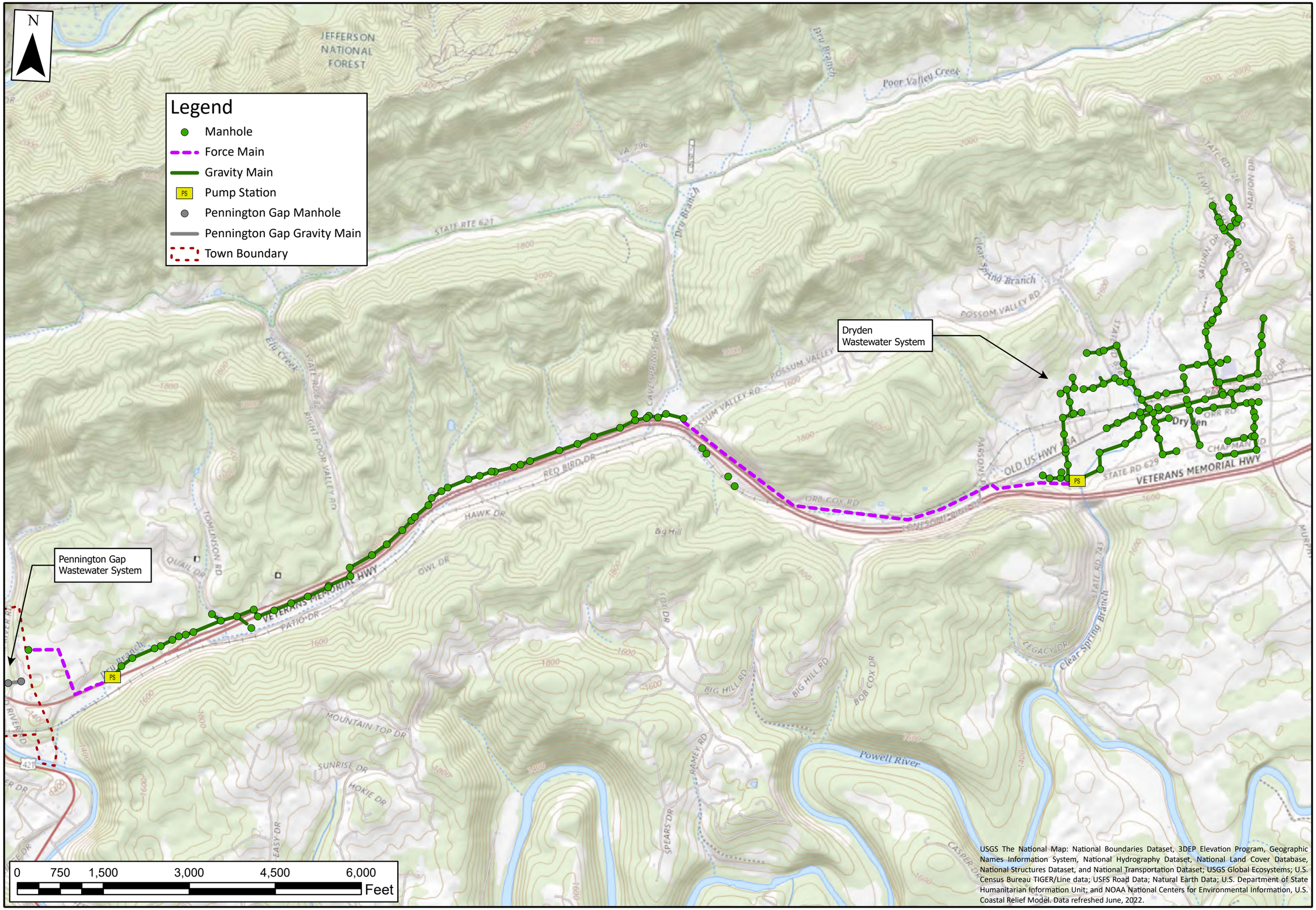
The following sewer rate structure was last modified on July 1, 2022:

| Residential Sewer | Non-Residential Sewer |
|---|---|
| Base Rate (2000 Gallons) - $41.64 | Base Rate (2000 Gallons) - $42.44 |
| Per 1000 Gallons After - $11.27 | 2001-3499 Gallons - $18.60 |
| | 3500 – 42,499 Gallons - $14.00 |
| Flat Rate Sewer - $58.63 | 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.




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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

# DRYDEN WASTEWATER SYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 12/28/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# EWING COLLECTION SYSTEM

***NEED MORE INFO**

**LEE COUNTY PUBLIC SERVICE AUTHORITY**

*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:

| | |
|---|---|
| 12 | Residential Customers |
| 0 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **12** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **N/A** | **32,233** | **N/A** |
| **Daily Average** | **N/A** | **1,060** | **N/A** |
| **Avg / Customer** | **N/A** | **106** | |

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 | Non-Residential Sewer |
|---|---|
| Base Rate (2000 Gallons) - $41.64 | Base Rate (2000 Gallons) - $42.44 |
| Per 1000 Gallons After - $11.27 | 2001-3499 Gallons - $18.60 |
| | 3500 – 42,499 Gallons - $14.00 |
| Flat Rate Sewer - $58.63 | 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**

*Lenowisco 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:

| | |
|---|---|
| 21 | Residential Customers |
| 1 | Commercial Customers |
| 0 | Industrial Customers |
| 1 | Other Municipal Systems |
| **23** | **Total Number of Customers** |

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 form 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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **7,267,508** | **7,267,508** | **100%** |
| **Daily Average** | **238,932** | **238,932** | **100%** |
| **Avg / Customer** | **10,388** | **10,388** | |

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 | Non-Residential Sewer |
|---|---|
| Base Rate (2000 Gallons) - $41.64 | Base Rate (2000 Gallons) - $42.44 |
| Per 1000 Gallons After - $11.27 | 2001-3499 Gallons - $18.60 |
| | 3500 – 42,499 Gallons - $14.00 |
| Flat Rate Sewer - $58.63 | 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 exceeded 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.

N

## Legend

- PS — Pump Station
- Manhole
- WWTP
- Force Main
- Gravity Main

Lee County
- Hickory Flats
Subsystem

Super Sac
Pump Station

Litton
Pump Station

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## LEE COUNTY WASTEWATER SYSTEM - HICKORY FLATS EAST

DEQ Virginia Department of Environmental Quality

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

N

## Legend

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

Lee County - Hickory Flats Subsystem

1230 Pump Station

Town Branch Pump Station

Allen Minor Pump Station

Old Jonesville Pump Station

Jonesville Wastewater System

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## LEE COUNTY WASTEWATER SYSTEM - HICKORY FLATS WEST

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 129 | Residential Customers |
| 14 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **143** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **1,788,000** | **392,292** | **22%** |
| **Daily Average** | **58,783** | **12,897** | **22%** |
| **Avg / Customer** | **411** | **90** | |

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 | Non-Residential Sewer |
|---|---|
| Base Rate (2000 Gallons) - $41.64 | Base Rate (2000 Gallons) - $42.44 |
| Per 1000 Gallons After - $11.27 | 2001-3499 Gallons - $18.60 |
| | 3500 – 42,499 Gallons - $14.00 |
| Flat Rate Sewer - $58.63 | 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.

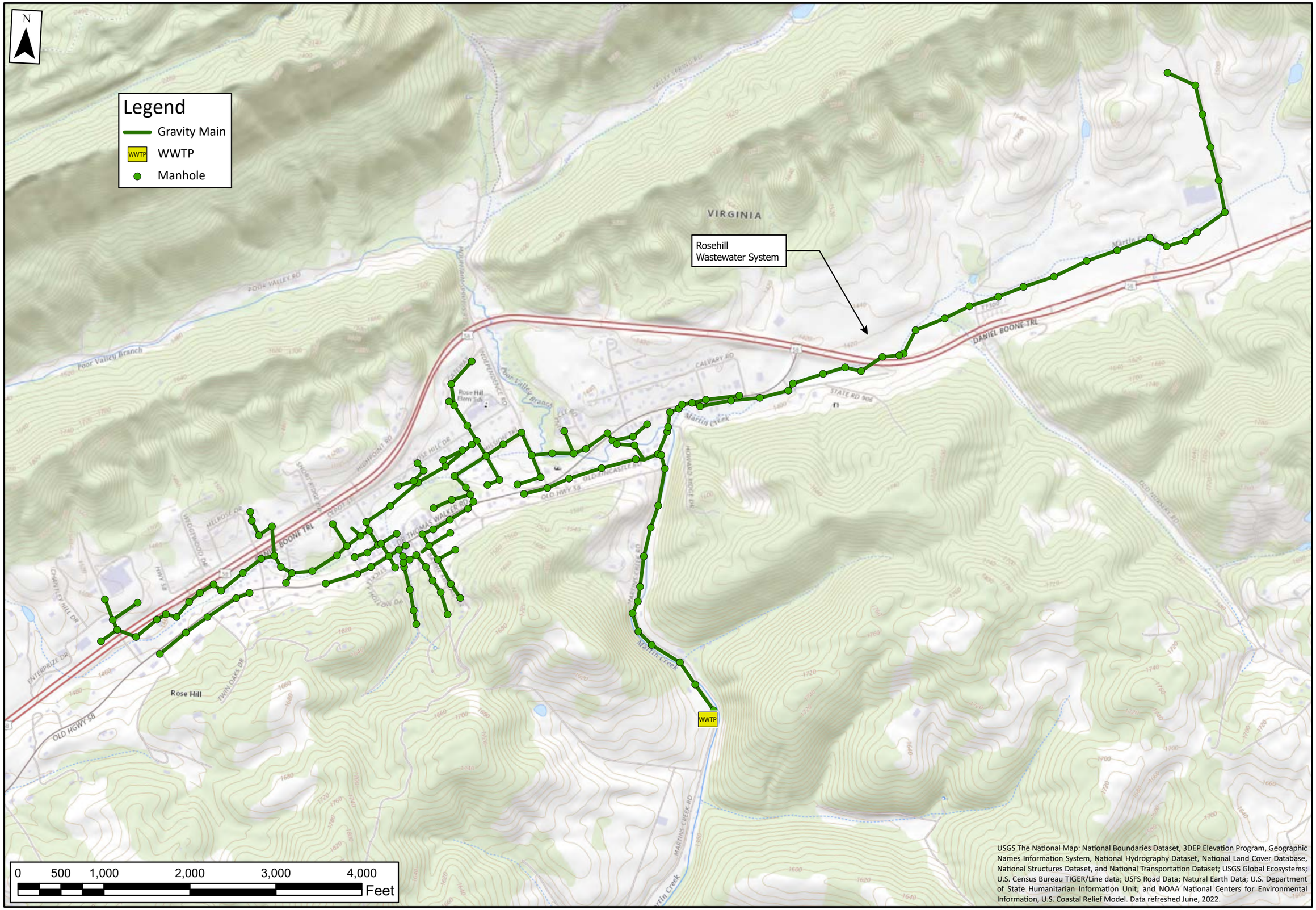
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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.




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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

ROSEHILL WASTEWATER SYSTEM

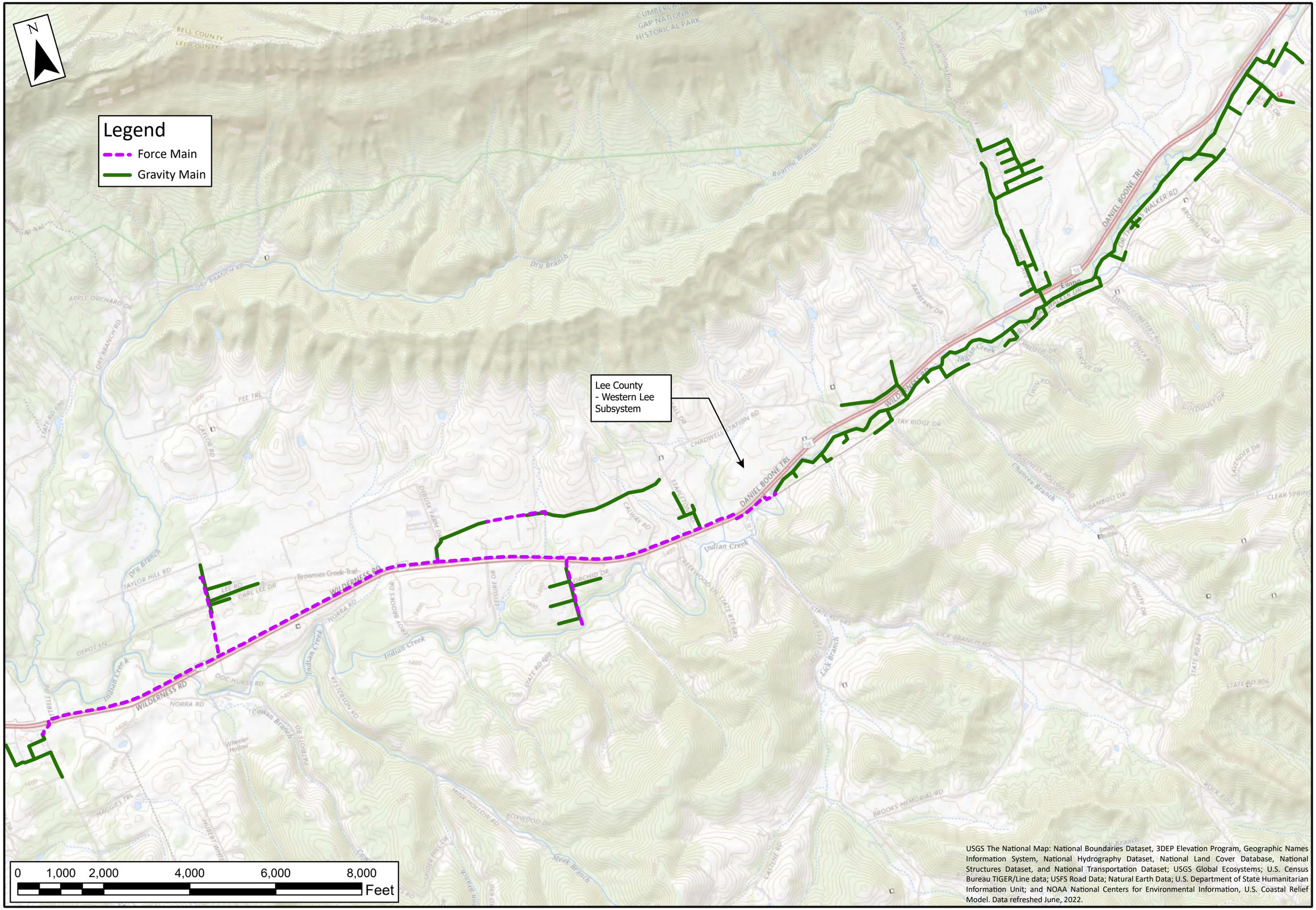
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/28/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

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THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

LEE COUNTY
WASTEWATER
SYSTEM - WESTERN
LEE COUNTY

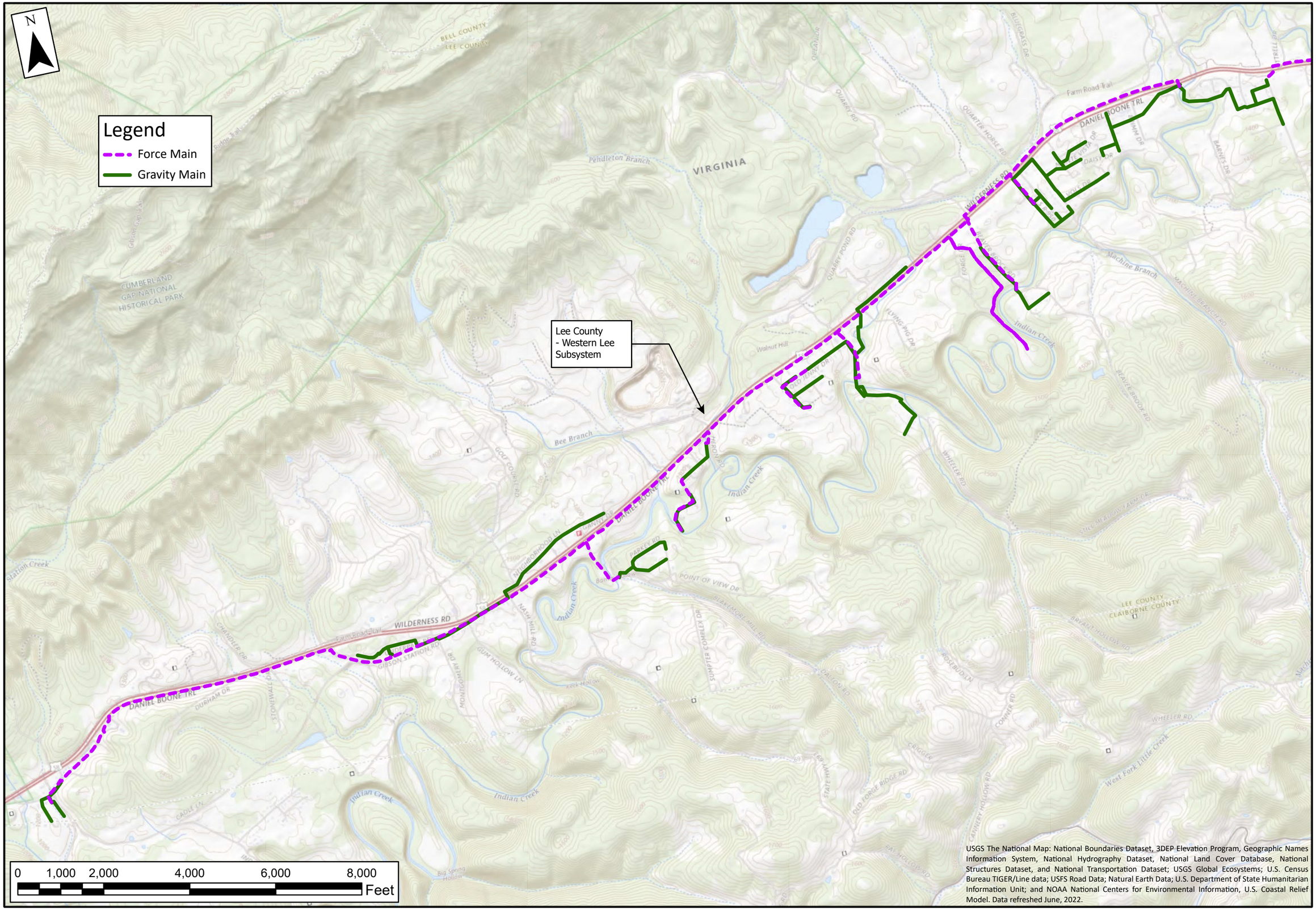
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248




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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

LEE COUNTY WASTEWATER SYSTEM - WESTERN LEE COUNTY

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 187 | Residential Customers |
| 2 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **189** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **1,977,083** | **430,411** | **22%** |
| **Daily Average** | **65,000** | **14,150** | **22%** |
| **Avg / Customer** | **344** | **75** | |

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

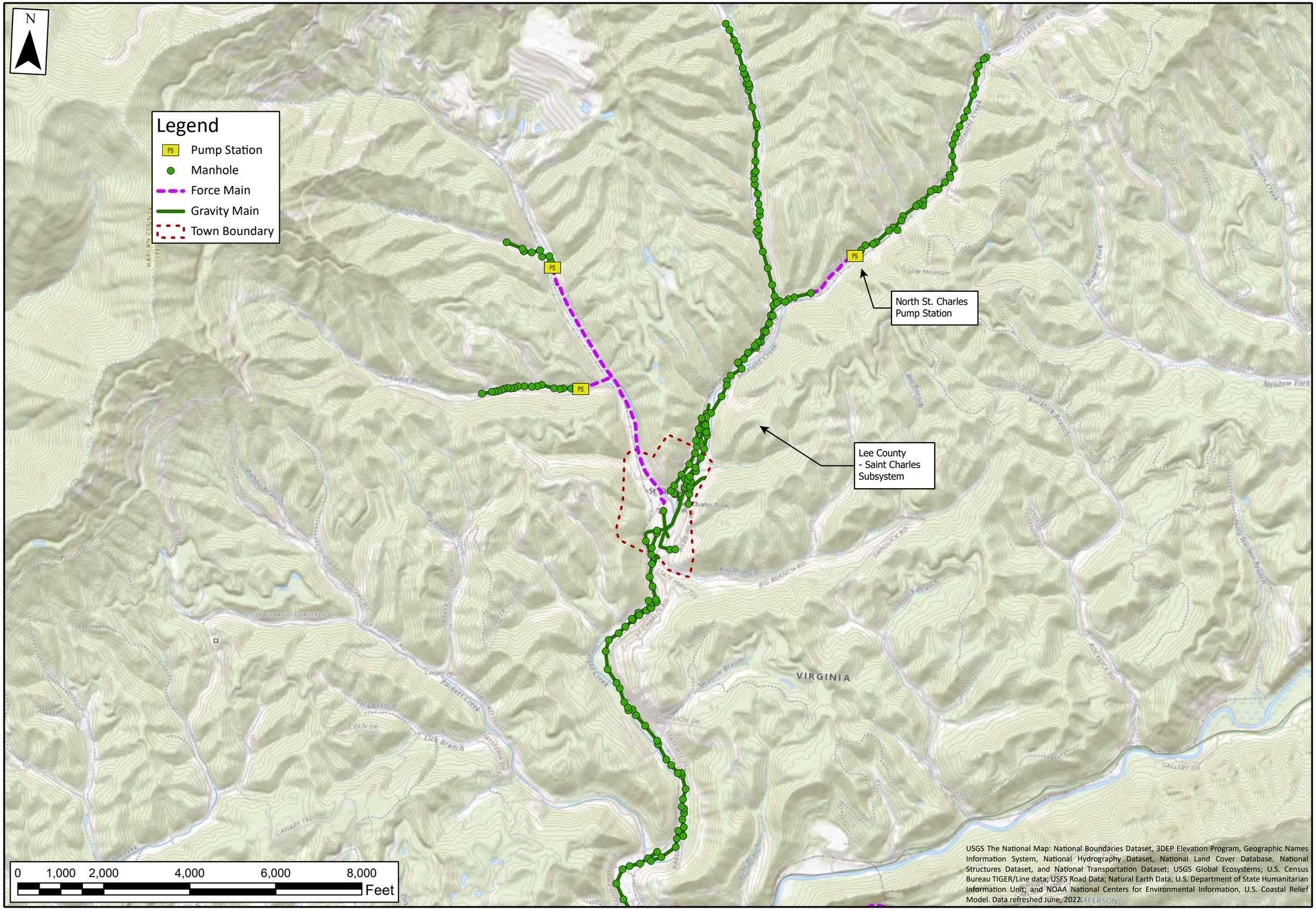
Flat Rate Sewer - $58.63

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.




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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

LEE COUNTY WASTEWATER SYSTEM - SAINT CHARLES NORTH

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

N

## Legend

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

Lee County - Saint Charles Subsystem

Pennington Gap Interceptor Pump Station

Red Hill/Poor Valley Pump Station

Pennington Gap Wastewater System

Town of Dryden Wastewater System

Lee County - Ben Hur Subsystem

Lee County - Hickory Flats Subsystem

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

LEE COUNTY WASTEWATER SYSTEM - SAINT CHARLES NORTH

DEQ Virginia Department of Environmental Quality

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 1850 | Residential Customers |
| 344 | Commercial Customers |
| 0 | Industrial Customers |
| 1 | Other Municipal Systems |
| **2,195** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |

| | | | |
|---|---|---|---|
| **Monthly Average** | **69,631,333** | **9,148,200** | **13%** |
| **Daily Average** | **2,289,249** | **300,762** | **13%** |
| **Avg / Customer** | **1,043** | **137** | |

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 | Outside City Limits |
|---|---|
| Water - $19.10 (<2,000 gallons) | Water - $28.65 (<2,000 gallons) |
| Each additional 1,000 gallons - $6.65 | Each additional 1,000 gallons - $13.30 |
| Sewer Rate – 175% of Water Bill | 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.

N

## 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

Wise
Wastewater System

Wise County
Wastewater System

Wise
Wastewater System

CNW
Wastewater System

Josephine
Pump Station

Wise County
Wastewater System

CNW
Wastewater System

City of Norton
Wastewater System

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

CITY OF NORTON
WASTEWATER
SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/30/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 840 | Residential Customers |
| 130 | Commercial Customers |
| 10 | Industrial Customers |
| 942 | Other Municipal Systems |
| **1922** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **8,729,250** | **0** | 0.00% |
| **Daily Average** | **290,975** | **0** | 0.00% |
| **Avg / Customer** | **151** | **0** | |

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 Dept 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)

N

## Legend

- Manhole
- Gravity Main
- WWTP
- Pump Station
- Lee County Pump Station
- Lee County Manhole
- Lee County Gravity Main
- Lee County Force Main
- Dryden Pump Station
- Dryden Force Main
- Dryden Gravity Main
- Dryden Manhole
- Town Boundary

Lee County - St. Charles Wastewater System

Town of Pennington Gap Wastewater System

Dryden Wastewater System

Main St Pump Station

Lee County - Ben Hur Wastewater System

0 500 1,000 2,000 3,000 4,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF PENNINGTON GAP WASTEWATER SYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 12/13/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 99 | Residential Customers |
| 32 | Commercial Customers |
| 20 | Industrial Customers |
| 0 | Other Municipal Systems |
| **151** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **5,980,583** | **2,937,316** | 49.11% |
| **Daily Average** | **199,353** | **97,911** | 49.11% |
| **Avg / Customer** | **1,320** | **648** | |

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**.

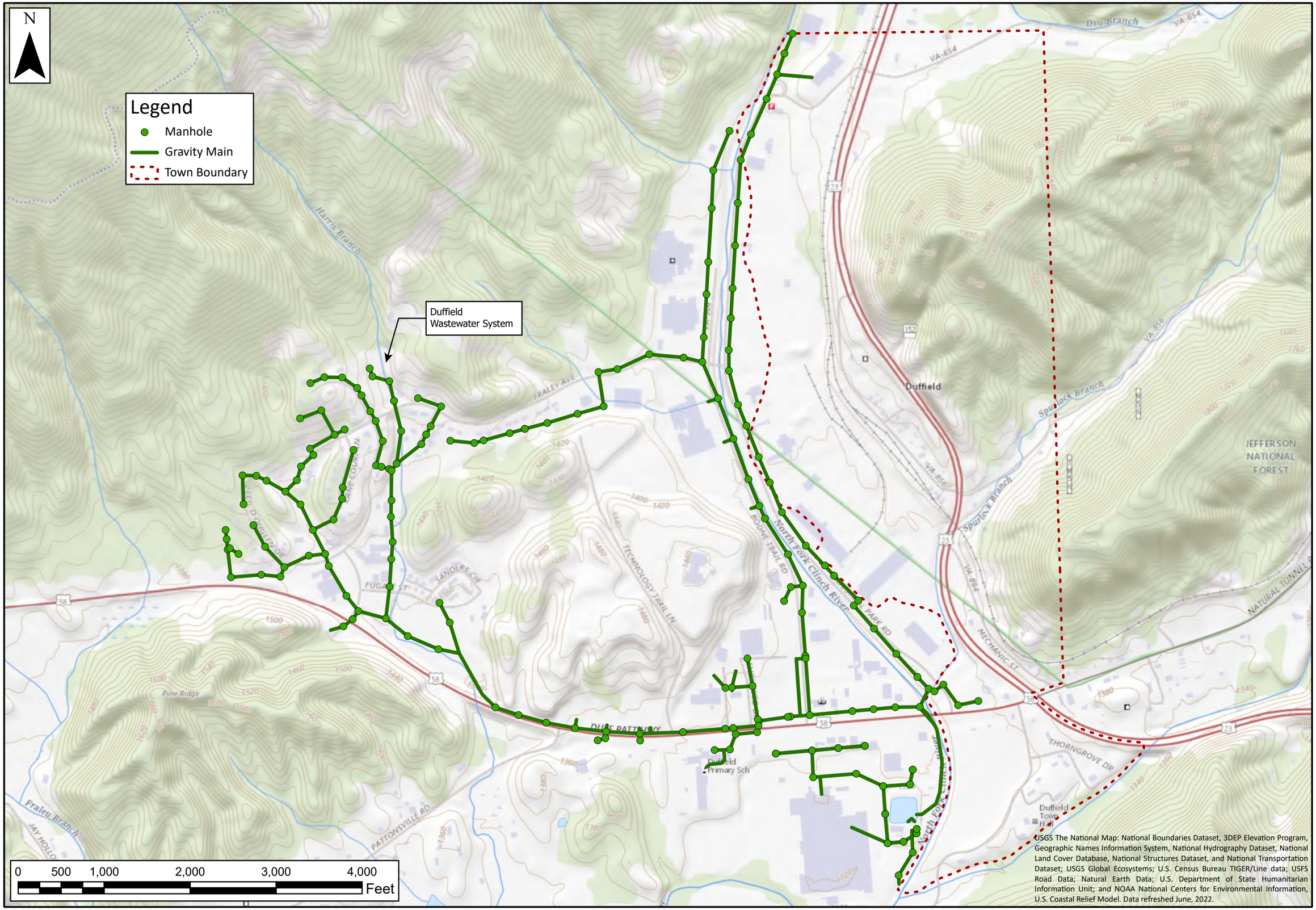
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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)




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## DUFFIELD WASTEWATER SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/01/2022

SHEET:

DRAWN BY: IJR

CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 955 | Residential Customers |
| 31 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **986** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **4,297,083** | **597,144** | 13.90% |
| **Daily Average** | **143,236** | **19,905** | 13.90% |
| **Avg / Customer** | **145** | | |

*****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**.

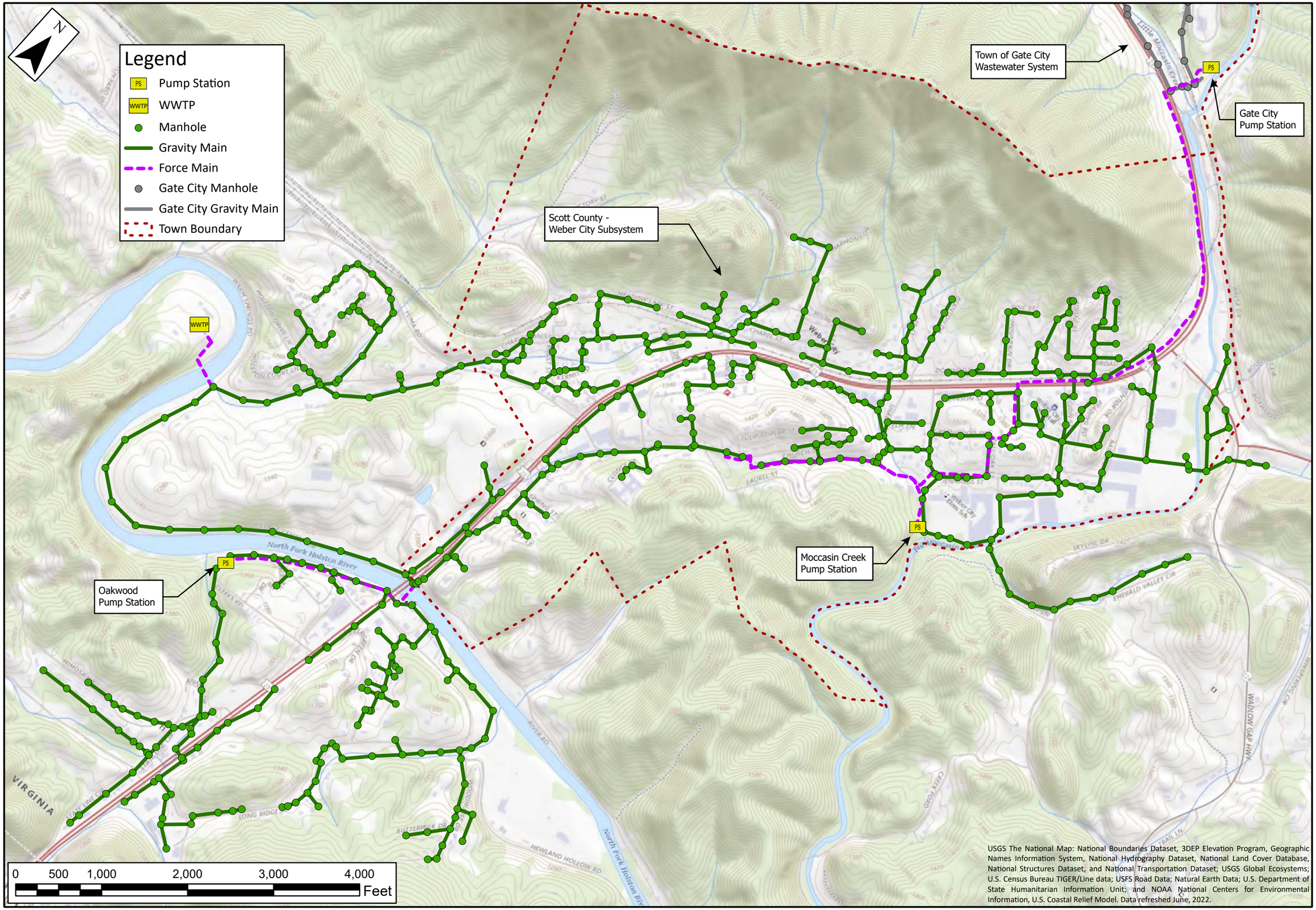
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:
During periods of heavy rain I/I causes:

- 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)




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## SCOTT COUNTY WASTEWATER SYSTEM - WEBER CITY

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/16/2022

SHEET:

DRAWN BY IJR

CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 227 | Residential Customers |
| 20 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **247** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **1,099,417** | **660,250** | 60.05% |
| **Daily Average** | **36,647** | **22,008** | 60.05% |
| **Avg / Customer** | **148** | **89** | |

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)

N

Lamp Lighter Pump Station

Taylor Street Pump Station

Meade Street Pump Station

Scott County - Wastewater System

Nickelsville Town Hall

Nickelsville Elem Sch

TAYLOR ST
WICK DR
RETRIEVER DR
SHEEP DR
BOATWRIGHT ST
VICTOR ST
MAGGIE ST
SCHOOL ST
ROY NICKELS ST
BOND ST
CASTLE ST
GREEN PINE
SPARTAN BLVD AVE
KILGORE ST
MEADOWS LANE DR
HEARTHSTONE DR
NICKELSVILLE HWY
TIMOTHY ST
GARY ST
QUILLEN TERRACE CIR
ARCH LN

Legend

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

0 250 500 1,000 1,500 2,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

SCOTT COUNTY WASTEWATER SYSTEM - NICKELSVILLE

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/16/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# TOWN OF ST. PAUL COLLECTION SYSTEM

**TOWN OF ST. PAUL, VIRIGNIA**

*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:

| | |
|---|---|
| 334 | Residential Customers |
| 76 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **410** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **2,459,816** | **1,455,138** | **60.9%** |
| **Daily Average** | **81,993** | **48,504** | |

| | | |
|---|---|---|
| **Avg / Customer** | **199.9** | **118** |

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)

N

Sunset #1
Pump Station

Dogwood
Pump Station

Sunset #2
Pump Station

Highland
Pump Station

Town of St. Paul
Wastewater System

Castlewood
Wastewater System

South St. Paul
Pump Station

Main
Pump Station

## Legend

- Pump Station
- Manhole
- WWTP
- Force Main
- Gravity Main
- Private Pump Station
- Castlewood Manhole
- Castlewood Gravity Main
- Town Boundary

0 250 500 1,000 1,500 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF ST. PAUL WASTEWATER SYSTEM - NORTH AREA

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/15/2022

SHEET:

DRAWN BY: IJR

CHECKED BY:

PROJECT NO.: 2248

N

## Legend

- Pump Station
- Manhole
- WWTP
- Private Pump Station
- Force Main
- Gravity Main
- Castlewood Manhole
- Castlewood Gravity Main
- Castlewood Force Main
- Town Boundary

Castlewood Wastewater System

Town of St. Paul Wastewater System

West Hills Pump Station

Castlewood Wastewater System

Castlewood Wastewater System

South St. Paul Pump Station

0 250 500 1,000 1,500 Feet

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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

# TOWN OF ST. PAUL WASTEWATER SYSTEM - SOUTH AREA

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/15/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 152 | Residential Customers |
| 0 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **152** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **0** | **288,558** | N/A |
| **Daily Average** | **0** | **9,619** | N/A |
| **Avg / Customer** | **0** | **84** | |

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:

| | |
|---|---|
| 26 | Residential Customers |
| 1 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **27** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **0** | **96,325** | N/A |
| **Daily Average** | **0** | **3,211** | N/A |
| **Avg / Customer** | **0** | **119** | |

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.

N

## Legend

- Manhole
- Gravity Main
- Force Main
- Pump Station (PS)
- Wise Manhole
- Wise 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.

THUNDER RD
FAIRGROUND RD
Bear Creek
GILLIAM RD
HURRICANE RD
HORIZON RD
AIRPORT HOLLOW RD
GREENWOOD CIR
RED MAPLE DR
Lonesome Pine Airport

Airport Hollow Pump Station

Wise County Wastewater System

Wise Wastewater System

0 250 500 1,000 1,500 Feet

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## WISE COUNTY PSA WASTEWATER SYSTEM - FAIRGROUNDS SEWER

DEQ Virginia Department of Environmental Quality

| | |
|---|---|
| DATE: | 12/14/2022 |
| SHEET: | |
| DRAWN BY | CHECKED BY |
| IJR | |
| PROJECT NO. | 2248 |

# 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:

| | |
|---|---|
| 139 | Residential Customers |
| 2 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **141** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **0** | **387,192** | N/A |
| **Daily Average** | **0** | **12,906** | N/A |
| **Avg / Customer** | **0** | **92** | |

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.

N

## Legend

- Manhole
- Gravity Main
- Force Main
- Blackwood Manhole
- Blackwood Force Main
- Blackwood Gravity Main

Wise County

Blackwood Wastewater System

PS

0 500 1,000 2,000 3,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## WISE COUNTY PSA WASTEWATER SYSTEM - BLACKWOOD

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/14/2022

SHEET:

DRAWN BY IJR

CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 74 | Residential Customers |
| 3 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **77** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **0** | **277,942** | N/A |
| **Daily Average** | **0** | **9,265** | N/A |
| **Avg / Customer** | **0** | **120** | |

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.

N

## Legend

- Manhole
- Pump Station
- Gravity Main
- Force Main
- Norton Pump Station
- Norton Manhole
- Norton Force Main
- Norton Gravity Main
- CNW Force Main
- CNW Gravity Main
- CNW Manhole

CNW
Wastewater System

Wise County
Wastewater System

Blackwood
Pump Station

Josephine
Pump Station

CNW
Wastewater System

Norton
Wastewater System

Wise County
Wastewater System

0 500 1,000 2,000 3,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## WISE COUNTY PSA WASTEWATER SYSTEM - JOSEPHINE

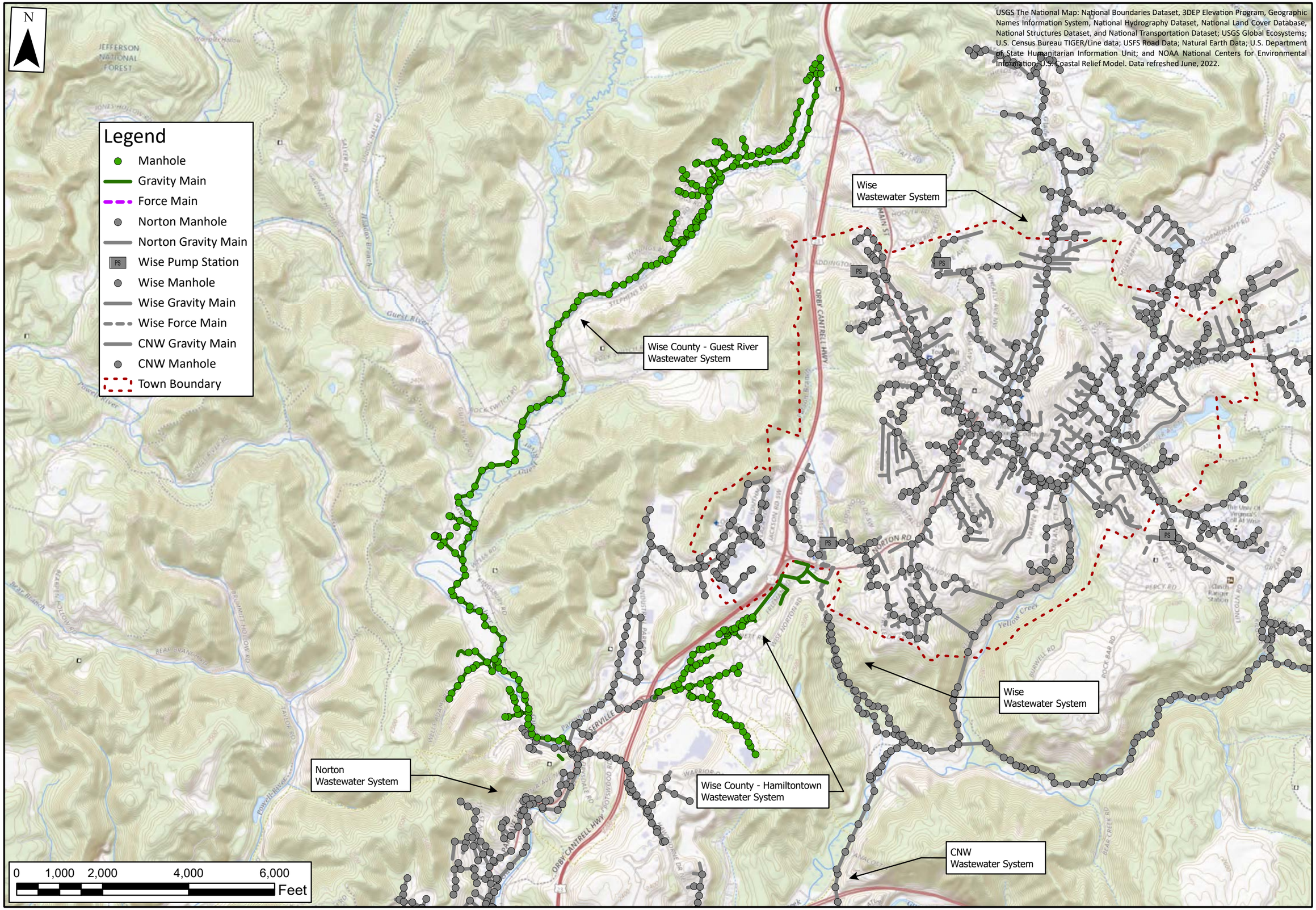
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/14/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

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SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

WISE COUNTY PSA
WASTEWATER
SYSTEM - NORTON
AREA

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/14/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 633 | Residential Customers |
| 34 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **667** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **1,052,833** | **868,850** | **83%** |
| **Daily Average** | **34,613** | **23,804** | **83%** |
| **Avg / Customer** | **51.89** | **36** | |

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.

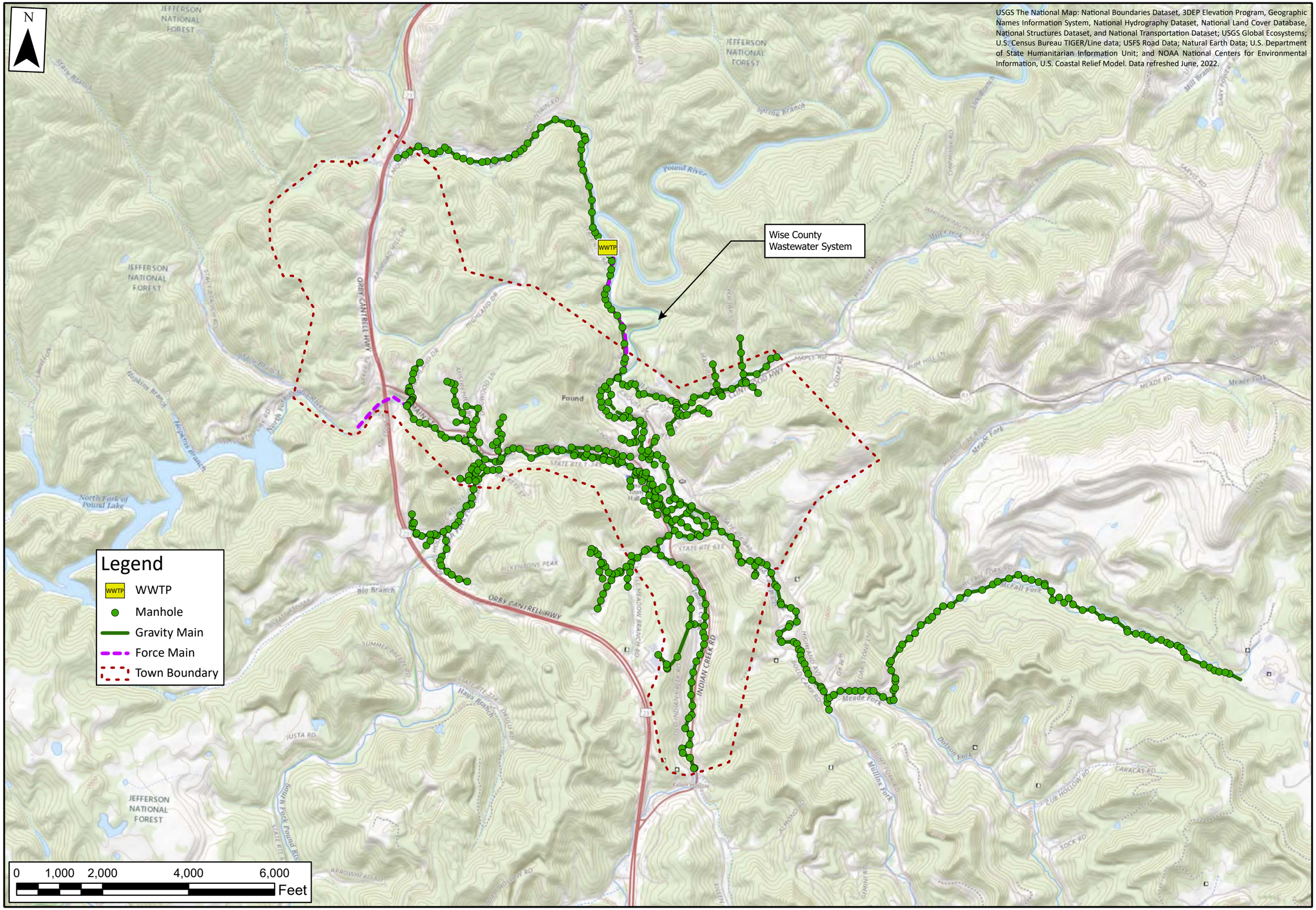
Facility Needs – Identified facility (identified in CIP, PER, etc..) needs are as follows:

- 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 |

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SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

WISE COUNTY PSA WASTEWATER SYSTEM - POUND

DEQ Virginia Department of Environmental Quality

DATE: 12/14/2022

SHEET:

DRAWN BY: JJR | CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 212 | Residential Customers |
| 0 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **212** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **0** | **403,150** | N/A |
| **Daily Average** | **0** | **13,438** | N/A |
| **Avg / Customer** | **0** | **63** | |

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.

N

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
- Pump Station (PS)
- Appalachia Manhole
- Appalachia Gravity Main
- Town Boundary

Wise County - Roda/Oska Wastewater System

Wise County - Stonega Wastewater System

Roda Pump Station

Wise County - Derby Wastewater System

Derby Pump Station

Appalachia Wastewater System

VIRGINIA

JEFFERSON NATIONAL FOREST

0 1,000 2,000 4,000 6,000 Feet

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## WISE COUNTY PSA WASTEWATER SYSTEM - NORTH APPALACHIA

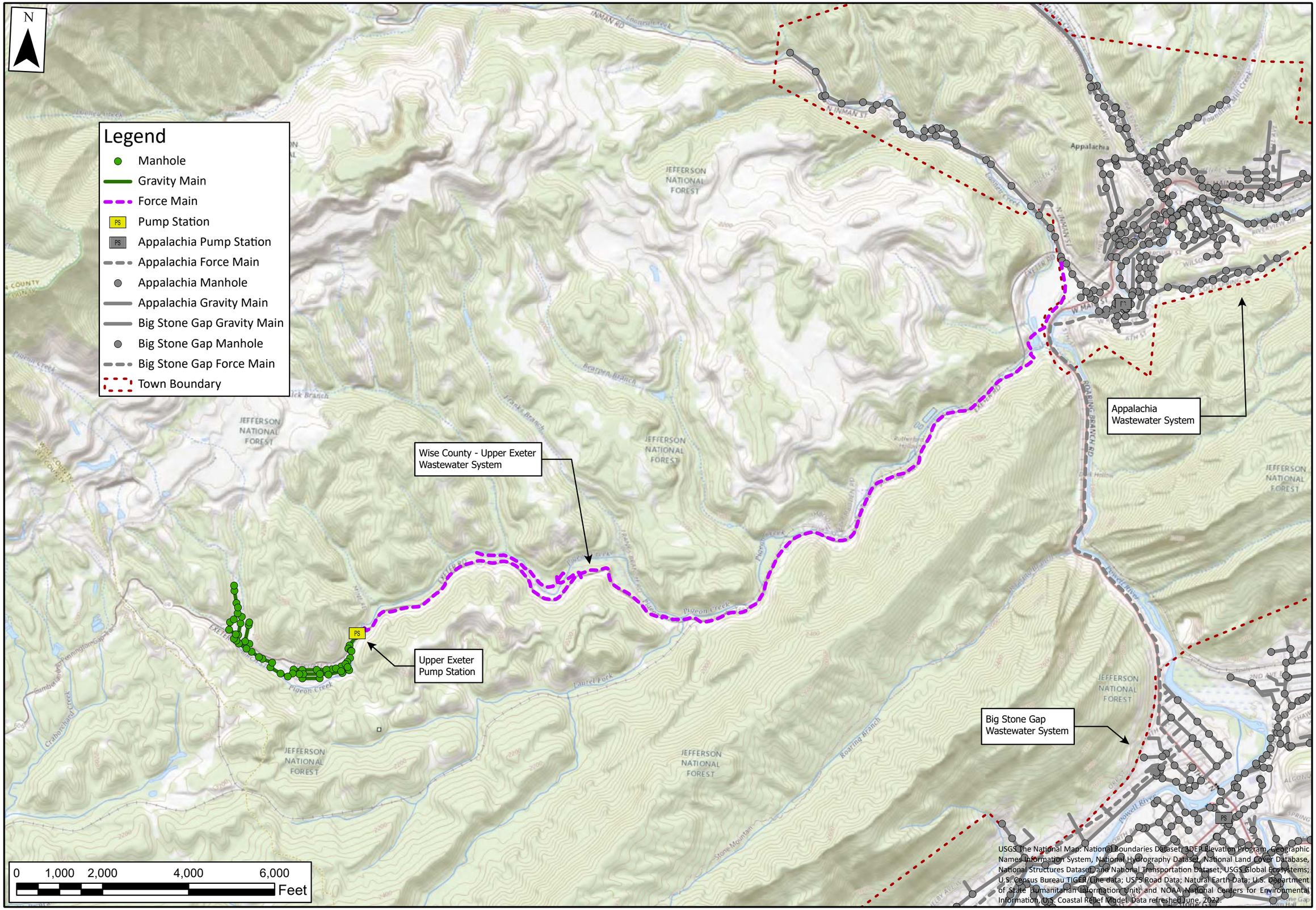
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/14/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248




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

## WISE COUNTY PSA WASTEWATER SYSTEM - WEST APPALACHIA

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/14/2022

SHEET:

DRAWN BY: IJR

CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 316 | Residential Customers |
| 3 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **319** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **0** | **633,725** | N/A |
| **Daily Average** | **0** | **21,124** | N/A |
| **Avg / Customer** | **0** | **293** | |

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.

N

## Legend

- Manhole
- Gravity Main
- Force Main
- Coeburn Pump Station
- Coeburn Manhole
- Coeburn Gravity Main
- Coeburn Force Main
- CNW 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; 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.

Coeburn
Wastewater System

CNW
Wastewater System

Wise County - Tacoma
Wastewater System

CNW
Wastewater System

Wise County - Riverview
Wastewater System

PS

0 1,000 2,000 4,000 6,000 Feet

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

# WISE COUNTY PSA WASTEWATER SYSTEM - COEBURN AREA

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/14/2022

SHEET:

DRAWN BY: IJR | CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 2,001 | Residential Customers |
| 124 | Commercial Customers |
| 54 | Industrial Customers |
| 0 | Other Municipal Systems |
| **2,179** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **N/A** | **9,366,033** | |

| | | | |
|---|---|---|---|
| **Daily Average** | **N/A** | **307,924** | **N/A** |
| **Avg / Customer** | **N/A** | **141** | **N/A** |

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.

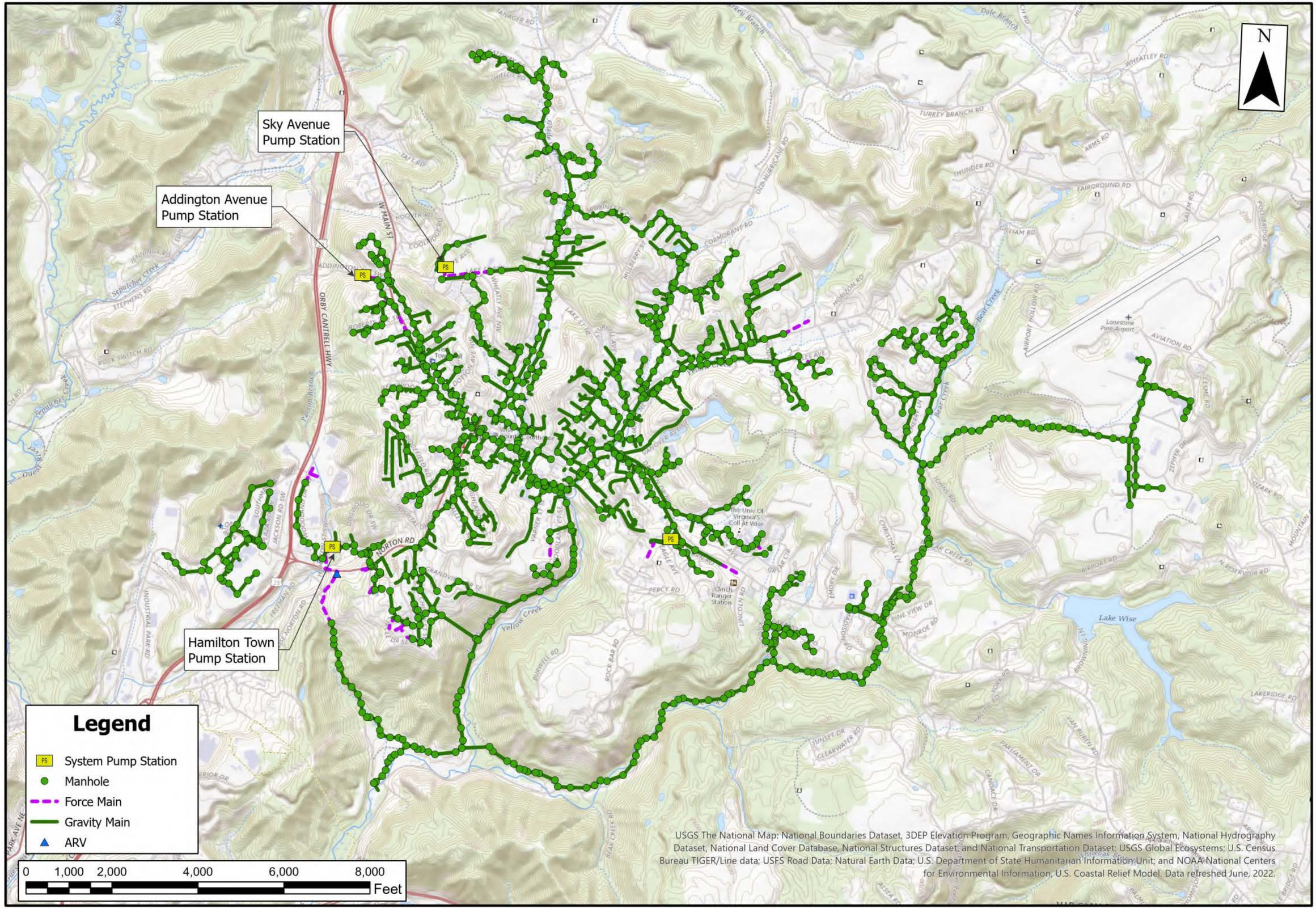
Sewer Rate Structure

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.




THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TOWN OF WISE

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:
SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

N

## Legend

- Manhole
- Gravity Main
- Force Main

Wise County

0 400 800 1,600 2,400 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## WISE COUNTY PSA WASTEWATER SYSTEM - LONESOME PINE AIRPORT

DEQ Virginia Department of Environmental Quality

DATE: 12/14/2022

SHEET:

DRAWN BY IJR | 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:

| | |
|---|---|
| 4,420 | Residential Customers |
| 730 | Commercial Customers |
| 1 | Other Municipal Systems |
| **5,151** | **Total Number of Customers** |

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:

| Month (2021) | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **71,422,500** | **26,929,832** | |
| **Daily Average** | **2,543,815** | **959,145** | |
| **Avg/Customer** | **493.8487805** | **186** | |

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 |

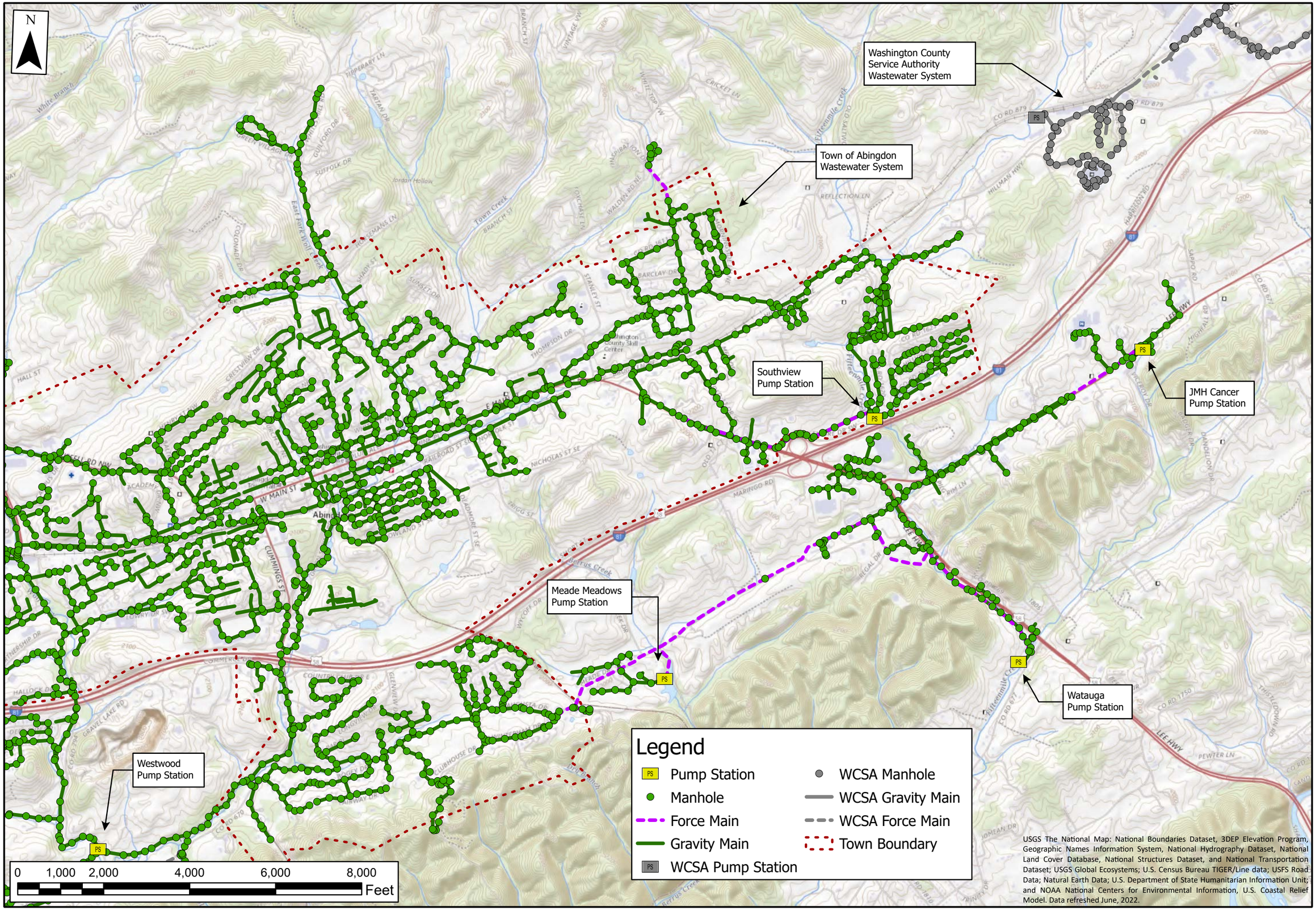
| | **Total** Sewer Fund | | |
|---|---|---|---|
| **Date** | **Principal** | **Interest** | **Total** |
| 11/30/2023 | 743,142.25 | 1,500.67 | 744,642.92 |
| 11/30/2024 | 711,611.32 | 513.22 | 712,124.54 |
| 11/30/2025 | 692,949.12 | | 692,949.12 |
| 11/30/2026 | 692,949.12 | | 692,949.12 |
| 11/30/2027 | 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 |
| **Total** | 3,716,905.41 | 2,013.89 | 3,718,919.30 |

## 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 |
| | | | | **Total Construction Cost** | **$ 2,250,000** |
| | 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 |
| | | | | **Total Opinion of Probable Cost** | **$ 3,314,000** |

## 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 |
| | | | | **Total Construction Cost** | **$ 4,763,000** |
| | 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 |
| | | | | **Total Opinion of Probable Cost** | **$ 6,188,000** |




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF ABINGDON WASTEWATER SYSTEM - EAST AREA

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

N

Wilson
Pump Station

Town of Abingdon
Wastewater System

Washington County
Service Authority
Wastewater System

Westwood
Pump Station

Wolfe Creek
Reclamation Facility

## Legend

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

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF ABINGDON WASTEWATER SYSTEM - WEST AREA

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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 |
| **7,900** | **Total Number of Customers** |

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:

| Month (2021) | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 | |
| **Monthly Average** | | **61,656,308** | |
| **Daily Average** | | **2,195,978** | |
| **Avg/Customer** | | **278** | |

* - 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 | Residential – Outside City |
|---|---|
| $17.14 Customer Charge, Min. Bill | $25.71 Customer Charge, Min. Bill |
| $3.86 per 1,000 Gallons Usage | $5.78 per 1,000 Gallons Usage |
| **Non-Residential – Inside City** | **Non-Residential – Outside City** |
| $38.61 Customer Charge, Min. Bill | $57.92 Customer Charge, Min. Bill |
| $3.40 per 1,000 Gallons Usage | $5.09 per 1,000 Gallons Usage |

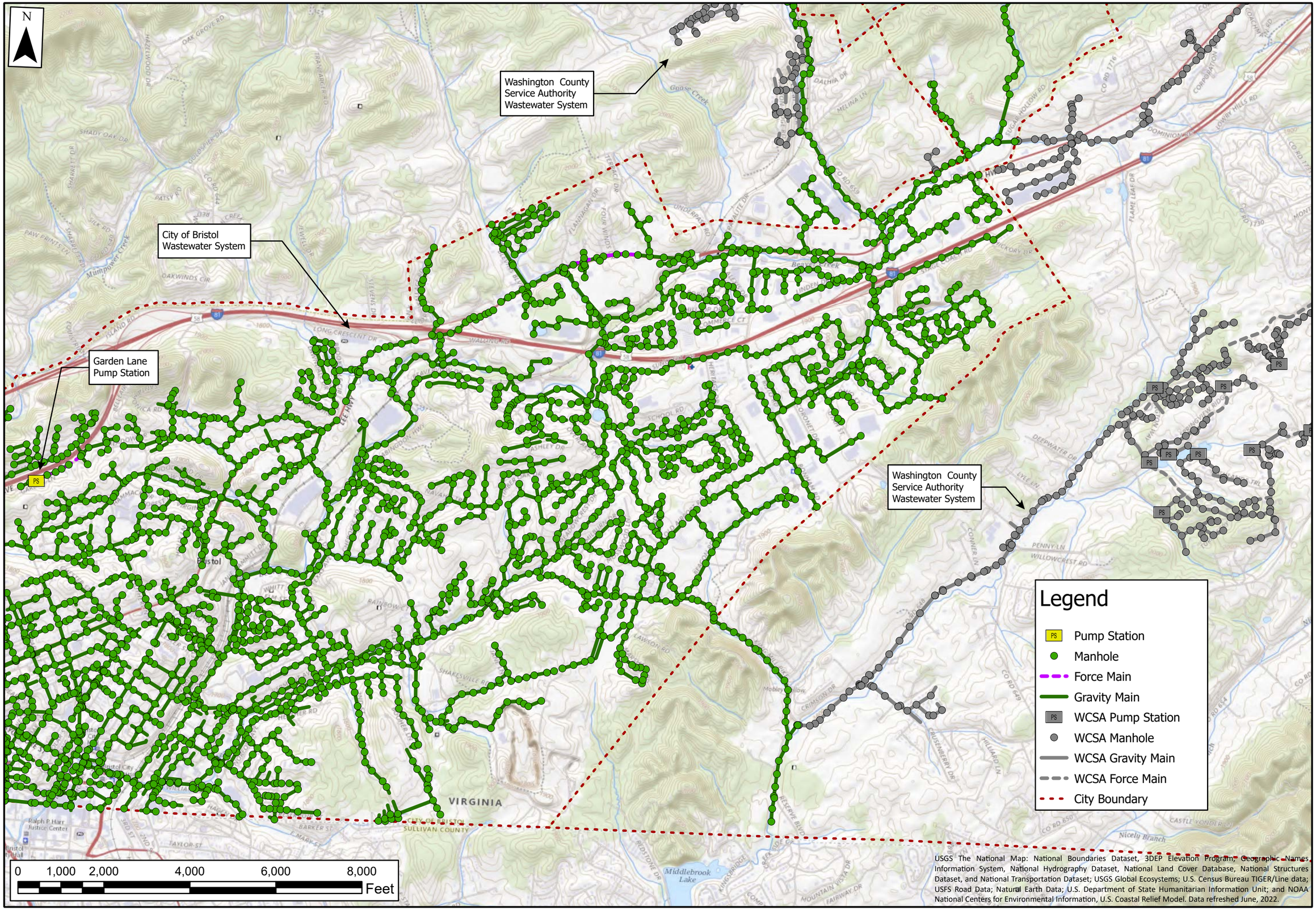
Opinion of Probable Cost for Necessary System Improvements – The opinion of probable cost for the identified system improvements is approximately $14,790,000.

System Debt and Maturity Date of Outstanding Loans

*Information not provided by BVU Authority.*

| TABLE 4.1: OPINION OF PROBABLE COST PHASE I | | | | |
|---|---|---|---|---|
| **Description** | **Quantity** | **Units** | **Unit Cost** | **Overall Costs** |
| **Option 1 - Full Interceptor Rehabilitation** | | | | |
| 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 |
| **Full Interceptor Rehabilitation Construction Cost** | | | | **$ 7,648,650** |
| 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 |
| **Total Non-Construction Cost** | | | | **$ 1,883,350** |
| **Total Phase I Opinion of Probable Project Cost** | | | | **$ 9,532,000** |

| TABLE 4.1 - OPINION OF PROBABLE COST: PROPOSED IMPROVEMENTS | | | | |
|---|---|---|---|---|
| **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 |
| | | | **Total Construction Cost** | **$4,093,908** |
| 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 |
| | | | **Subtotal Related Cost** | **$1,159,635** |
| | | | **Total Opinion of Probable Project Cost** | **$5,253,543** |




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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## BRISTOL VIRGINIA UTILITY AUTHORITY WASTEWATER STYEM - EAST AREA

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY: IJR | CHECKED BY:

PROJECT NO.: 2248

N

## 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

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

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# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## BRISTOL VIRGINIA UTILITY AUTHORITY WASTEWATER STYEM - NORTH AREA

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

| | |
|---|---|
| DATE: | 11/10/2022 |
| SHEET: | |
| DRAWN BY | IJR |
| CHECKED BY | |
| PROJECT NO. | 2248 |

N

## Legend

- PS — Pump Station
- Manhole
- Force Main
- Gravity Main
- City Boundary

City of Bristol Wastewater System

Garden Lane Pump Station

Island Road Pump Station

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

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# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## BRISTOL VIRGINIA UTILITY AUTHORITY WASTEWATER STYEM - WEST AREA

DEQ Virginia Department of Environmental Quality

| | |
|---|---|
| DATE: | 11/10/2022 |
| SHEET: | |
| DRAWN BY | IJR |
| CHECKED BY | |
| PROJECT NO. | 2248 |

# 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:

| | |
|---|---|
| 29 | Residential Customers |
| 47 | Commercial Customers |
| 0 | Industrial Customers |
| 0 | Other Municipal Systems |
| **76** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **284,972** | **291,042** | **102.1%** |
| **Daily Average** | **9,369** | **9,568** | **102.1%** |
| **Avg / Customer** | **123** | **126** | |

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

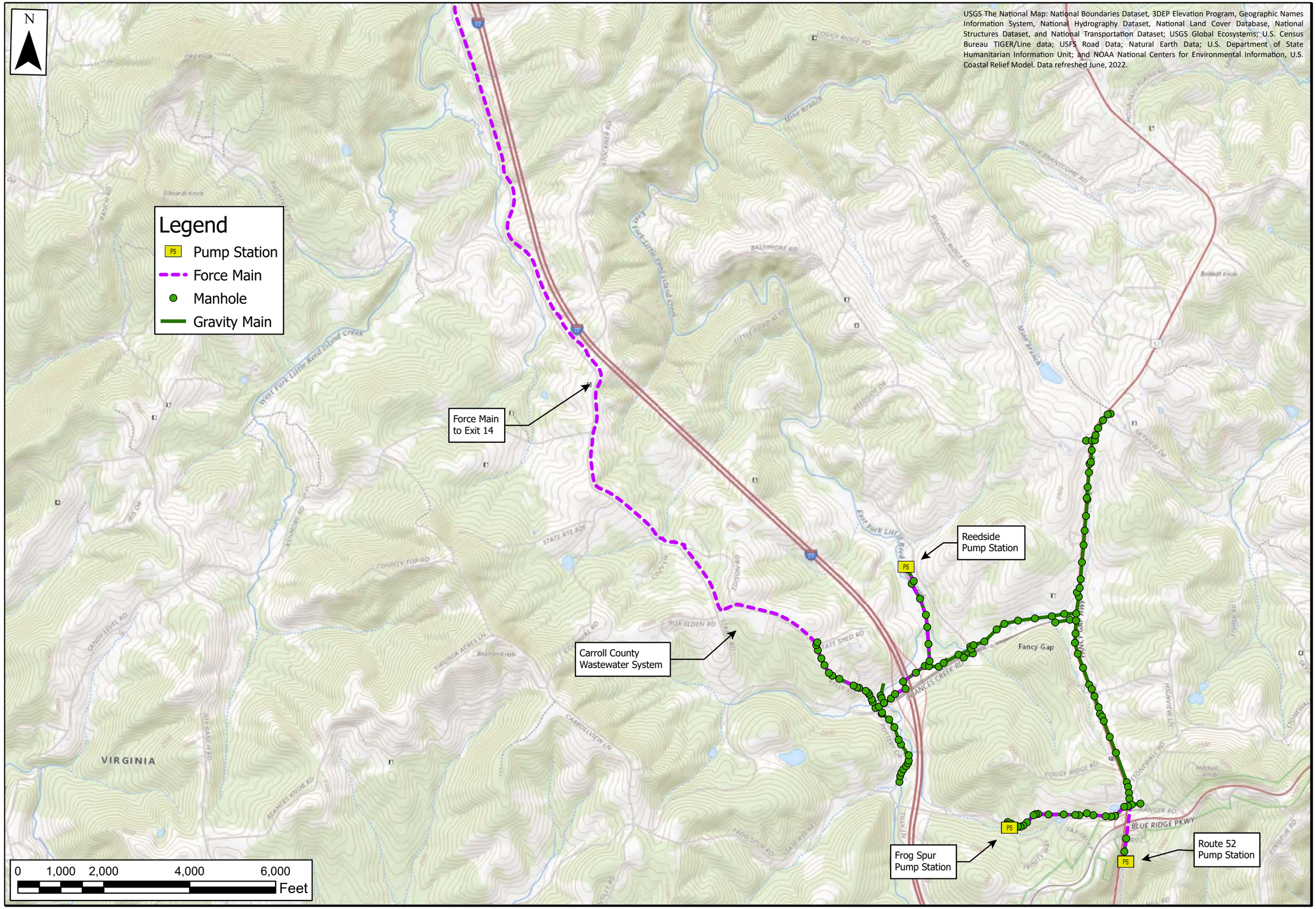
The following monthly sewer rate structure was last modified on July 15, 2021:

| Residential Sewer | Commercial Sewer |
|---|---|
| First 1,000 Gallons @ $24.20 Minimum | First 2,000 Gallons @ $67.21 Minimum |
| All Over 1,000 Gallons @ $11.00 per 1,000 Gallons | 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.




THOMPSON & LITTON

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# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CARROLL COUNTY WASTEWATER SYSTEM - FANCY GAP AREA

DEQ Virginia Department of Environmental Quality

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 889 | Residential Customers |
| 69 | Commercial Customers |
| 4 | Industrial Customers |
| 0 | Other Municipal Systems |
| **962** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **19,455,471** | **16,799,946** | **86.4%** |
| **Daily Average** | **639,632** | **552,327** | **86.4%** |
| **Avg / Customer** | **665** | **574** | |

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:

| Loan Balance | Payoff Date |
|---|---|
| $ 243,967 | 2039 |
| 623,587 | 2040 |
| 2,820.590 | 2048 |
| 1,497,867 | 2052 |

N

## Legend

- Pump Station
- Force Main
- Manhole
- Gravity Main
- Hillsville Manholes
- Hillsville Gravity Mains
- 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.

Hillsville
Wastewater System

Exit 14
Pump Station

DLB
Pump Station

Industrial Park
Pump Station

Woodlawn
Pump Station

CCPSA
Fancy Gap System

0 1,000 2,000 4,000 6,000 Feet

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CARROLL COUNTY WASTEWATER SYSTEM - GLADEVILLE/ CRANBERRY

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY: IJR

CHECKED BY:

PROJECT NO.: 2248

N

## Legend

- Pump Station
- Force Main
- Manhole
- Gravity Main
- Galax Gravity Main
- Galax Manhole
- Galax Pump Station

Hills Pump Station

Gladeville Pump Station

Crooked Creek Pump Station

Galax Wastewater System

0 1,000 2,000 4,000 6,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CARROLL COUNTY WASTEWATER SYSTEM - GLADEVILLE/ CRANBERRY

DEQ Virginia Department of Environmental Quality

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# I-77 EXIT 1 COLLECTION SYSTEM

**CARROLL COUNTY PUBLIC SERVICE AUTHORITY**

*Mount Rogers Planning District Commission*

System Description – The I-77 Exit 1collection 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:

0 Residential Customers
3 Commercial Customers
0 Industrial Customers
0 Other Municipal Systems
**3 Total Number of Customers**

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **265,667** | **386,342** | **145.4%** |
| **Daily Average** | **8,734** | **12,702** | **145.4%** |
| **Avg / Customer** | **2,911** | **4,234** | |

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.

N

## Legend

- Pump Station (PS)
- Force Main
- WWTP
- Manhole
- Gravity Main

Exit 1
Pump Station

0 250 500 1,000 1,500 Feet

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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

CARROLL COUNTY
WASTEWATER
SYSTEM - I-77 EXIT 1

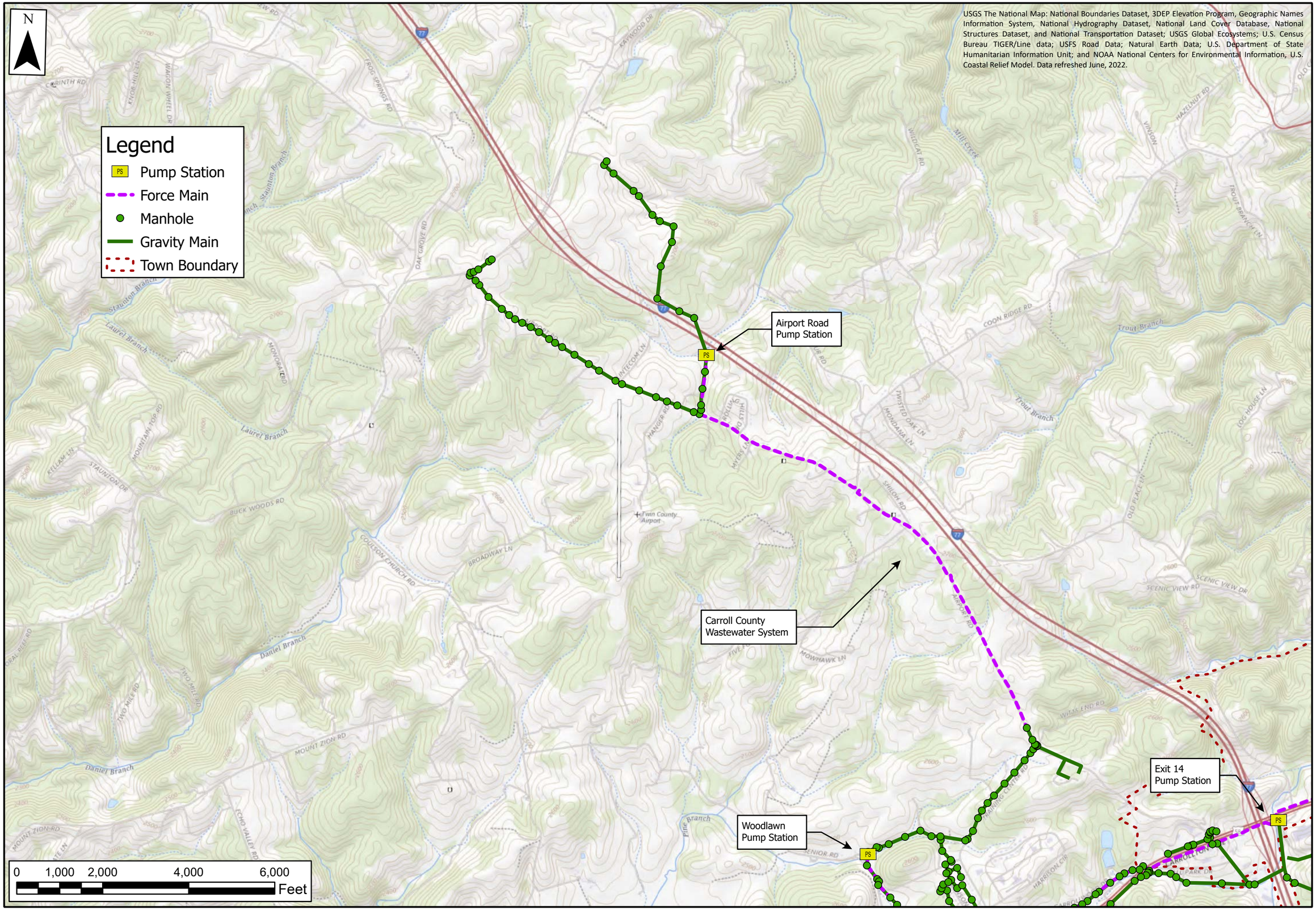
DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

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THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CARROLL COUNTY WASTEWATER SYSTEM - AIRPORT AREA

DEQ Virginia Department of Environmental Quality

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

N

## Legend

- PS — Pump Station
- Force Main
- Manhole
- Gravity Main
- Hillsville Manholes
- Hillsville Gravity Mains
- Town Boundary

Hillsville Elementary Pump Station

Hillsville Wastewater System

0 500 1,000 2,000 3,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CARROLL COUNTY WASTEWATER SYSTEM - ROUTE 221 AREA

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY: IJR | CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 1,039 | Residential Customers |
| 130 | Commercial Customers |
| 5 | Industrial Customers |
| 1 | Other Municipal Systems |
| **1,175** | **Total Number of Customers** |

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:

| Month (2021) | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **6,985,750** | **9,040,988** | |
| **Daily Average** | **248,808** | **297,238** | |
| **Avg/Customer** | **212** | **253** | |

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

**2022-2023**

**Effective July 1, 2022**

| | | | | | | | Current 2021-2022 | Increase 2022-2023 |
|---|---|---|---|---|---|---|---|---|
| **Residential** | | | | | | | | |
| **In Town** | | | | | | | | |
| | First | 2,000 | gallons @ | $ 22.14 | Min. | $ | 21.28 | 5.66% |
| | All over | 2,000 | gallons @ | $ 5.68 | per 1,000 gal | $ | 5.51 | 5.08% |
| **Out of Town** | | | | | | | | |
| | 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% |
| **Commercial/Industrial** | | | | | | | | |
| **In Town** | First | 5,000 | gallons @ | $ 40.47 | Min | $ | 38.54 | 5.00% |
| | Next | 495,000 | gallons @ | $ 6.82 | per 1,000 gal | $ | 6.59 | 5.00% |
| | All over | 500,000 | gallons @ | $ 5.57 | per 1,000 gal | $ | 5.30 | 5.00% |
| **Out of Town** | First | 5,000 | gallons @ | $ 53.00 | Min | $ | 51.71 | 2.50% |
| | Next | 495,000 | gallons @ | $ 8.33 | per 1,000 gal | $ | 6.18 | 2.50% |
| | All over | 500,000 | gallons @ | $ 6.08 | per 1,000 gal | $ | 4.96 | 2.50% |

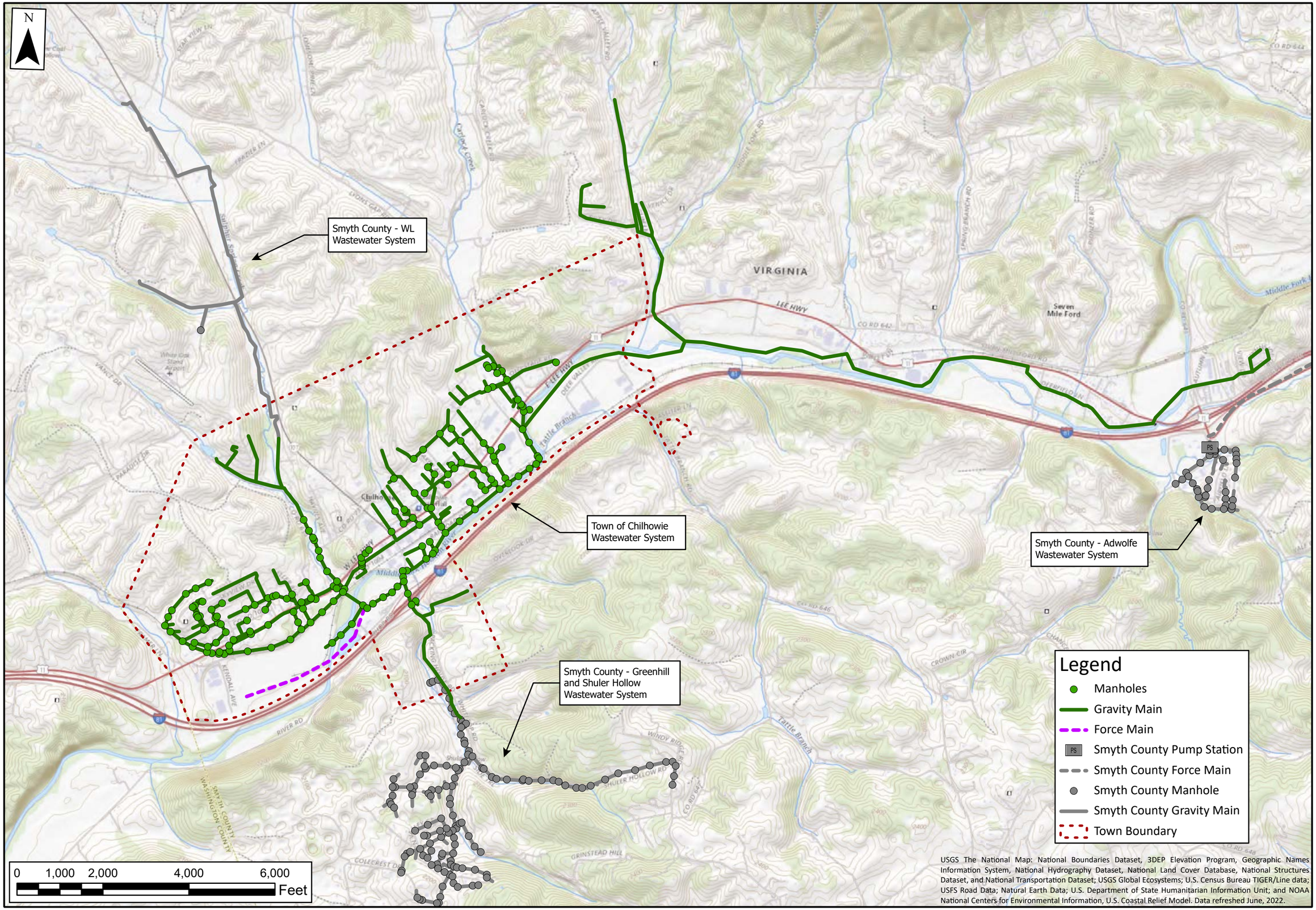
## SEWER

| | | | | | | | Current Rate | Increase % |
|---|---|---|---|---|---|---|---|---|
| **Residential** | | | | | | | | |
| **In Town** | | | | | | | | |
| | 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% |
| **Out of Town** | | | | | | | | |
| | First | 2,000 | gallons @ | $ 45.09 | Min. | $ | 45.06 | 0.00% |
| | All over | 2,000 | gallons @ | $ 11.30 | per 1,000 ga | $ | 11.30 | 0.00% |
| **Commercial/Industrial** | | | | | | | | |
| | First | 5,000 | gallons @ | $ 56.21 | Min. | $ | 52.58 | 6.00% |
| | Next | 495,000 | gallons @ | $ 9.36 | per 1,000 ga | $ | 8.90 | 6.00% |
| | All over | 500,000 | gallons @ | $ 6.30 | per 1,000 ga | $ | 5.05 | 6.00% |
| **MUNICIPAL** | | | | | | | | |
| | First | 1,000 | gallons @ | $ 4.51 | Min. 5000 gal per 1,000 | $ | 4.40 | 2.50% |
| | Next | 495,000 | gallons @ | $ 4.51 | gall ( next <495,000) per 1,000 | $ | 4.40 | 2.50% |
| | All over | 500,000 | gallons @ | $ 4.51 | gal. (all over 500,000) | $ | 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% |




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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TOWN OF
CHILHOWIE
WASTEWATER
SYSTEM

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 12/16/2022
SHEET:
DRAWN BY IJR
CHECKED BY
PROJECT NO. 2248

**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:

| | |
|---|---|
| 286 | Residential Customers |
| 10 | Commercial/Industrial Customers |
| 296 | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 | 1,574,000 | 511,322 | 32.5% |
| **Monthly Average** | **2,564,750** | **640,853** | **25.0%** |
| **Daily Average** | **84,321** | **21,069** | **25.0%** |
| **Avg / Customer** | **272** | **68** | |

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.

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.

N

Old Mill
Pump Station

Town of Fries
Wastewater System

Fender's Curve
Pump Station

WWTP

## Legend

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

0 250 500 1,000 1,500 2,000 2,500 Feet

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

# TOWN OF FRIES WASTEWATER SYSTEM

DATE: 11/10/2022

SHEET:

DRAWN BY IJR

CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 2,400 | Residential Customers |
| 40 | Commercial Customers |
| 460 | Industrial Customers |
| 1 | Other Municipal Systems |
| **2,901** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **50,920,583** | **22,892,583** | **45.0%** |
| **Daily Average** | **1,674,101** | **752,633** | **45.0%** |
| **Avg / Customer** | **577** | **260** | |

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.

N

## Legend

- WWTP — WWTP
- Pump Station — PS
- Force Main
- Gravity Main
- Manhole
- Carroll County Pump Station — PS
- Carroll County Manhole
- Carroll County Force Main
- Carroll County Gravity Main
- City Limits

Effluent Force Main

Fries Road Pump Station

Ballards Branch Pump Station

City of Galax Wastewater System

BC Vaughan Pump Station

Mill Creek Flow Equalization Pump Station

Carroll County - Gladeville Cranberry Wastewater System

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CITY OF GALAX WASTEWATER SYSTEM - NORTH AREA

DEQ Virginia Department of Environmental Quality

DATE: 11/15/2022

SHEET:

DRAWN BY: IJR | CHECKED BY:

PROJECT NO.: 2248

N

Fries Road
Pump Station

Ballards Branch
Pump Station

City of Galax
Wastewater System

## Legend

- WWTP — WWTP
- PS — Pump Station
- Force Main
- Gravity Main
- Manhole
- City Limits

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CITY OF GALAX WASTEWATER SYSTEM - SOUTH AREA

DEQ Virginia Department of Environmental Quality

DATE: 11/15/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 1,050 | Residential Customers |
| 180 | Commercial Customers |
| 4 | Industrial Customers |
| 1 | Other Municipal Systems |
| **1,235** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |

| | | | |
|---|---|---|---|
| **Monthly Average** | **11,353,333** | **7,939,350** | **70%** |
| **Daily Average** | **373,260** | **261,020** | **70%** |
| **Avg / Customer** | **129** | **91** | |

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 30th, 2022: $3,043,212.55

VRA Loan: UV System 2014: June 30th, 2022: $101,617.00

Skyline National Bank: Sewer System Upgrade 2000, June 30th, 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.

0 750 1,500 3,000 4,500 6,000
Feet

## Legend

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

N

Weddle Street
Pump Station #2

Weddle Street
Pump Station #1

58 West
Pump Station



THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TOWN OF HILLSVILLE

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY: DRW | CHECKED BY: CHK

PROJECT NO. xxxx

# 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:

394 Residential Customers
105 Commercial/Industrial Customers
499 **Total Number of Customers**

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:

| Month (2021) | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **8,741,267** | **4,944,837** | |
| **Daily Average** | **311,333** | **176,117** | |
| **Avg/Customer** | **624** | **353** | |

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.

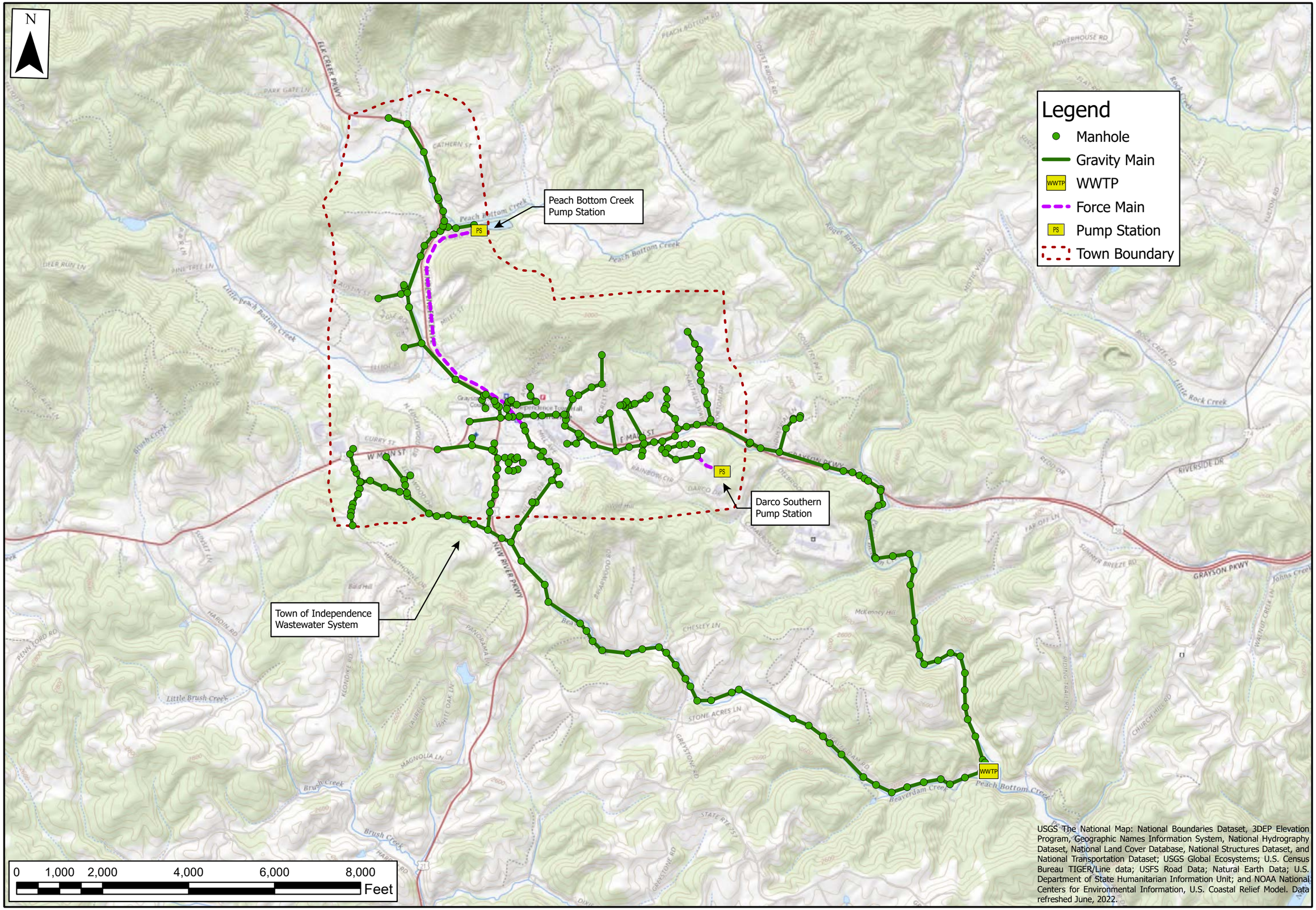
| Residential Customers | Commercial & Industrial Customers |
|---|---|
| $23.63 for first 1,000 Gallons, Minimum | $29.54 for First 1,000 Gallons, Minimum |
| All Over @ $7.13 per 1,000 Gallons | All Over @ $8.91 per 1,000 Gallons |

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.

| TABLE 4.1 - OPINION OF PROBABLE COST: PROPOSED IMPROVEMENTS | | | | |
|---|---|---|---|---|
| **Description** | **Quantity** | **Units** | **Unit Cost** | **Overall Costs** |
| 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 |
| | | | **Total Construction Cost** | **$764,794** |
| 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 |
| | | | **Subtotal Related Cost** | **$246,046** |
| | | | **Total Opinion of Probable Project Cost** | **$1,010,840** |

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SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

TOWN OF INDEPENDENCE WASTEWATER SYSTEM

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/15/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 1830 | Residential Customers |
| 1126 | Commercial Customers |
| 0 | Industrial Customers |
| 4 | Other Municipal Systems |
| **2960** | **Total Number of Customers** |

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 grider 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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **42,264,750** | **21,317,242** | **50.4%** |
| **Daily Average** | **1,389,526** | **700,841** | **50.4%** |
| **Avg / Customer** | **469** | **237** | |

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.

| Loan | Borrower/Placement | Maturity Date | Balance as of June 30, 2022 |
|---|---|---|---|
| 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.

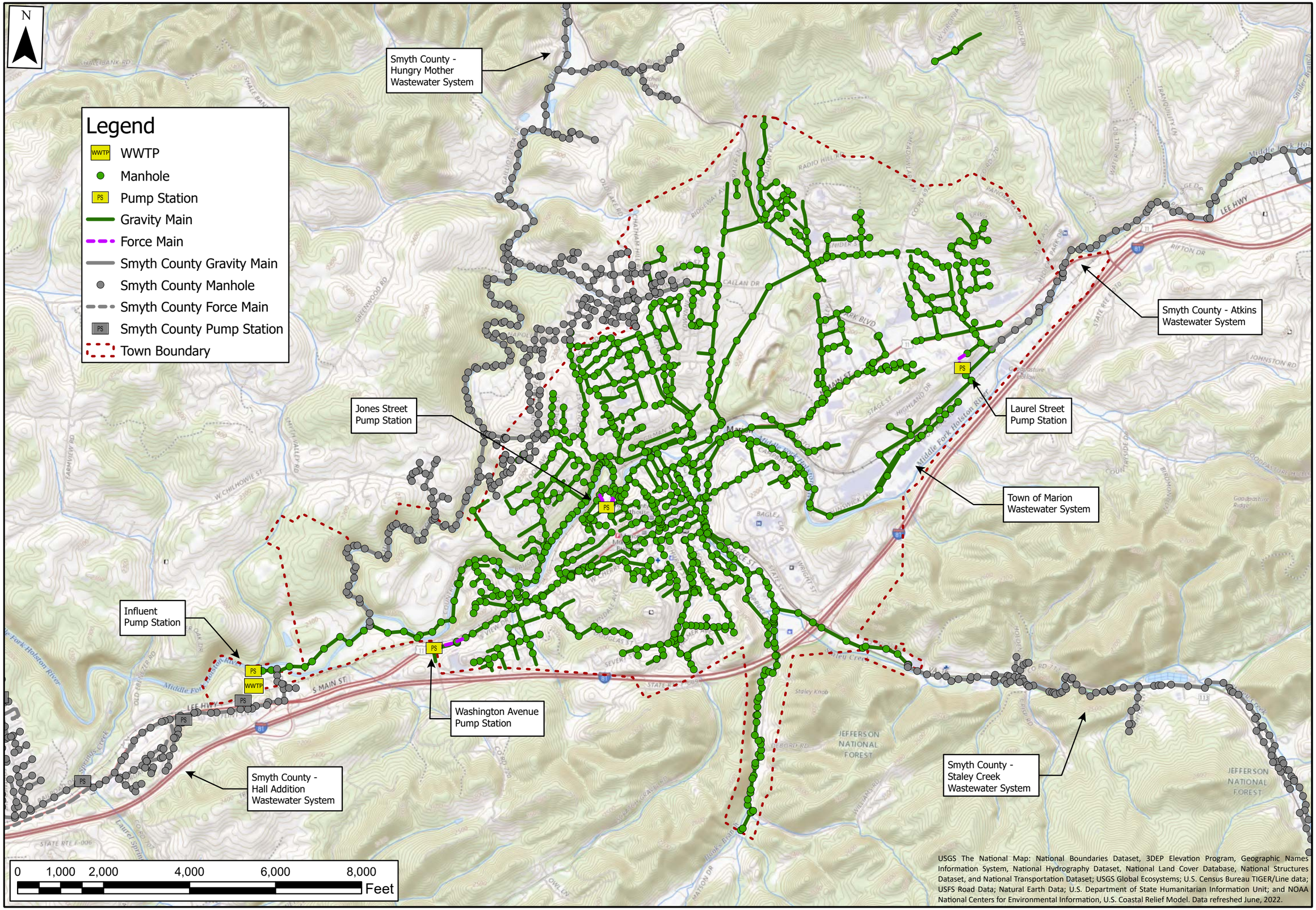
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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)

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# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF MARION WASTEWATER SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 674 | Residential Customers |
| 59 | Commercial Customers |
| 5 | Industrial Customers |
| 4 | Other Municipal Systems (Public Authorities) |
| **742** | **Total Number of Customers** |

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:

| **Month** | **Gallons Treated** | **Gallons Billed** | **Percent Accountable** |
|---|---|---|---|
| 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% |
| **Monthly Average** | **7,000,000** | **3,591,667** | **51.3%** |
| **Daily Average** | **230,137** | **118,082** | **51.3%** |

| | | |
|---|---|---|
| **Avg / Customer** | **281** | **144** |

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 plant 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.

| Loan | Borrower/Placement | Maturity Date | Balance as of June 30, 2022 |
|---|---|---|---|
| 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.

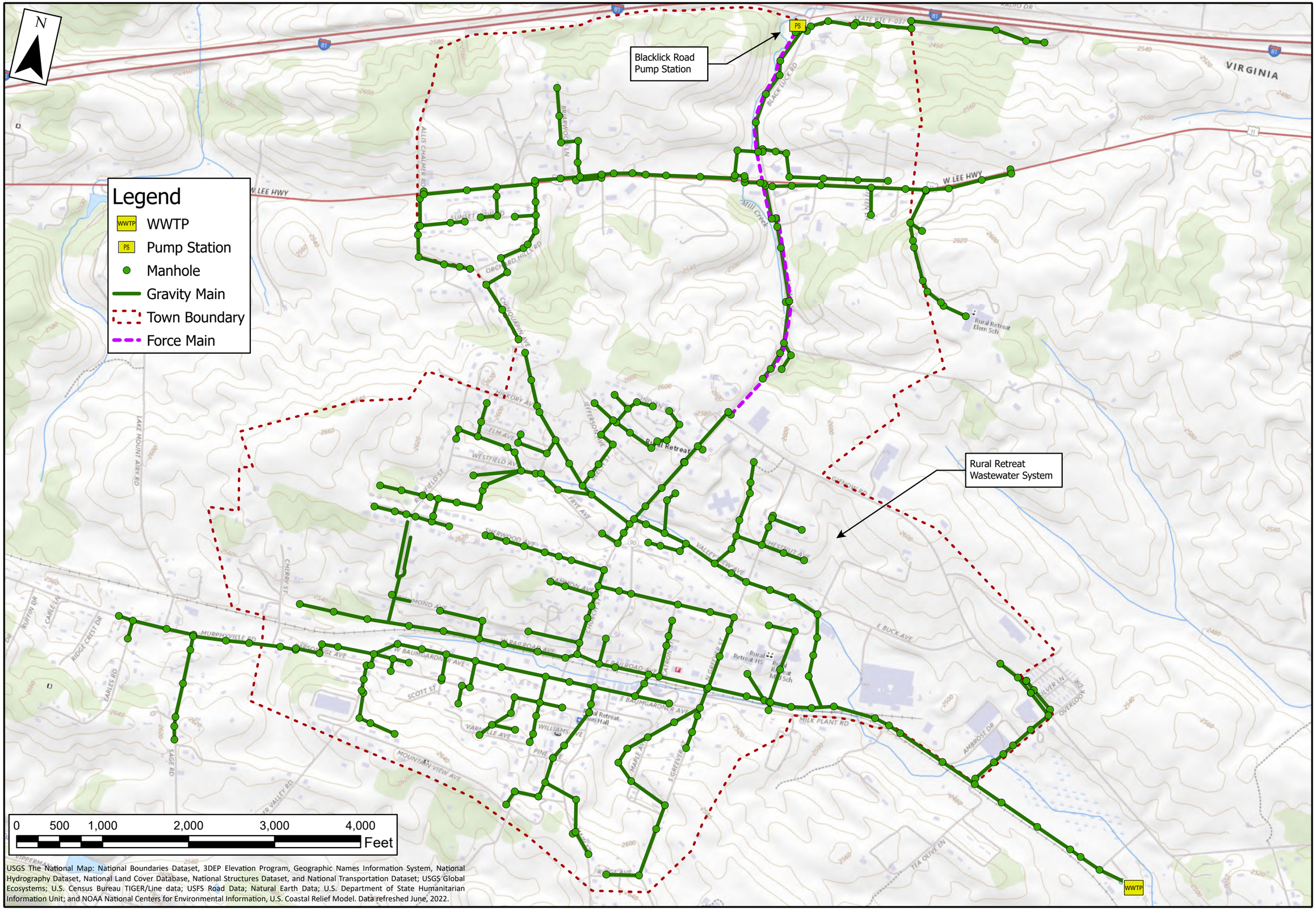
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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)




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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## TOWN OF RURAL RETREAT WASTEWATER SYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 11/10/2022

SHEET:

DRAWN BY: IJR

CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 880 | Residential Customers |
| 61 | Commercial Customers |
| 2 | Industrial Customers |
| 4 | Other Municipal Systems |
| **947** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **10,007,250** | **2,288,024** | **22.9%** |
| **Daily Average** | **329,005** | **75,223** | **22.9%** |
| **Avg / Customer** | **359** | **82** | |

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.

| | **Sewer Rate - Residential** | |
|---|---|---|
| | **In-Town** | **Out of Town** |
| 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 |

| | **Sewer Rate - Commercial** | |
|---|---|---|
| | **In-Town** | **Out of Town** |
| 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.

| Loan | Borrower/Placement | Maturity Date | Balance as of June 30, 2021 |
|---|---|---|---|
| 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*)

N

Smyth County -
Allison Gap
Wastewater System

Government
Plant Rd
Pump Station

McCready
Pump Station

Rte. 634/Headworks
Pump Station

Henrytown
Pump Station

Rte. 91
Pump Station

Farm Rd
Pump Station

Plasterco
Pump Station

## Legend

- WWTP — WWTP
- PS — Pump Station
- Manhole
- Force Main
- Gravity Main
- Smyth County Gravity Main
- Smyth County Manhole
- Town Boundary

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## SALTVILLE WASTEWATER SYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 36 | Residential Customers |
| 10 | Commercial Customers |
| 0 | Industrial Customers |
| 24 | Other Municipal Systems |
| **70** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **318,333** | | **132%** |
| **Daily Average** | **10,466** | | |
| **Avg / Customer** | **150** | | |

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.

| Loan | Borrower/Placement | Maturity Date | Balance as of June 30, 2022 |
|---|---|---|---|
| 1 | USDA RD | 2060 | |

Yearly payment on Loan 1 are $78,492.

N

## Legend

- Force Main
- Pump Station
- Manhole
- Gravity Main
- Chilhowie Gravity Main

Town of Chilhowie Wastewater System

Exit 39 Pump Station

Smyth County - Exit 39 Subsystem

Oak Point Elementary School Pump Station

I-81 Crossing/Dip Dog Pump Station

Smyth County - Hall Addition Subsystem

Rolling Hills Drive Pump Station

Smyth County - Adwolfe Subsystem

0 500 1,000 2,000 3,000 4,000 5,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

SMYTH COUNTY WASTEWATER SYSTEM - ADWOLFE SUBSYSTEM

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY: IJR | CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 113 | Residential Customers |
| 1 | Commercial Customers |
| 0 | Industrial Customers |
| 2 | Other Municipal Systems |
| **116** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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 |
| **Monthly Average** | **504,535** | **244,736** | **57** |
| **Daily Average** | **16,587** | **8,046** | |
| **Avg / Customer** | **143** | **70** | |

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.

N

## 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 - VPDESD # 0026808

Smyth County - Allison Gap Subsystem

Town of Saltville Wastewater System

WWTP

PS

JEFFERSON NATIONAL FOREST

North Fork Holston River

HARPER LN

0 500 1,000 2,000 3,000 4,000 5,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## SMYTH COUNTY WASTEWATER SYSTEM - ALLISON GAP SUBSYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 59 | Residential Customers |
| 26 | Commercial Customers |
| | Industrial Customers |
| | Other Municipal Systems |
| **85** | **Total Number of Customers** |

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:

| **Month** | **Gallons Treated** | **Gallons Billed** | **Percent Accountable** |
|---|---|---|---|
| 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% |
| **Monthly Average** | **5,300,918** | | **34%** |
| **Daily Average** | **174,277** | | |
| **Avg / Customer** | **2,050** | | |

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 |

**Sewer Rate - Commercial**

| | |
|---|---|
| 0-4,000 gallons | $54.32 minimum bill |
| 4,001 and over | $12.42 per 1,000 gallons |

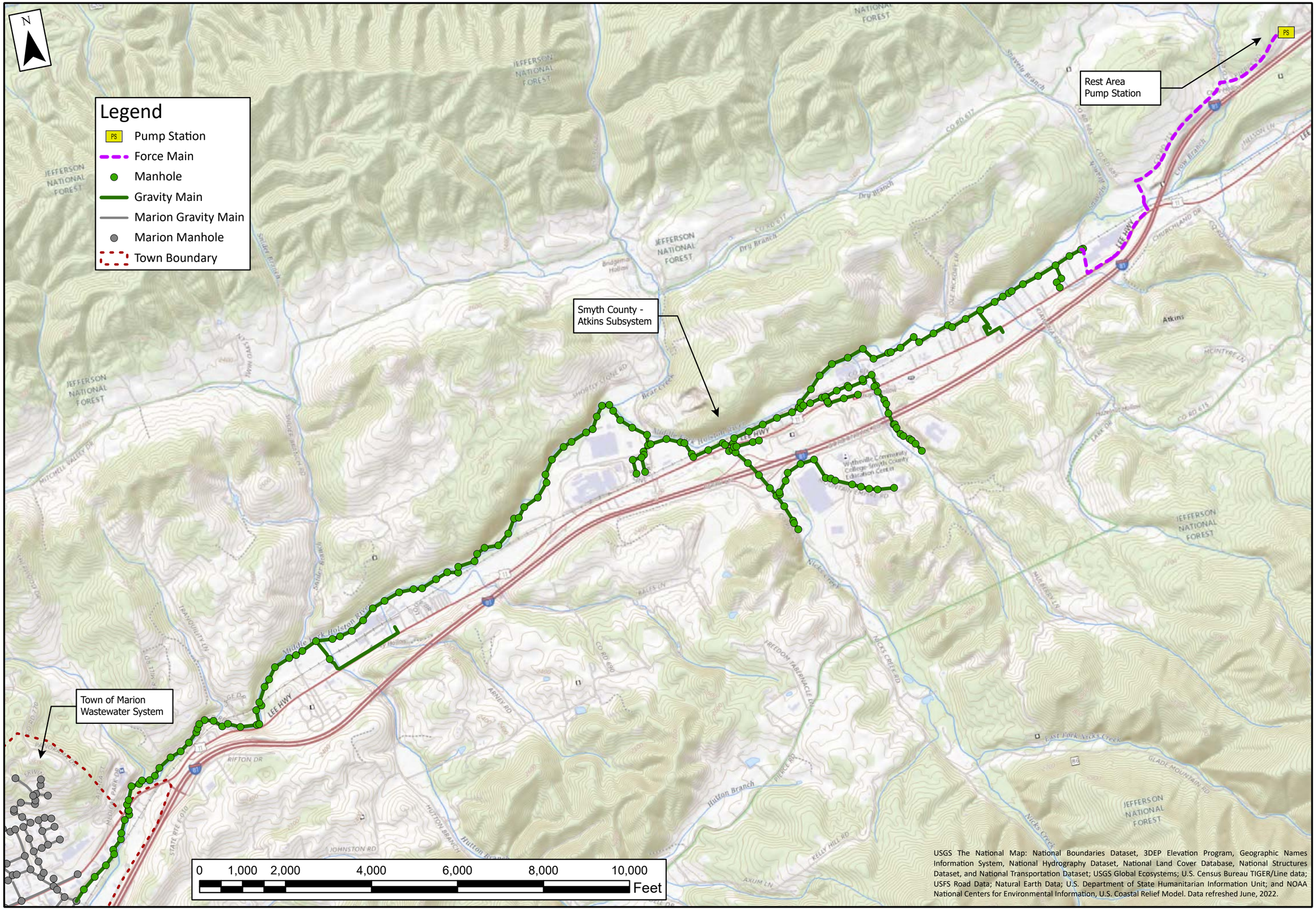
**Sewer Rate - Industrial and Industrial Enterprise**

| | |
|---|---|
| 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.




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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

SMYTH COUNTY
WASTEWATER SYSTEM -
ATKINS SUBSYSTEM

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY: JJR | CHECKED BY:

PROJECT NO.: 2248

# 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:

| | |
|---|---|
| 195 | Residential Customers |
| 7 | Commercial Customers |
| 0 | Industrial Customers |
| 9 | Other Municipal Systems |
| **211** | **Total Number of Customers** |

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 Higway 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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **591,333** | | **115%** |
| **Daily Average** | **19,441** | | |
| **Avg / Customer** | **92** | | |

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.

| Loan | Borrower/Placement | Maturity Date | Balance as of June 30, 2022 |
|---|---|---|---|
| 1 | USDA RD | 2047 | |

Yearly payment on Loan 1 are $68,940.

N

## Legend

- Force Main
- Pump Station (PS)
- Manhole
- Gravity Main
- Marion Manhole
- Marion Gravity Main
- Town Boundary

Town of Marion Wastewater System

Hall Addition Phase II Pump Station

Hall Addition/Cedars Community Pump Station 1

Hall Addition/Cedars Community Pump Station 2

Hall Addition/Cedars Community Pump Station 3

Smyth County - Hall Addition Subsystem

Smyth County - Adwolfe Subsystem

0 500 1,000 2,000 3,000 4,000 5,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## SMYTH COUNTY WASTEWATER SYSTEM - HALL ADDITION SUBSYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 200 | Residential Customers |
| 1 | Commercial Customers |
| | Industrial Customers |
| 4 | Other Municipal Systems |
| **205** | **Total Number of Customers** |

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.

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **1,737,892** | | **38%** |
| **Daily Average** | **57,136** | | |
| **Avg / Customer** | **279** | | |

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 Dept and Maturity Date of Outstanding Loans

The subsystem currently has no known debt.

N

## Legend

- Pump Station
- Manhole
- Gravity Main
- Marion Gravity Main
- Marion Manhole
- Town Boundary

Smyth County - Hungry Mother Subsystem

Town of Marion Wastewater System

Smyth County - Hall Addition Subsystem

Smyth County - Staley Creek Subsystem

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## SMYTH COUNTY WASTEWATER SYSTEM - HUNGRY MOTHER SUBSYSTEM

DEQ Virginia Department of Environmental Quality

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 73 | Residential Customers |
| 6 | Commercial Customers |
| | Industrial Customers |
| 3 | Other Municipal Systems |
| **82** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **2,701,412** | | **9%** |
| **Daily Average** | **88,813** | | |
| **Avg / Customer** | **1,083** | | |

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 |

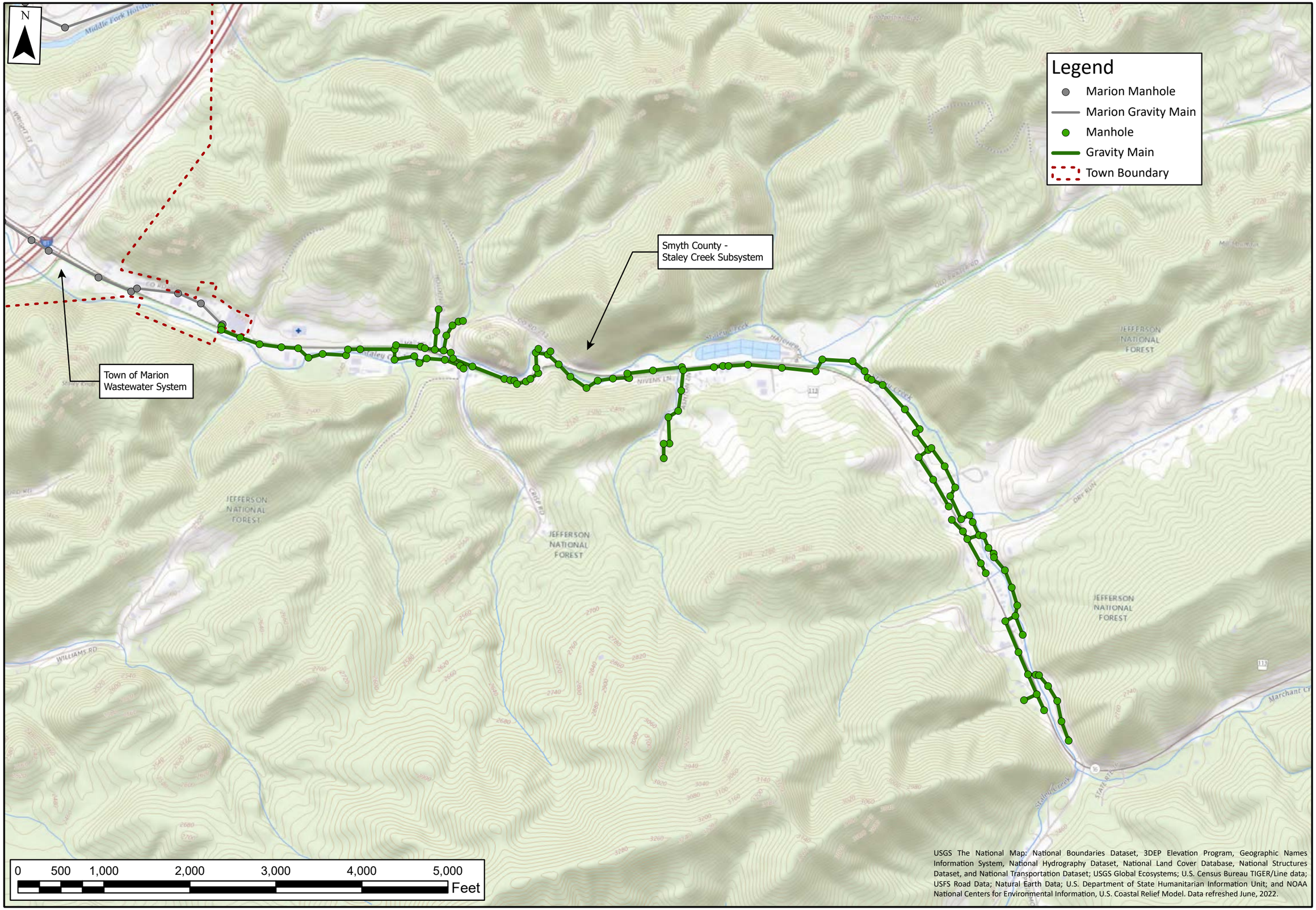
**Sewer Rate - Industrial and Industrial Enterprise**

| | |
|---|---|
| 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.




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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

SMYTH COUNTY
WASTEWATER SYSTEM -
STALEY CREEK
SUBSYSTEM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

N

## Legend

- Manhole
- Gravity Main
- Chilhowie Manholes
- Chilhowie Gravity Main
- Town Boundary

Smyth County- WL Wastewater System

Town of Chilhowie Wastewater System

0 500 1,000 2,000 3,000 4,000 5,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

SMYTH COUNTY WASTEWATER SYSTEM - WL

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

N

Town of Chilhowie
Wastewater System

Smyth County
- Greenhill and Shuler
Hollow Subsystem

Greenhill and Shuler
Hollow Sewer Extension
Pump Station

Legend

- Pump Station
- Manhole
- Gravity Main
- Chilhowie Manholes
- Chilhowie Gravity Main
- Chilhowie Force Main
- Town Boundary

0 500 1,000 2,000 3,000 4,000 5,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

SMYTH COUNTY
WASTEWATER SYSTEM -
GREEN HILL AND
SHULER SUBSYSTEM

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: 11/10/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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:

| | |
|---|---|
| 387 | Residential Customers |
| 42 | Commercial Customers |
| **429** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **4,274,046** | **2,810,555** | **66%** |
| **Daily Average** | **140,517** | **92,402** | **66%** |
| **Avg / Customer** | **328** | **215** | |

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.

N

Virginia #10

Virginia #13

Virginia #11

Virginia #7

Eagle Ridge Pump Station

Virginia #12

Virginia #3

Virginia #5

Virginia #1

Virginia #6

Virginia #2

Virginia #4

## Legend

- PS — System Pump Station
- Manhole
- Gravity Main
- Force Main

0 1,000 2,000 4,000 6,000 8,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## WASHINGTON COUNTY SERVICE AUTHORITY - BVU LEE HIGHWAY

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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:

| | |
|---|---|
| 420 | Residential Customers |
| 70 | Commercial Customers |
| **490** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **4,728,333** | **3,210,190** | **68%** |
| **Daily Average** | **159,382** | **108,209** | **68%** |
| **Avg / Customer** | **325** | **221** | |

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

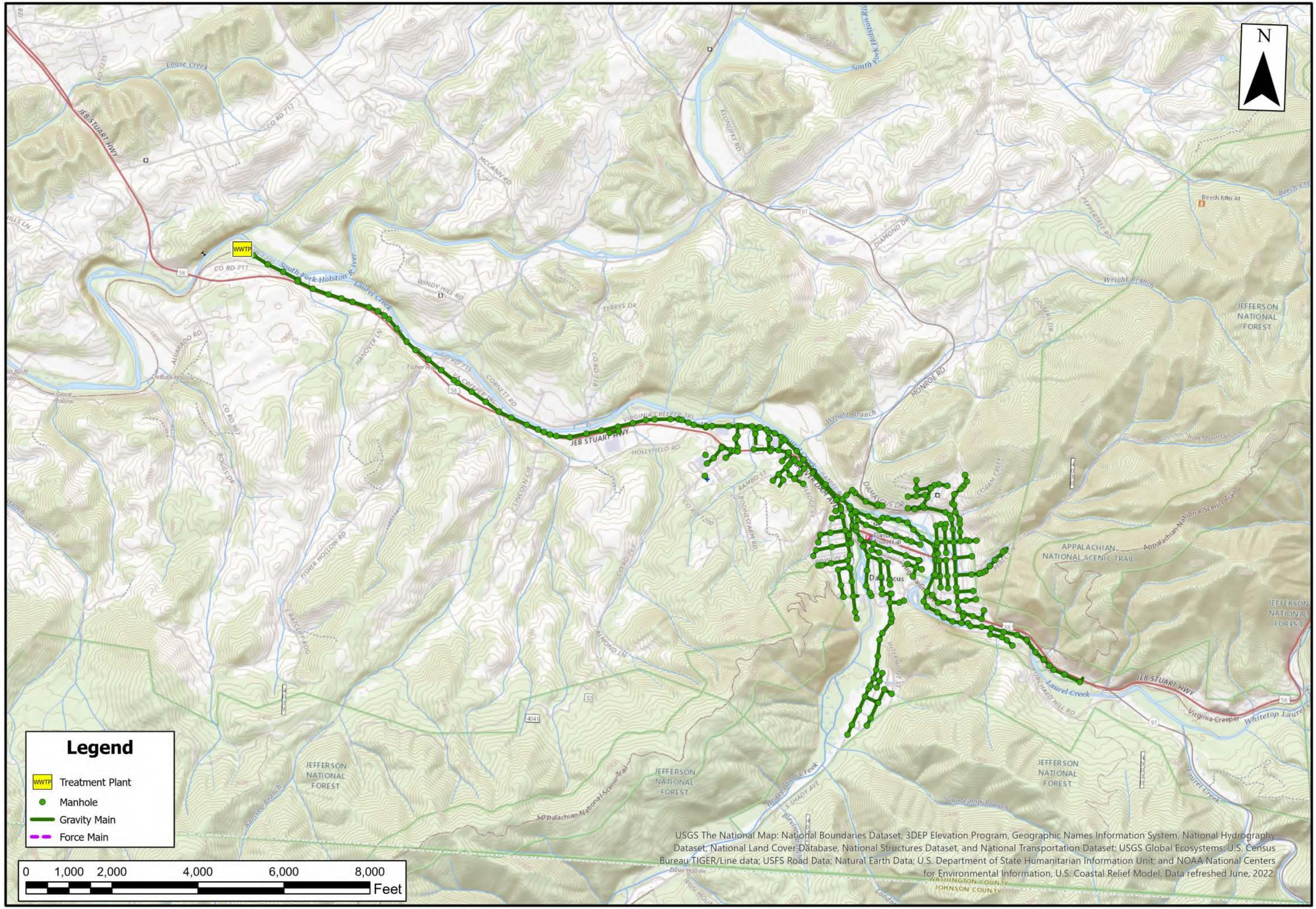
The following sewer rate structure was last modified in 2022:

| 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.




THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

WASHINGTON
COUNTY SERVICE
AUTHORITY -
DAMASCUS

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:

SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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:

| | |
|---|---|
| 342 | Residential Customers |
| 37 | Commercial Customers |
| **379** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |

| | | | |
|---|---|---|---|
| **Monthly Average** | **1,989,500** | **2,482,984** | **125%** |
| **Daily Average** | **65,408** | **81,632** | **125%** |
| **Avg / Customer** | **173** | **215** | |

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.

Oak Park #2
Pump Station

Oak Park #1
Pump Station

Wyndale Heights
Pump Station

Greenbriar
Pump Station

Exit 13
Pump Station

Foxfire
Pump Station

N

## Legend

- PS — System Pump Station
- Manhole
- Gravity Main
- Force Main

0 1,250 2,500 5,000 7,500 10,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

WASHINGTON COUNTY
SERVICE AUTHORITY -
EXIT 13 LEE HIGHWAY

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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:

| | |
|---|---|
| 1,308 | Residential Customers |
| 174 | Commercial Customers |
| **1,482** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **9,818,667** | **9,709,188** | **99%** |
| **Daily Average** | **322,805** | **319,206** | **99%** |
| **Avg / Customer** | **218** | **215** | |

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.

Clarksville Pump Station

Food Country Pump Station

Glade #3 Pump Station

Glade #2 Pump Station

Spring Hills Pump Station

Glade #1 Pump Station

Utility Trailer Pump Station

Meadowview #2 Pump Station

IPP Pump Station

General Engineering Pump Station

Meadowview #1 Pump Station

Loves Pump Station

Abingdon Steel Pump Station

N

## Legend

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

0 1,750 3,500 7,000 10,500 14,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

WASHINGTON COUNTY SERVICE AUTHORITY - HALL CREEK

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:

SHEET

DRAWN BY DRW CHECKED BY CHK

PROJECT NO. xxxx

# 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:

| | |
|---|---|
| 2,754 | Residential Customers |
| 426 | Commercial Customers |
| 26 | Industrial Customers |
| 13 | Other Municipal Systems |
| **3,219** | **Total Number of Customers** |

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:

| Month | Gallons Treated | Gallons Billed | Percent Accountable |
|---|---|---|---|
| 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% |
| **Monthly Average** | **62,725,750** | **33,913,432** | **54%** |
| **Daily Average** | **2,062,216** | **1,114,962** | **54%** |
| **Avg / Customer** | **640** | **346** | |

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.

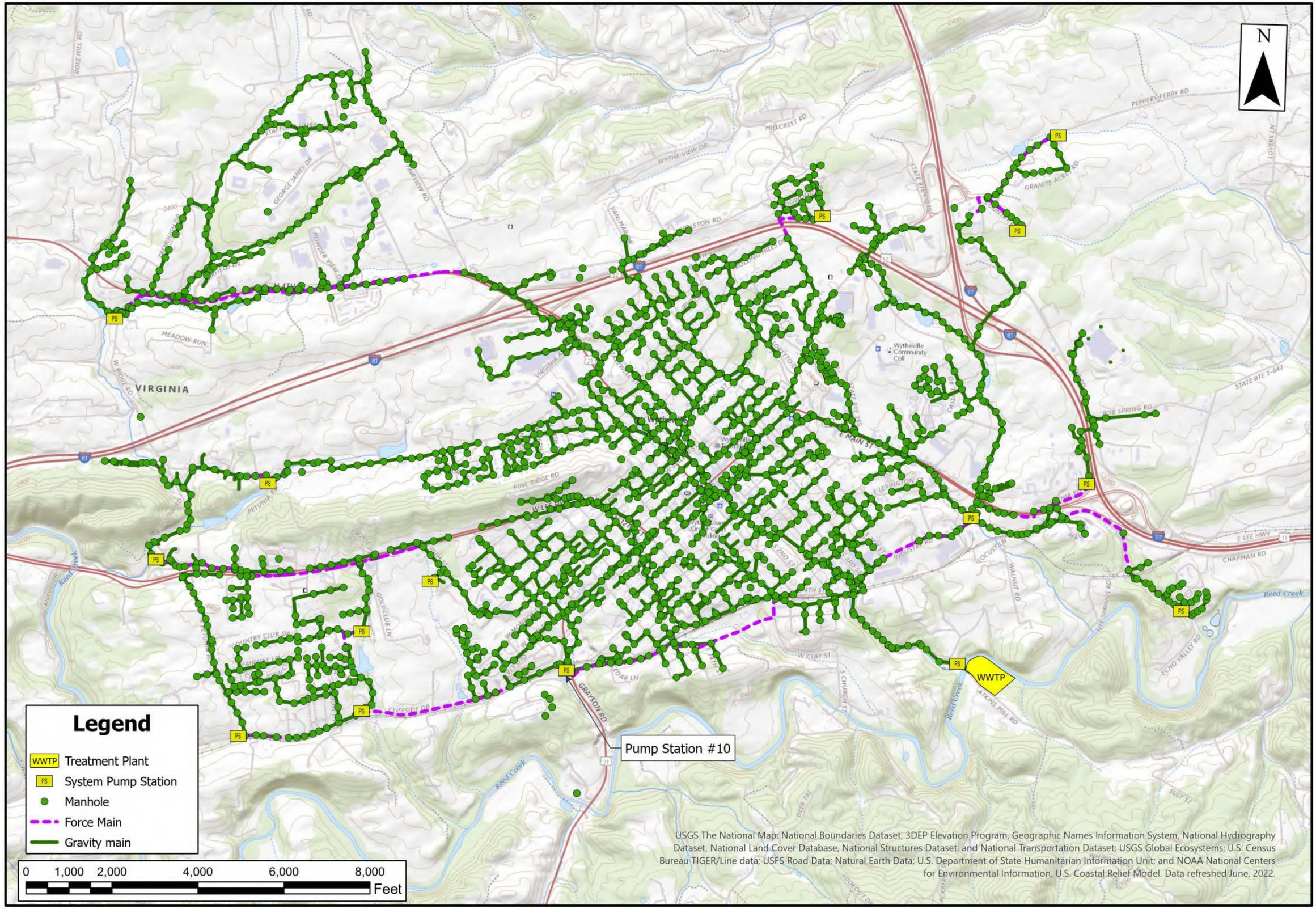
Permit Violations – The facility has had 10 permit violations over the past 2 years. The violations were the result of breaks withing the system.

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.




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.

THOMPSON & LITTON

the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TOWN OF
WYTHEVILLE

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:
SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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.

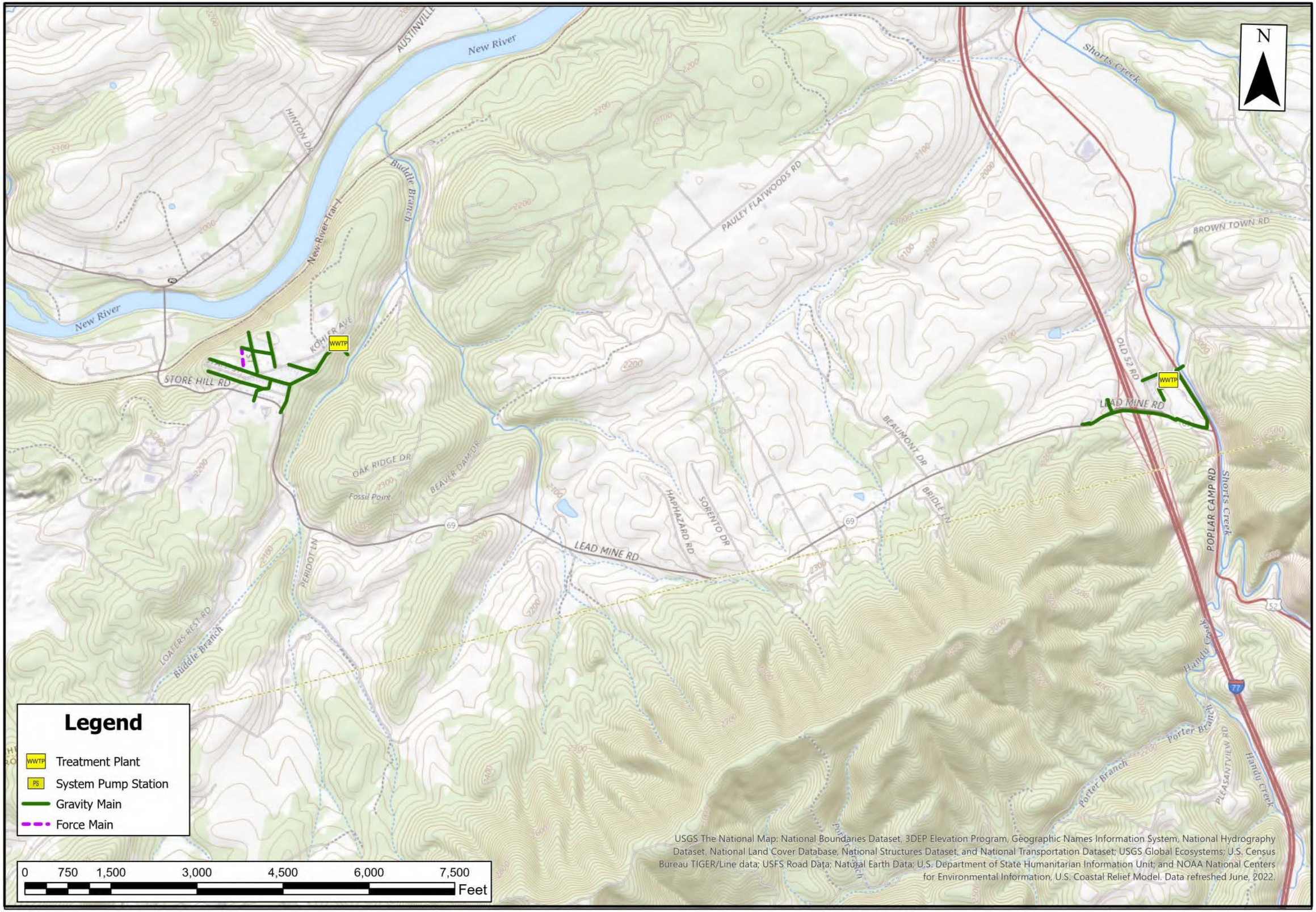
Maintenance Related Issues Experienced at the Facility – The predominant maintenance issues experienced by the facility are as follows:

- 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.




THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

WYTHE COUNTY -
EXIT 24
POPLAR CAMP /
AUSTINVILLE

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:

SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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.

N

Max Meadows

JEFFERSON NATIONAL FOREST

WWTP

PS

## Legend

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

0 2,000 4,000 8,000 12,000 16,000 20,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

WYTHE COUNTY -
FORT CHISWELL /
MAX MEADOWS

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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

LOVERS GAP

DRY FORK

LEEMASTER

VIRGINIA

Grundy

Vansant

N

## Legend

Proposed Sewer Project

0 3,000 6,000 12,000 18,000 24,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

BUCHANAN COUNTY PUBLIC SERVICE AUTHORITY - PROPOSED PROJECTS

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW CHECKED BY CHK

PROJECT NO. xxxx

# 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: | Impaired (Y/N): |
|---|---|
| Trace Fork | No |
| Big Lick Branch | No |
| Dry Fork | No |

**Equivalent Customers Served:** Residential = 257 Commercial = 13 Industrial = 2

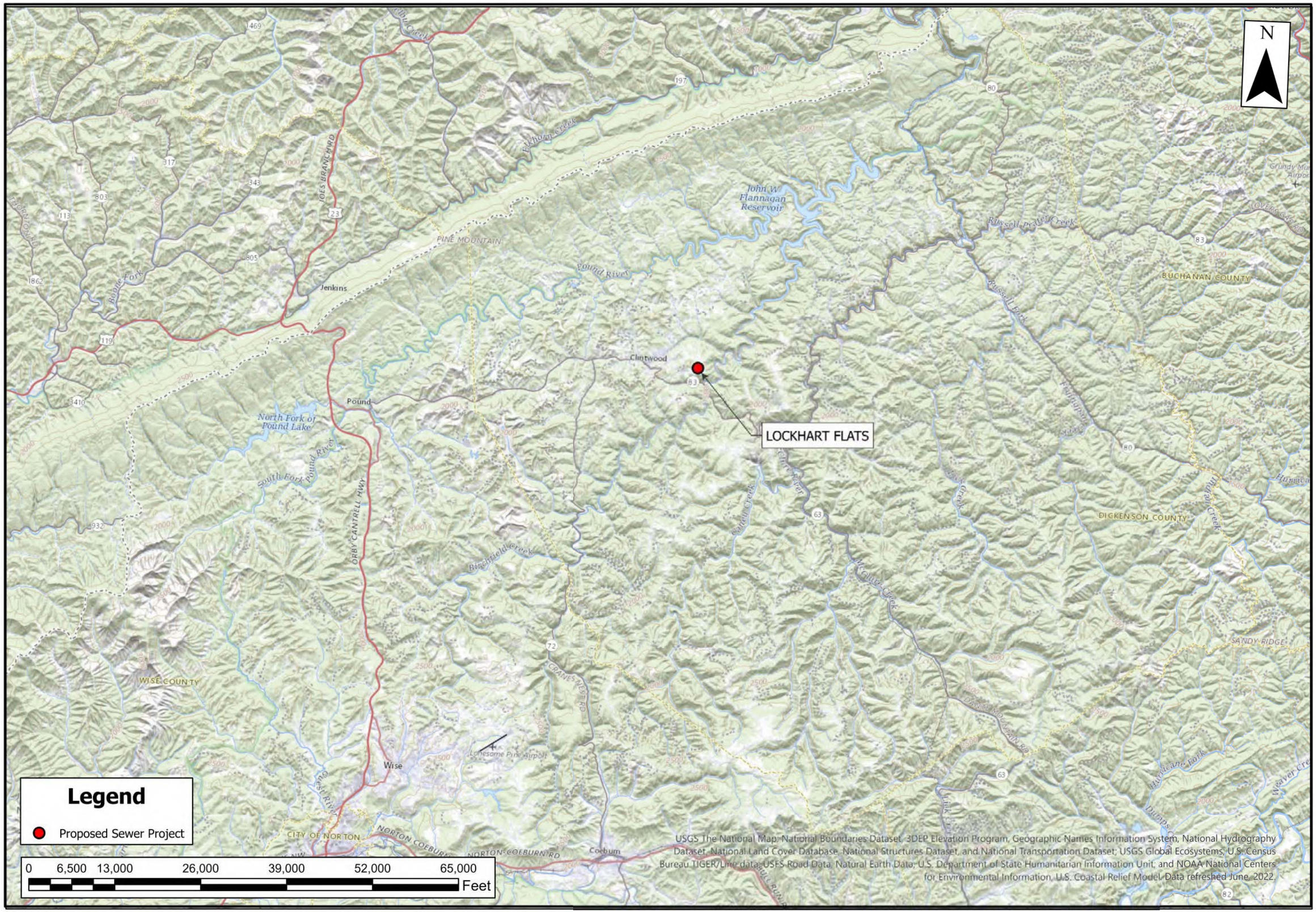
| | |
|---|---|
| Health Hazards: | Failing septic systems and straight pipes suspected. |
| Construction Feasibility: | Very Feasible - The project will connect to an existing system with adequate treatment capacity. |
| Growth Potential: | Residential - Moderate<br>Commercial - Moderate<br>Industrial - 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<br>Elkins Branch | | Impaired (Y/N): | No<br>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<br>Commercial - Moderate<br>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<br>Looney Creek | | Impaired (Y/N): | No<br>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<br>Commercial - Low<br>Industrial - Low | | | | | |
| Total Project Cost: | $7,250,100 | | | | | |
| Cost Per Connection: | $54,925 | | | | | |




THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

DICKENSON COUNTY PUBLIC SERVICE AUTHORITY - PROPOSED PROJECTS

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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. |

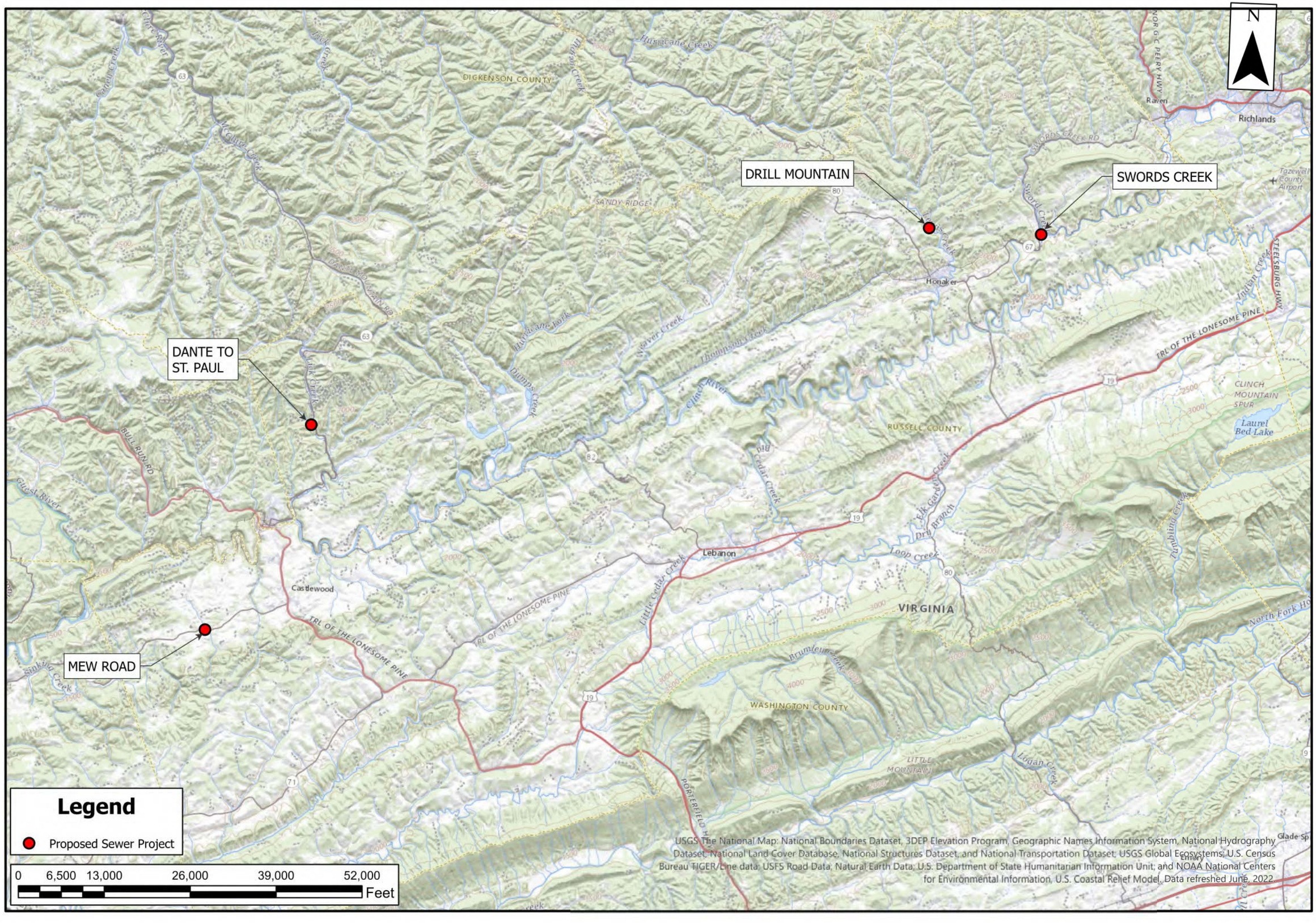
**Existing WWTP:**

| | | |
|---|---|---|
| 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<br>Commercial - Low<br>Industrial - Low |
| Total Project Cost: | $3,505,060 |
| Cost Per Connection: | $62,590 |




THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

RUSSELL COUNTY PUBLIC
SERVICE AUTHORITY -
PROPOSED PROJECTS

DEQ
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:
SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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<br>Commercial - Low<br>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<br>Commercial - Low/Moderate<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>Industrial - Low | | | | | |
| Total Project Cost: | $3,219,713 | | | | | |
| Present Worth Per Connection: | $17,691 | | | | | |

N

ABBS VALLEY

WRIGHTS VALLEY TIPTOP
TO ST. CLAIR'S CROSSING

BISHOP

BLUEFIELD TO DIVIDES
PHASE 2 & 3

WRIGHTS VALLEY
WITTENS MILL
TO TIPTOP

JEWELL RIDGE

BAPTIST VALLEY WEST

ROUTE 637

RED ASH

MILL CREEK

ROUTE 699

ROUTE 639

TAZEWELL TO CLAYPOOL HILL

WILLOW SPRINGS
PHASE 2

ROAD RIDGE

KENTS RIDGE NORTH

FOREST HILLS

WITTEN VALLEY
BUNDYS CHAPEL
TO TAZEWELL

KENTS RIDGE SOUTH

WITTEN VALLEY
BUNDYS CHAPEL
TO LIBERTY

WARDELL

WILLOW SPRINGS
PHASE 3

WITTEN VALLEY
BUNDYS CHAPEL
TO WARDELL

GREEN'S CHAPEL

**Legend**

Proposed Sewer Project

0 6,500 13,000 26,000 39,000 52,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

TAZEWELL COUNTY
PUBLIC SERVICE
AUTHORITY -
PROPOSED PROJECTS

DEQ
VIRGINIA DEPARTMENT OF
ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 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<br>Commercial - High<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>Industrial - Low | | | | | |
| Total Project Cost: | $9,246,900 | | | | | |
| Cost Per Connection: | $92,469 | | | | | |

# PROJECT DATA SHEET

| | |
|---|---|
| Project Name: | Rte. 639 (Cliffield 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - High<br>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<br>Commercial - High<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>Industrial - Low |
| Total Project Cost: | $14,978,275 |
| Cost Per Connection: | $73,785 |

# APPENDIX B

# LENOWISCO PLANNING DISTRICT
# CONVENTIONAL PROJECTS

N

## Legend

- Proposed Pump Station
- Proposed Force Main
- Proposed Gravity Main
- Existing WWTP
- Existing Pump Station
- Existing Manhole
- Existing Gravity Main
- Existing Force Main
- Town Boundary

Western Lee Sewer Project

St. Charles

Pennington Gap

Dryden Heights Community Sewer Project

Cross Creek to Hickory Flats Sewer Project

Jonesville

Sandy Ridge / N. Jonesville Sewer Project

Woodway / Hickory Flats Community Sewer Project

Harrogate

0 10,000 20,000 40,000 60,000 80,000 Feet

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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## LEE COUNTY - PROPOSED SEWER EXTENSIONS

DEQ Virginia Department of Environmental Quality

DATE: 1/9/2023

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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 | | |
| Equivalent Customers Served: | Residential = | 710 | Commercial = | 25 | 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>Industrial - Low | | | | | | |
| Total Project Cost: | $5,790,200 | | | | | | |
| Present Worth Per Connection: | #DIV/0! | | | | | | |

N

## Legend

- Proposed Pump Station
- Proposed Force Main
- Proposed Gravity Main
- Existing Manhole
- Existing Gravity Main
- Existing WWTP
- Existing Force Main
- Existing Pump Station
- Town Boundary

Duffield

Duffield Route 871
Sewer Project

Clinchport

Scott

Manville Road Community
Sewer Project

Reed Hollow Community
Sewer Project

Gate City

Weber City

Dungannon

Nickelsville

AP Carter Highway
Sewer Extension Project

Daniel Boone Community
Sewer Project Phase 2 & 3

Hiltons Community
Sewer Project Phase 1-3

Yuma Community
Sewer Project Phase 2 - 4

0 7,500 15,000 30,000 45,000 60,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## SCOTT COUNTY - PROPOSED SEWER EXTENSIONS

DEQ Virginia Department of Environmental Quality

DATE: 1/16/2023

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Moderate<br>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 | | |
| Equivalent Customers Served: | Residential = | 115 | Commercial = | 0 | Industrial = | 0 | |
| 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<br>Commercial - Moderate<br>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: | Clinch River | | Impaired (Y/N): | Yes | | |
| Equivalent Customers Served: | Residential = | 65 | 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<br>Commercial - Moderate<br>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<br>Commercial - Low<br>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 | |
| 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<br>Commercial - Low<br>Industrial - Low | | | | | |
| Total Project Cost: | $3,137,225 | | | | | |
| Present Worth Per Connection: | $69,716 | | | | | |

N

## Legend

- Proposed Pump Station
- Proposed Gravity Main
- Proposed Force Main
- Existing WWTP
- Existing Pump Station
- Existing Manhole
- Existing Force Main
- Existing Gravity Main
- Town Boundary

North Fork Community Sewer Project

South Fork Community Sewer Project

Upper Guest River Community Sewer Project

Dorchester Community Project

Wildcat/Irondale Community Sewer Project

East Stone Gap/Crackers Neck Community Sewer Project

Powell Valley Community Sewer Project

Hoot Owl Hollow Sewer Project

Riverview Community Sewer Project

Indian Creek Community Sewer Project

Glamorgan Community Sewer Project

Bold Camp Sewer Project

Timberville Acres Sewer Project

South Coeburn Community Sewer Project

Coeburn Mountain Community Sewer Project

Cranesnest Community Sewer Project

Banner Community Sewer Project

Crab Orchard/Dry Fork/Bull Run Community Sewer Project

Pound

Wise

Appalachia

Big Stone Gap

Coeburn

St. Paul

0 7,500 15,000 30,000 45,000 60,000 Feet

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## WISE COUNTY - PROPOSED SEWER EXTENSIONS

DEQ Virginia Department of Environmental Quality

DATE: 12/14/2022

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | |
| Equivalent Customers Served: | Residential = | 450 | 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | | |
| Equivalent Customers Served: | Residential = | 117 | 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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): | Yes | |
| Equivalent Customers Served: | Residential = | 360 | 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<br>Commercial - Moderate<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | |
| Equivalent Customers Served: | Residential = | 25 | 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<br>Commercial - Low<br>Industrial - Low | | | | | |
| Total Project Cost: | $2,719,275 | | | | | |
| Present Worth Per Connection: | $108,771 | | | | | |

# APPENDIX B

# MOUNT ROGERS PLANNING DISTRICT
# CONVENTIONAL PROJECTS

ROCKY GAP

BLAND

N

## Legend

Proposed Sewer Project

0 4,000 8,000 16,000 24,000 32,000 Feet

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

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

BLAND COUNTY
PROPOSED PROJECTS

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:

SHEET

DRAWN BY DRW CHECKED BY CHK

PROJECT NO. xxxx

# 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<br>Commercial - Moderate<br>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<br>Commercial - Moderate<br>Industrial - Low | | | | | |
| Total Project Cost: | $6,691,815 | | | | | |
| Present Worth Per Connection: | $75,189 | | | | | |

N

Wytheville

## Legend

- Existing WWTP
- Existing Pump Station
- Existing Manhole
- Existing Force Main
- Existing Gravity Main
- Proposed Extension
- Town Boundary

Hillsville

Fries

CANA Extensions

Cana

CARROLL COUNTY

GRAYSON COUNTY

PATRICK COUNTY

0 7,500 15,000 30,000 45,000 Feet

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.

THOMPSON & LITTON

the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## CARROLL COUNTY - PROPOSED SEWER EXTENSIONS

DEQ Virginia Department of Environmental Quality

DATE: 2/1/2023

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# PROJECT DATA SHEET

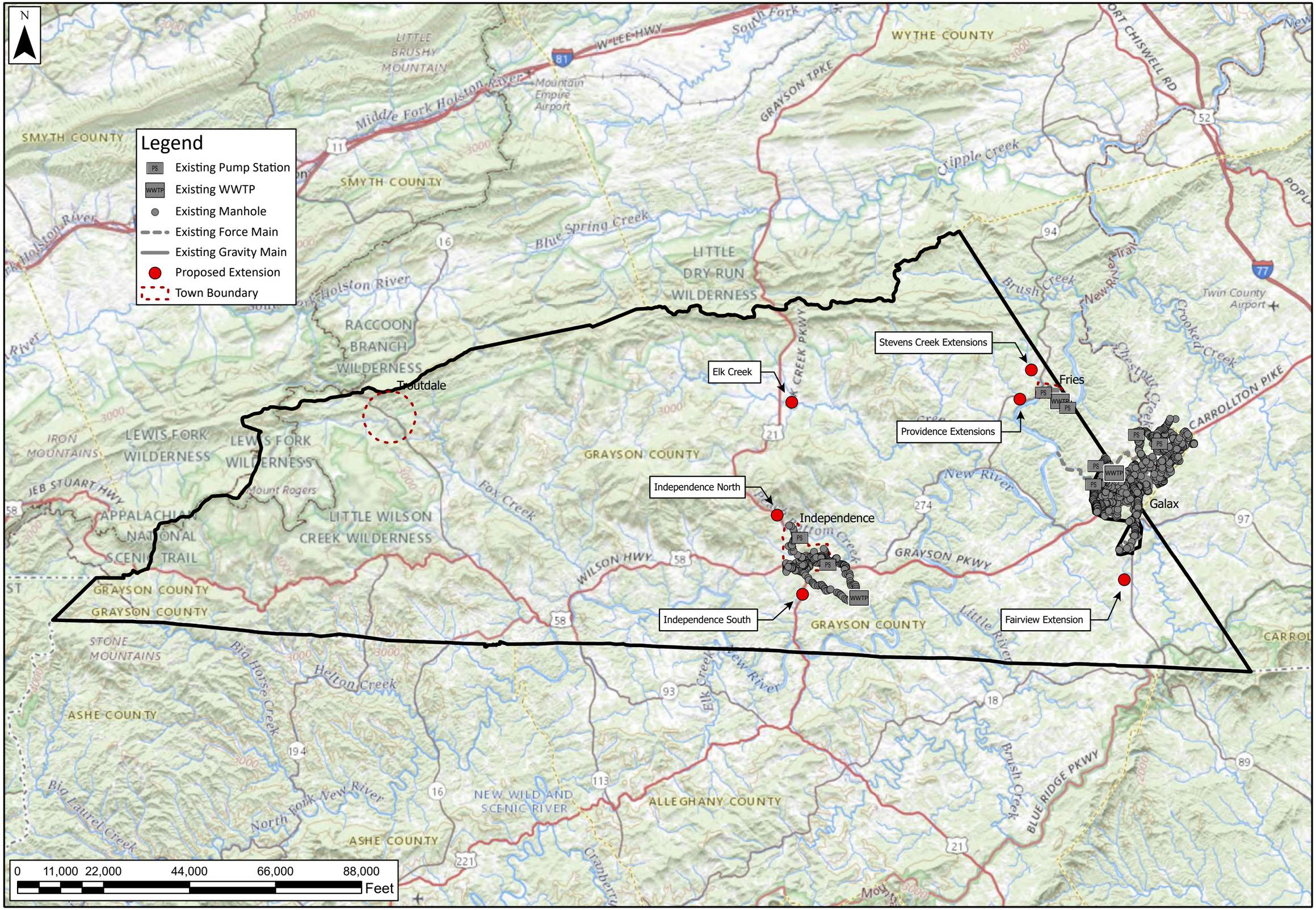
| | |
|---|---|
| Project Name: | Cana/I77 Sewer Extension |
| County: | Carroll |
| Planning District: | Mount Rogers |
| Utility Provider: | Carroll County Public Service Authority |
| Served by Public Water (Y/N): | Yes |
| Existing Conditions: | The project area is currently not served by a public 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<br>Lovills Creek | | Impaired (Y/N): | No<br>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<br>Commercial - Moderate/High<br>Industrial - Moderate/High |
| Total Project Cost: | $43,878,250 |
| Present Worth Per Connection: | $121,884 |

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## GRAYSON COUNTY - PROPOSED SEWER EXTENSIONS




DATE: 2/1/2023

SHEET:

DRAWN BY IJR | CHECKED BY

PROJECT NO. 2248

# 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<br>Commercial - Moderate/High<br>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<br>Commercial - Moderate/High<br>Industrial - Moderate | | | | | |
| Total Project Cost: | $42,060,460 | | | | | |
| Present Worth Per Connection: | $125,554 | | | | | |

# PROJECT DATA SHEET

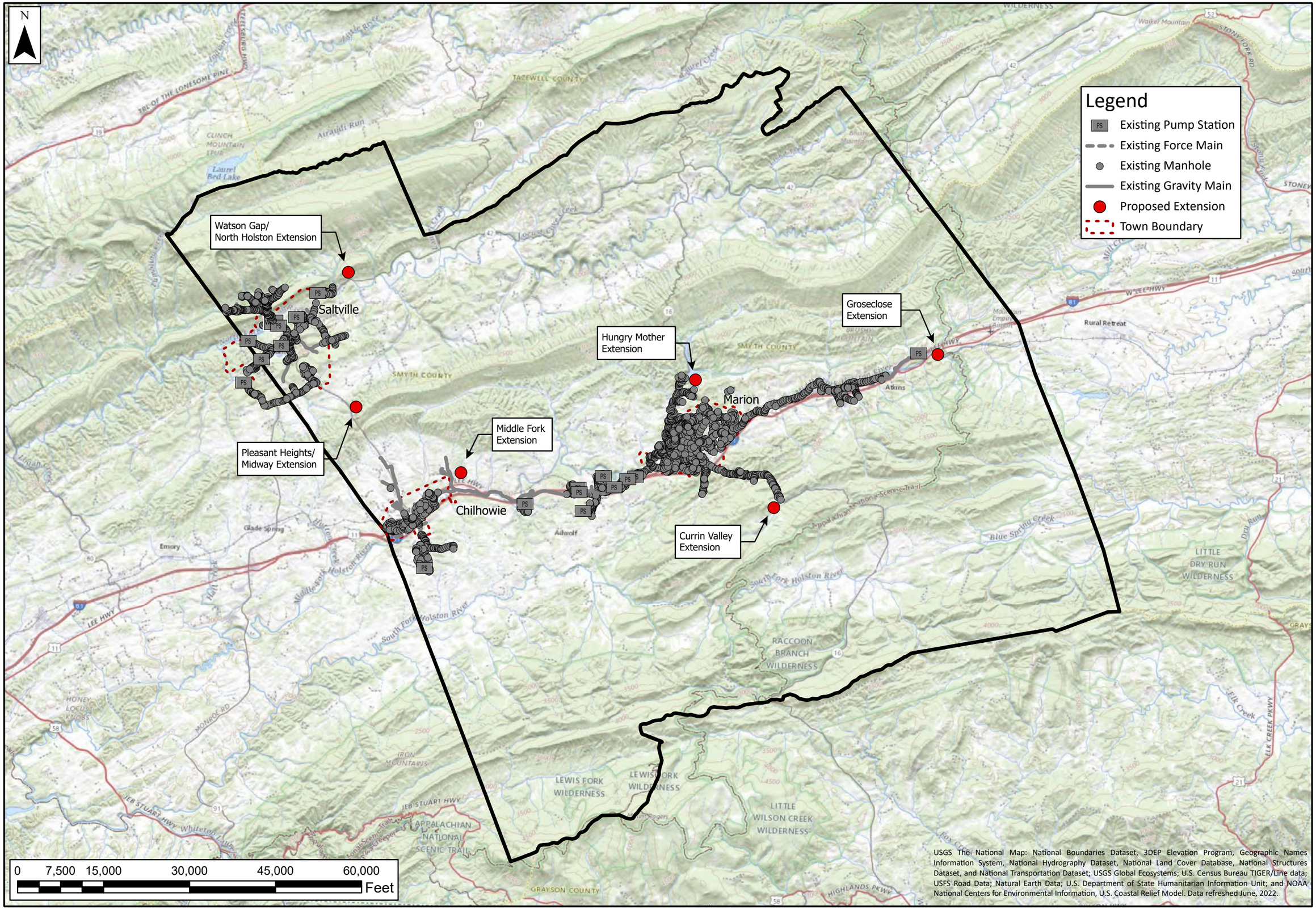
| | | | | | | |
|---|---|---|---|---|---|---|
| Project Name: | Independence North/South Sewer Extension | | | | | |
| County: | Grayson | | | | | |
| Planning District: | Mount Rogers | | | | | |
| Utility Provider: | Grayson County Board of Supervisors | | | | | |
| Served by Public Water (Y/N): | 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<br>Brush Creek | | Impaired (Y/N): | No<br>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<br>Commercial - Moderate/High<br>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<br>Commercial - Moderate<br>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<br>Commercial - Low<br>Industrial - Low | | | | | |
| Total Project Cost: | $11,085,360 | | | | | |
| Present Worth Per Connection: | $54,878 | | | | | |




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.

THOMPSON & LITTON / the LANE GROUP

# SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

## SMYTH COUNTY - PROPOSED SEWER EXTENSIONS

DEQ Virginia Department of Environmental Quality

| | |
|---|---|
| DATE: | 2/1/2023 |
| SHEET: | |
| DRAWN BY | IJR |
| CHECKED BY | |
| PROJECT NO. | 2248 |

# 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 straigt 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 | Numberous 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:

| | | |
|---|---|---|
| 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 = Middle Fork Holston River; Impaired= Yes

Equivalent Customers Served: 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 Mari 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.<br>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<br>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<br>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 convetional septic systems as weel as some requests to enable ne 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 McHenrys 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. |

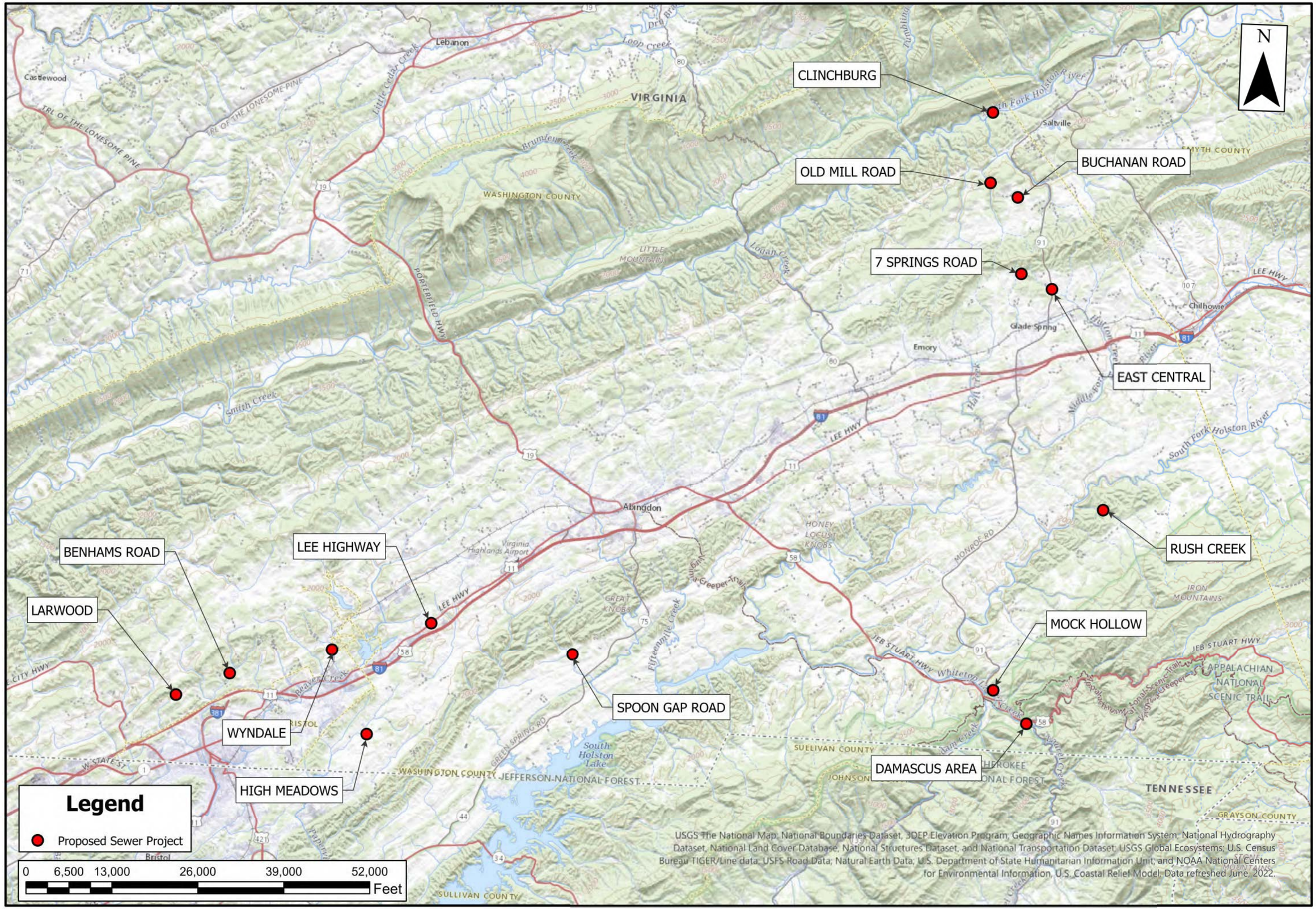
Existing WWTP:

| | | |
|---|---|---|
| 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 |




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.

THOMPSON & LITTON / the LANE GROUP

SOUTHWEST VIRGINIA COMPREHENSIVE REGIONAL SEWER STUDY 2022

WASHINGTON COUNTY SERVICE AUTHORITY - PROPOSED PROJECTS

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET: SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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 | It is proposed that the sewerage problem be addressed by installing a centralized collection. Treatment can be provided at the Hall Creek POTW.<br><br>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. |

| 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 = | Impaired= |
|---|---|---|
| | Hall Creek | 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 = | Commercial = | Industrial = |
|---|---|---|---|
| | 783 | 35 | 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.<br>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 = 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 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 | It is proposed that the sewerage problem be addressed by installing a centralized collection. Treatment can be provided at the Hall Creek POTW.<br><br>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. |

| | | | | | | |
|---|---|---|---|---|---|---|
| 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 = | Rush Creek | | Impaired= | no | |
| Equivalent Customers Served: | 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 communit is in a low growth potential areas 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.<br>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.<br><br>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.<br>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.<br><br>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 |

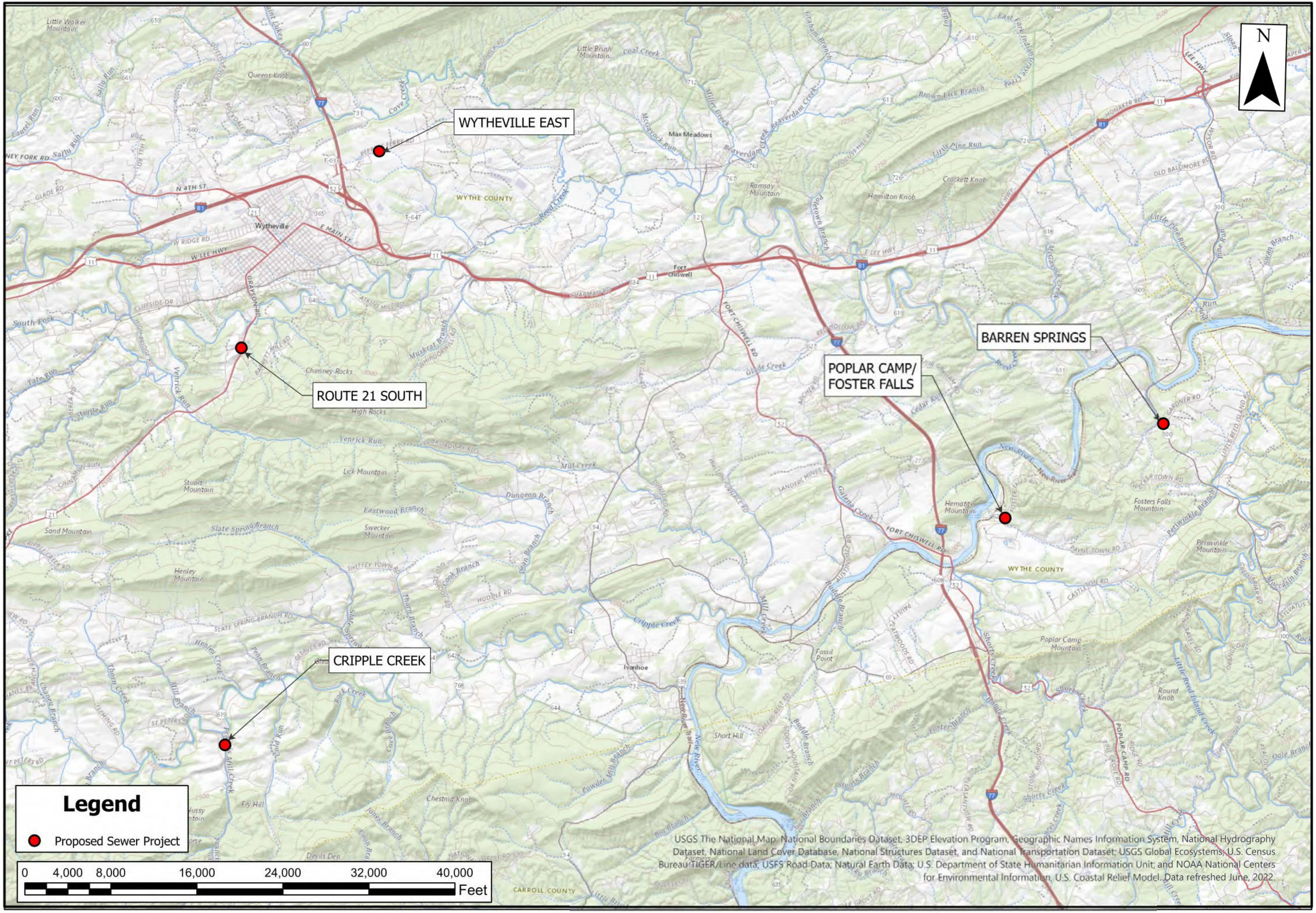
# PROJECT DATA SHEET

| | |
|---|---|
| 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 |




THE LANE GROUP / THOMPSON & LITTON

SOUTHWEST VIRGINIA
COMPREHENSIVE REGIONAL
SEWER STUDY 2022

WYTHE COUNTY
PROPOSED
PROJECTS

DEQ VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE: xx/xx/xxxx

SHEET:

SHEET

DRAWN BY DRW | CHECKED BY CHK

PROJECT NO. xxxx

# 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<br>Commercial - Low<br>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<br>Commercial - Moderate/High<br>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

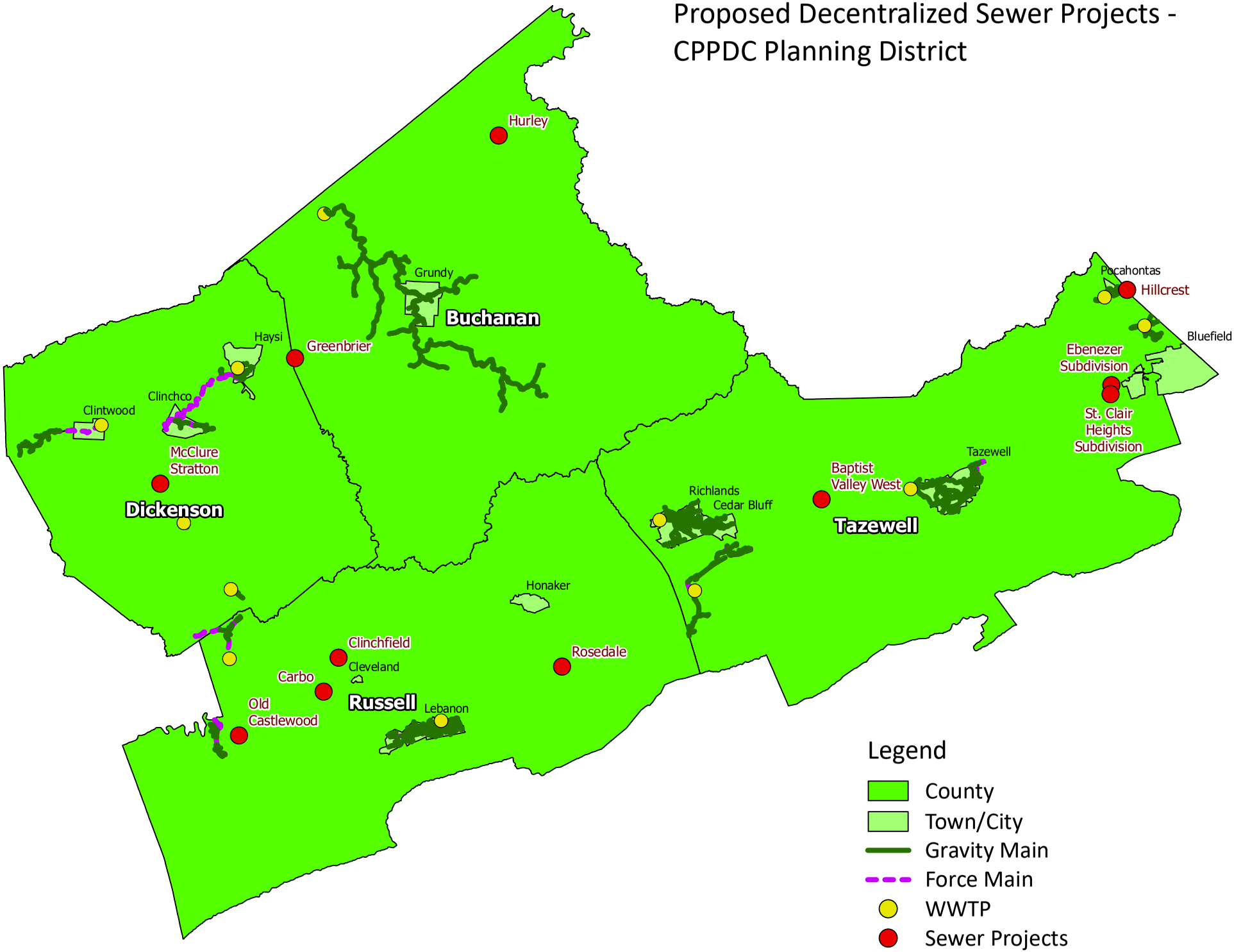
| | | | | | | |
|---|---|---|---|---|---|---|
| Project Name: | Route 21 South Sewer Extension | | | | | |
| County: | Wythe | | | | | |
| Planning District: | Mount Rogers | | | | | |
| Utility Provider: | Wythe County Board of Supervisors | | | | | |
| Served by Public Water (Y/N): | Approximately 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<br>Reed Creek | | Impaired (Y/N): | No<br>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<br>Commercial - Low<br>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<br>Commercial - Moderate<br>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
Hurley
Grundy
Buchanan
Haysi
Greenbrier
Clinchco
Clintwood
McClure
Stratton
Dickenson
Pocahontas
Hillcrest
Bluefield
Ebenezer
Subdivision
St. Clair
Heights
Subdivision
Tazewell
Baptist
Valley West
Richlands
Cedar Bluff
Tazewell
Honaker
Clinchfield
Cleveland
Carbo
Old
Castlewood
Russell
Lebanon
Rosedale
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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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.<br>Inground disposal of treated effluent, or VPDES Permit. |
| Watershed or Adjacent Stream | Name: Millstone Branch<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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 |

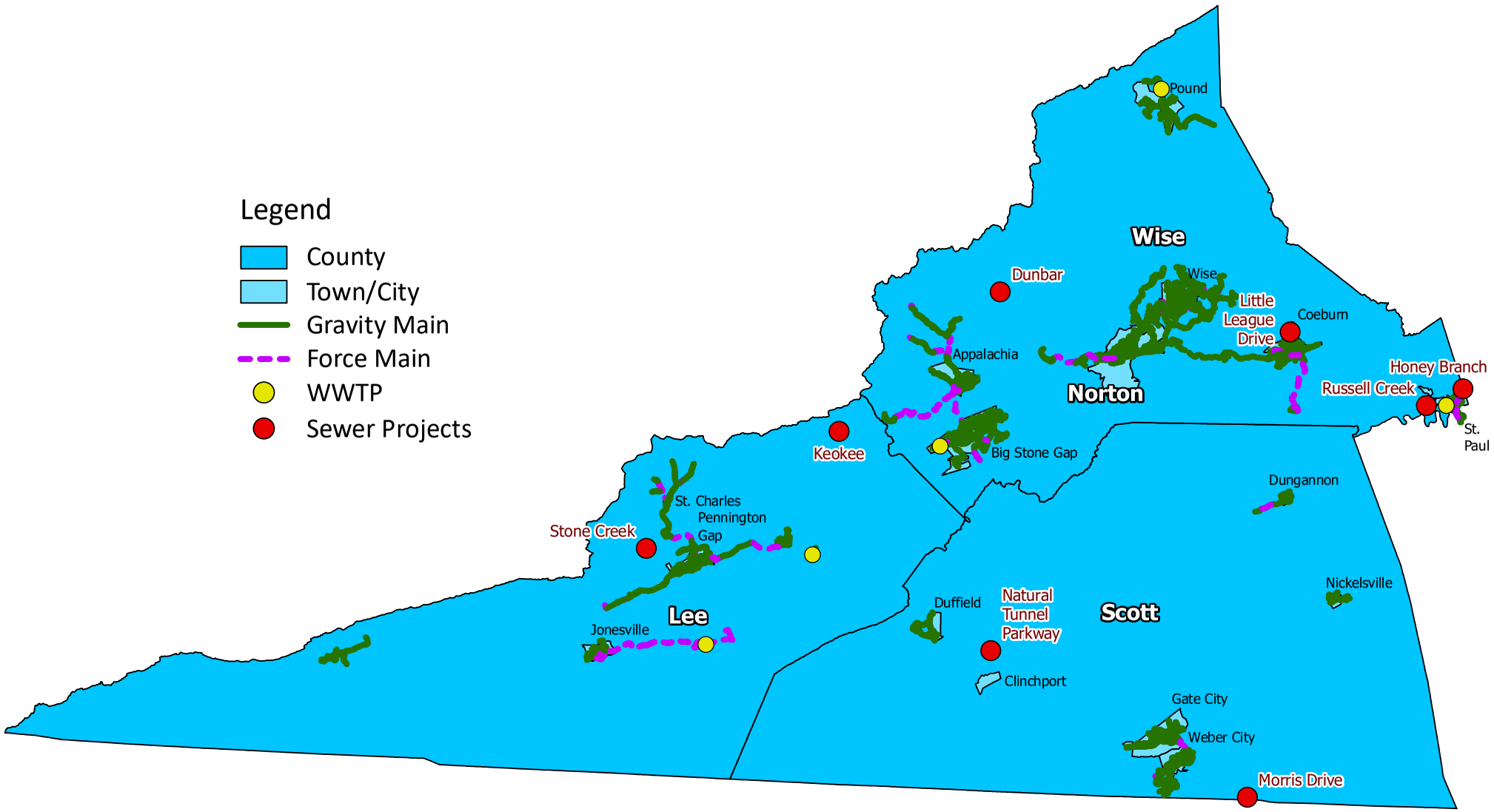
# PROJECT DATA SHEET

| | |
|---|---|
| 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<br>Stream Classification: VI<br>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<br>Stream Classification: VI<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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: | Bloomingdale 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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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 |

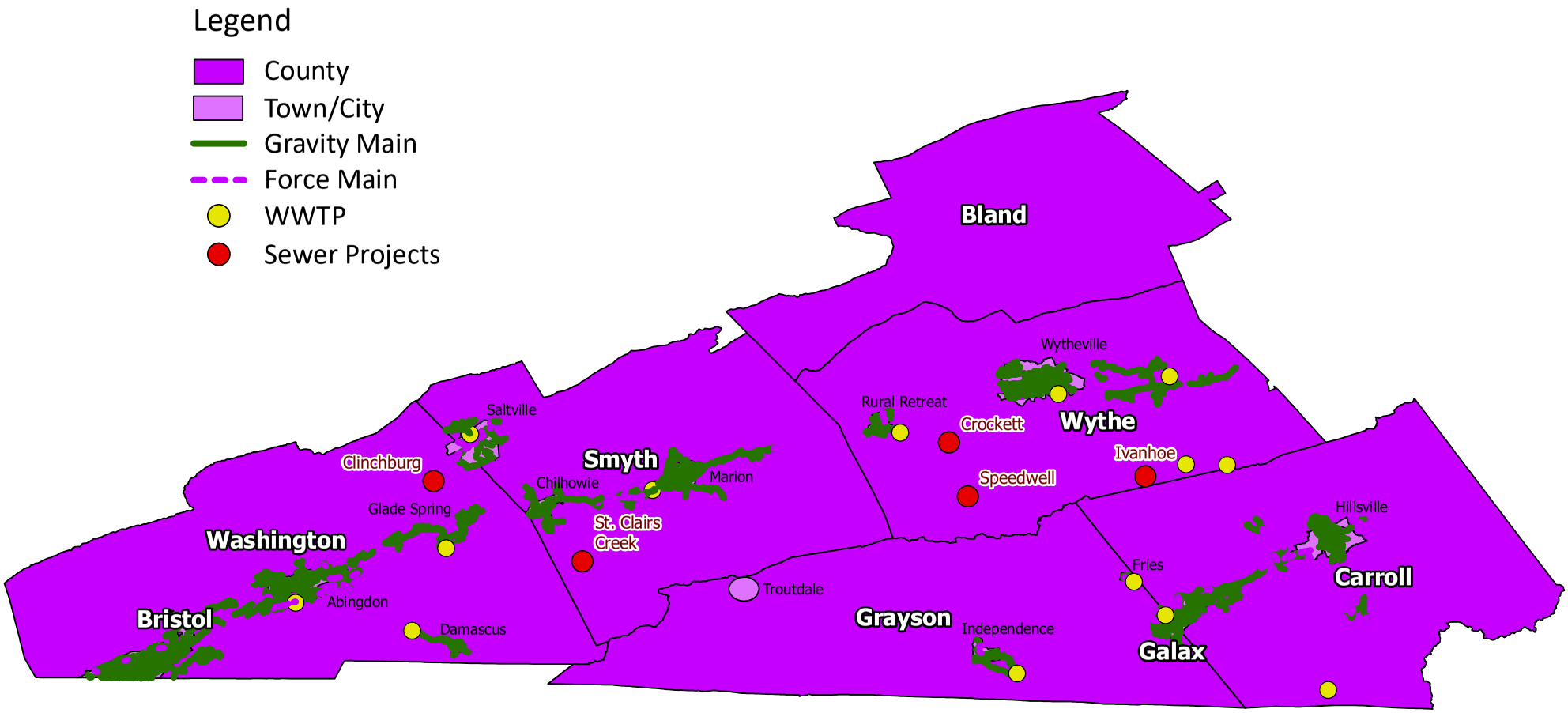
| | | | | | | |
|---|---|---|---|---|---|---|
| Equivalent Customers Served: | Residential = | 15 | Commercial = | 0 | Industrial = | 0 |

| | |
|---|---|
| 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<br>Stream Classification: IV<br>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



# 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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: IV<br>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<br>Stream Classification: VI<br>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<br>Commercial - High<br>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 | | |
| Equivalent Customers Served: | Residential = | 1205 | Commercial = | 38 | Industrial = | 155 | |
| 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<br>Commercial - High<br>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<br>Commercial - INP<br>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<br>Commercial - INP<br>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<br>Commercial - High<br>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<br>Commercial - INP<br>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): | Yes | |
| Equivalent Customers Served: | Residential = | 630 | Commercial = | | Industrial = | |
| Health Hazards: | | | | | | |
| Construction Feasibility: | Information not provided. | | | | | |
| Growth Potential: | Residential - INP<br>Commercial - INP<br>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<br>Commercial - High<br>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<br>Commercial - High<br>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: | The project consists Influent pump station rehabilitation including influent and sludge pumps & VFDs, valve replacements, new walkway, monorail & electric hoist, painting, replacement windows & 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 & 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 & VFDs, non-potable pumps and diffused air system & 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 & recirculation rumps and cleaning of the digesters, including removal and disposal of sludge & 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 & controls, SCADA Update (software, interfaces, PLCs), replacement of 8 ft. chain link fence with barbed wire, 1.5-inch pavement overlay of access road & parking lot, chain link fence swing gate replacement and associated items. |

| | | | | |
|---|---|---|---|---|
| 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<br>Commercial - High<br>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 benchs, 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<br>Commercial - High<br>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<br>Commercial - High<br>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<br>Commercial - High<br>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 | |
| 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | |
| 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | |
| 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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: | 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | |
| 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<br>Commercial - Low<br>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 | |
| 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | |
| 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | |
| Equivalent Customers Served: | Residential = | 0 | 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 - Low<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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 | | |
| 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<br>Commercial - Low<br>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 | |
| 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 sewerlines. | | | | | |
| Growth Potential: | Residential - Low<br>Commercial - Low<br>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 | | |
| 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - High<br>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<br>Commercial - High<br>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 feetand 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<br>Commercial - High<br>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<br>Commercial - High<br>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<br>Commercial - High<br>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<br>Commercial - High<br>Industrial - High | | | | | |
| Total Project Cost: | $ 10,000,000 | | | | | |
| Present Worth Per Connection: | $4,854 | | | | | |

# PROJECT DATA SHEET

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|---|---|---|---|---|---|---|---|
| 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<br>Commercial - High<br>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 exectancy 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 convyance 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<br>Commercial - High<br>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<br>Commercial - Low<br>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<br>Commercial - High<br>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 (Tennessee & Big Sandy River Basins) | | Impaired (Y/N): | Yes | | |
| 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<br>Commercial - High<br>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 bursitng approximatley 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 capcity 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<br>Commercial - Moderate<br>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 capcity of the system via I/I removal, thus reducing the number and magnitude of SSO's. | | | | | | |
| Growth Potential: | Residential - Moderate<br>Commercial - Moderate<br>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 replacinging 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 = | 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<br>Commercial - High<br>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 = | 100 | Industrial = | 3 | |
| Health Hazards: | | | | | | | |
| Construction Feasibility: | Very Feasible - The improvements in this area will increase the capcity of the system via I/I removal, thus reducing the number and magnitude of SSO's. | | | | | | |
| Growth Potential: | Residential - Moderate<br>Commercial - Moderate<br>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 comercial 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 capcity of the system via I/I removal, thus reducing the number and magnitude of SSO's. | | | | | | |
| Growth Potential: | Residential - High<br>Commercial - High<br>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 (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<br>Commercial - High<br>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<br>Commercial - High<br>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<br>Commercial - High<br>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<br>Commercial - Moderate<br>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 desparate 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<br>Commercial - Low<br>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<br>Commercial - Moderate<br>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<br>Commercial - High<br>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<br>Commercial - Moderate<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Moderate<br>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<br>Commercial - Low<br>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 desparate 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<br>Commercial - Low<br>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<br>Commercial - Low<br>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<br>Commercial - Low<br>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

| | | | |
|---|---|---|---|
| ***SANITARY SEWER CONNECTION TO GRAVITY SEWER*** | | | |
| 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 | |
| **Gravity Sewer Connection, EA.** | | | **$4,250** |

| | | | |
|---|---|---|---|
| ***SANITARY SEWER CONNECTION TO FORCE MAIN*** | | | |
| 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 | |
| **Force Main Connection, EA.** | | | **$23,650** |

| | | | |
|---|---|---|---|
| ***15-INCH GRAVITY SEWER*** | | | |
| 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 | |
| Total | | | $3,212,250 |
| **15-inch Gravity Sewer Cost, L.F.** | | | **$321** |

## UNIT COSTS - CONSTRUCTION

| | | | |
|---|---|---|---|
| ***12-INCH GRAVITY SEWER*** | | | |
| 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** |

| | | | |
|---|---|---|---|
| ***10-INCH GRAVITY SEWER*** | | | |
| 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** |

| | | | |
|---|---|---|---|
| ***8-INCH GRAVITY SEWER*** | | | |
| 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

| | | | |
|---|---|---|---|
| ***6-INCH GRAVITY SEWER*** | | | |
| 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** |

| | | | |
|---|---|---|---|
| ***8-INCH FORCE MAIN SEWER*** | | | |
| 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** |

| | | | |
|---|---|---|---|
| ***6-INCH FORCE MAIN SEWER*** | | | |
| 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

| | | | |
|---|---|---|---|
| ***4-INCH FORCE MAIN SEWER*** | | | |
| 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** |

| | | | |
|---|---|---|---|
| ***2-INCH FORCE MAIN SEWER*** | | | |
| 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

| | |
|---|---|
| ***SEWAGE PUMP STATION*** | |
| **Sewage Pump Station, EA.** | **$300,000** |

| | |
|---|---|
| ***GRINDER PUMP STATION*** | |
| **Grinder Pump Station, EA.** | **$95,000** |

***PLANT EXPANSION / I & I REMEDIATION***

| | |
|---|---|
| **Plant Expansion / I & I Remediation, Per Connection, EA.** | **$7,500** |

| | |
|---|---|
| ***NEW TREATMENT FACILITIES*** | |
| **0 - 25,000 Gallons/Day (GPD)** | **$25/GPD** |
| **25,001 - 50,000 GPD** | **$20/GPD** |
| **50,001 - 100,000 GPD** | **$15/GPD** |
| **100,001 - 300,000 GPD** | **$10/GPD** |

***RAILROAD CROSSINGS***

| | |
|---|---|
| **Railroad Crossings, EA** | **$100,000** |

# 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

**Noelle Bissell, MD – Interim Director**
**Reisa L. Sloce, Chief Operations Officer**

***Cumberland Plateau Health District***
***133 Highland Drive, Suite A***
***Lebanon, VA 24266***

**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 is 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

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.

Sincerely,

Brian Stanley
Environmental Health Manager, Senior
Cumberland Plateau Health District

**Lee County**
P. O. Box 763
134 Hill Street
Jonesville, VA 24263
Phone: 276-346-2011
Fax: 276-346-0401

**Scott County**
190 Beech Street
Suite 102
Gate City, VA 24251
Phone: 276-386-1312
Fax: 276-386-2116

**Wise County and the City of Norton**
134 Roberts Ave., SW
Wise, VA 24293
Phone: 276-328-8000
Fax: 276-376-1020

***COMMONWEALTH OF VIRGINIA***

**LENOWISCO HEALTH DISTRICT**

134 Roberts Avenue, SW
WISE, VIRGINIA 24293

**Noelle Bissell, MD – Interim Director**
**Reisa L. Sloce, Chief Operations Officer**

**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 area 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

LOCAL HEALTH DEPARTMENTS
SERVING THE PEOPLE OF
Bland
Wythe
Carroll
Galax
Grayson
Smyth
Washington
Bristol

# COMMONWEALTH of VIRGINIA

Mount Rogers Health District
201 Francis Marion Lane
Marion, VA 25354

Noelle Bissell, MD, Acting Director
Phone: 276-781-7450
Fax: 276-781-7455

Email
noelle.bissell@vdh.virginia.gov

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,

Travis Holt

Travis Holt
Environmental Health Manager

LOCAL HEALTH DEPARTMENTS
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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 if 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 are 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

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,

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 | Maintenanc | 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 ST | 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 S | 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 |

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|---|---|---|---|---|---|---|---|---|---|
| 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 ST | 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 S | 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 |

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|---|---|---|---|---|---|---|---|---|---|
| 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 S | 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 | Vansant |
| 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 S | 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 |

| Permit No | Returns | Maintenanc | PDC | SFH (dot) | Type | County | Facility Name | Facility Address | FCity |
|---|---|---|---|---|---|---|---|---|---|
| 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 Paridise 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 Jacquline 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 |

| Permit No | Returns | Maintenanc | PDC | SFH (dot) | Type | County | Facility Name | Facility Address | FCity |
|---|---|---|---|---|---|---|---|---|---|
| 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 ST | St Rte 683 | Russell County |
| VAG400873 | | MC | CP | N | 1 | Russell | Davis Frank and Hurd Dewey Residences ST | 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 ST | 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 McCownan Residence STP | 600 Dyers Chapel Rd | Clinchco |
| VAG400905 | | NB | CP | Y | 1 | Dickenson | Mackey Sylvia E and Richard Residence ST | 301 Corps Lower Twin Ln | Haysi |
| VAG400906 | | NB | CP | N | 1 | Buchanan | Justus Jennie and Blankenship Tim Residen | 1393 and 1409 Brushy Fork Rd | Buchanan County |
| VAG400906 | | NB | CP | N | 1 | Buchanan | Justus Jennie and Blankenship Tim Residen | 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 ST | 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 Evanell Residence STP | St Rte 675 | Buchanan Co |
| VAG400980 | | NB | CP | Y | 1 | Buchanan | Stacy Donnie Ray and Jessica Residence ST | 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 |

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|---|---|---|---|---|---|---|---|---|---|
| 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 Jessee and Kayla Residence STP | 2006 Steelsburg Hwy | Tazewell County |
| VAG409088 | | | CP | N | 1 | Russell | Cliffield 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 STI | 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 Clearf 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 |

| Permit No | Returns | Maintenanc | PDC | SFH (dot) | Type | County | Facility Name | Facility Address | FCity |
|---|---|---|---|---|---|---|---|---|---|
| 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.T. 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 Countryshire 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 | Fraley 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 ST | 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 Pattonsville 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 Primative 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 |

| Permit No | Returns | Maintenanc | PDC | SFH (dot) | Type | County | Facility Name | Facility Address | FCity |
|---|---|---|---|---|---|---|---|---|---|
| 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 | Lauterbauh 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 STI | 8226 Gilliam Hollow Road | Pound |
| VAG400666 | | MC | LEN | Y | 1 | Wise | Greene William R and Charlene Residence S | 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 STI | 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 |

| Permit No | Returns | Maintenanc | PDC | SFH (dot) | Type | County | Facility Name | Facility Address | FCity |
|---|---|---|---|---|---|---|---|---|---|
| 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 Residenc | 9927 Miller Hollow Rd | Wise |
| VAG400857 | | MC | LEN | N | 1 | Wise | Adkins Casey and Cox Orange Lee Residenc | 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 |

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|---|---|---|---|---|---|---|---|---|---|
| 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 ST | 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 | Starnes 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 S | 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 Churc | 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 |

| Permit No | Returns | Maintenanc | PDC | SFH (dot) | Type | County | Facility Name | Facility Address | FCity |
|---|---|---|---|---|---|---|---|---|---|
| VAG400818 | | NB | MR | Y | 1 | Carroll | Roy Allman Development Lot 1 and 9 STP | St Rte 69 | Carroll Co |
| VAG400819 | | NB | MR | Y | 1 | Carroll | Roy Allman Development Lot 2 STP | St Rte 69 | Carroll Co |
| VAG400820 | | NB | MR | Y | 1 | Carroll | Roy Allman Development Lot 3 and 7 STP | St Rte 69 | Carroll Co |
| VAG400821 | | NB | MR | Y | 1 | Carroll | Roy Allman Development Lot 4 STP | St Rte 69 | Carroll Co |
| VAG400822 | | NB | MR | Y | 1 | Carroll | Roy Allman Development Lot 5 STP | St Rte 69 | Carroll Co |
| VAG400823 | | NB | MR | Y | 1 | Carroll | Roy Allman Development Lot 8 STP | St Rte 69 | Carroll Co |
| VAG400824 | | NB | MR | Y | 1 | Carroll | Roy Allman Development Lot 6 STP | St Rte 69 | Carroll Co |
| VAG400841 | | NB | MR | N | 1 | Smyth | Blue Ridge Discovery Center STP | St Rte 603 | Smyth Co |
| VAG400843 | | NB | MR | N | 1 | Wythe | Eversole Richard Residences STP | 1221 Red Hollow Ln | Max Meadows |
| VAG400869 | | | MR | Y | 1 | Washington | Magnuson Alan and Charlotte Residence ST | 2492 Mendota Rd | Mendota |
| VAG400882 | | NB | MR | Y | 1 | Smyth | Crewey Kenneth and Elaine Residence STP | 706 St Clair Creek Rd | Chilhowie |
| VAG400883 | | O&M | MR | Y | 1 | Wythe | Marsh Russell L Residence STP | 1053 Crockett Rd | Crockett |
| VAG400978 | | NB | MR | Y | 1 | Washington | Vestal J.D. and Judy Residence STP | 26111 Lorimer Branch Ln | Abingdon |
| VAG409006 | | MC | MR | N | 1 | Washington | Dollar General Store STP - Meadowview | 29248 Lee Hwy | Meadowview |
| VAG409011 | | NB | MR | N | 1 | Washington | Shaw Christopher Lynn Residences STP | 14260 Porterfield Hwy | Abingdon |
| VAG409017 | | NB | MR | Y | 1 | Carroll | Coletrain Gary Residence STP | US 52 | Carroll County |
| VAG409026 | | NB | MR | Y | 1 | Washington | Deel Vernon Ray and Rachel Residence STP | 13104 Porterfield Hwy | Washington Co |
| VAG409036 | | MC | MR | N | 1 | Bland | Leadership Development Center System 1 S | 13066 W. Bluegrass Tr | Bland |
| VAG409037 | | MC | MR | N | 1 | Bland | Leadership Development Center System 2 S | 13066 W. Bluegrass Tr | Bland |
| VAG409038 | | MC | MR | N | 1 | Bland | Leadership Development Center System 3 S | 13066 W. Bluegrass Tr | Bland |
| VAG409040 | | NB | MR | N | 1 | Smyth | Bethel Baptist Church STP | 964 Laurel Valley Rd | Troutdale |
| VAG409053 | | NB | MR | Y | 1 | Smyth | Minton Sandra Residence STP | St Rte 613 | Smyth Co |
| VAG409063 | | NB | MR | N | 1 | Wythe | Locher Silica Corp and Smokin Guns STP | E Lee Hwy - US 11 | Wythe County |
| VAG409063 | | NB | MR | N | 1 | Wythe | Locher Silica Corp and Smokin Guns STP | E Lee Hwy - US 11 | Wythe County |
| VAG409071 | | | MR | Y | 1 | Washington | Burrows John and Catherine Residence STP | 15521 Large Hollow Rd | Bristol |
| VAG409105 | | NB | MR | N | 1 | Bland | Crouse Dakotah and Sara Residences STP | 6598 Grapefield Rd | Bland County |
| VAG409121 | | MC | MR | N | 1 | Washington | Dollar General Store STP - Bristol VA | 6869 Gate City Hwy | Bristol |
| VAG409128 | | NB | MR | N | 1 | Washington | SpiritWheel Allegiance Inc STP | US 19 | Washington Co |
| VAG409157 | | | MR | N | 1 | Bland | W&B Fabricators STP | 111 Enterprise Ln | Bland County |
| VAG409177 | | | MR | N | 1 | Washington | Dutton Rental Property | 34520 Fleet Rd | Washington Co |
| VAG409182 | | | MR | N | 1 | Washington | M and D Partners Garage STP | 20084 Rustic Lane | Washington Co |
| VAG409187 | | | MR | N | 1 | Washington | Hahn Emergency Vet Clinic STP | 29231 Lee Hwy | Meadowview |
| VAG409210 | | | MR | N | 1 | Washington | Abingdon MHP, LLC STP | 16471 Canyon Dr | Abingdon |
| VAG409216 | | | MR | N | 1 | Smyth | W-L Construction Glade Spring Asphalt Plant | 33040 Ramblewood Dr | Glade Spring |
| VAG400562 | | | | | | | | | |

# APPENDIX G

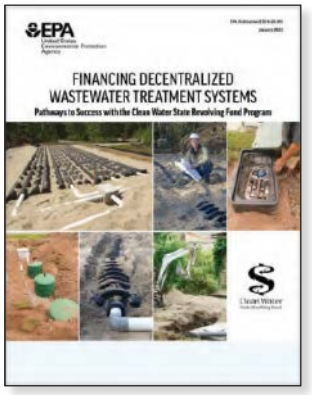
# EPA FACT SHEETS FOR DECENTRALIZED WASTEWATER

United States Environmental Protection Agency

# Financing Decentralized Wastewater Treatment Systems

## 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 septics
- 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 computers

### 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?

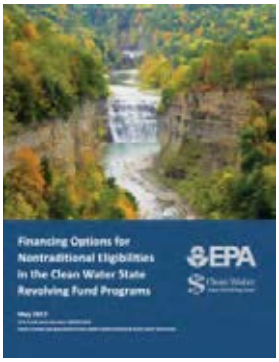
| Lending Structure | How does it work? | Who is doing it? |
|---|---|---|
| **Direct homeowner loan** | The state CWSRF signs a loan directly with the property owner. | DE |
| **Linked deposit loan** | The borrower applies for funding at a participating bank. The CWSRF buys down the interest rate that the bank charges the borrower. | IA, MD, OH |
| **Pass-through loan** | 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 |
| **CDFI pass-through** | Same as above, but through a CDFI or other financial institution. | ID, OR, WA, WV |
| **Sub-state revolving fund** | 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 |
| **Sponsorship** | 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 |
| **Co-funding** | 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

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

Financing Options for Nontraditional Eligibilities in the Clean Water State Revolving Fund Programs: epa.gov/cwsrf/financing-options-nontraditional-eligibilities-cwsrf

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# 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 month, 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 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

*Bio-Microbics FAST unit, courtesy KOWA*

## 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

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 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

Water Environment Research Foundation Decentralized Systems – http://www.werf.org/i/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 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 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.**

| Name of Applicant / Project / VCWRLF amount | Engineer | Local Share |
|---|---|---|
| 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.**

| Name of Applicant / Project / VCWRLF amount | Engineer | Local Share |
|---|---|---|
| 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 | $2,069,974.00 |
| Wythe County | $1,209,000.00 |
| Town of Independence | $1,010,840.00 |
| Town of Wytheville | $1,967,137.00 |
| Town of Saltville | $349,800.00 |
| Town of Abingdon | $3,336,800.00 |
| Town of Big Stone Gap | $2,965,566.00 |
| Total | $12,909,117.00 |

| CWFAP FY 23 SW Phase 1 Step 2 (Authorized Funding Amounts) | |
|---|---|
| FY 21 SSES Projects | |
| Town of Hillsville | **$1,265,000.00** |
| Buchanan County PSA | **$1,811,380.00** |
| Tazewell County PSA | **$3,520,690.00** |
| BVU Authority | **$5,253,700.00** |
| Bland County | **$810,000.00** |
| Abingdon (Phase 2) | **$9,502,000.00** |
| Big Stone Gap (Phase 2) | **$11,869,198.00** |
| FY 22 SSES Reports | |
| Town of Chilhowie Phase 2 | **$1,248,531.00** |
| Town of Rural Retreat | **$430,224.00** |
| Town of ST. Paul | **$892,300.00** |
| Town of Marion | **$1,300,488.00** |
| Town of Saltville Phase 2 | **$1,476,000.00** |
| Lee County PSA | **$739,200.00** |
| Town of Lebanon | **$2,921,700.00** |
| Smyth County | **$500,000.00** |
| FY 23 Phase 1 Step 2 Request | $43,540,411.00 |

# 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, 804.698.4133

VRA: Shawn B. Crumlish, Director of Financial Services, 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.

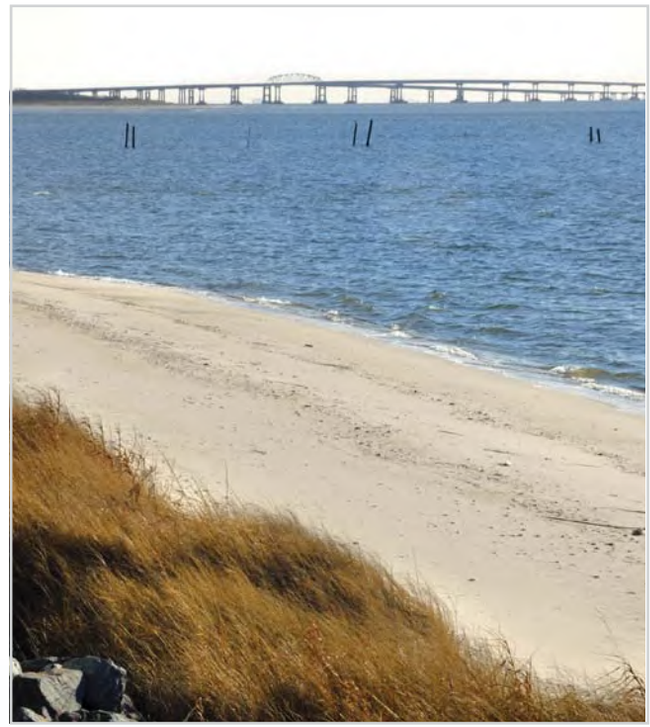
DEQ
Virginia Department of Environmental Quality

VRA Virginia Resources Authority

1111 E. Main Street
Richmond, VA 23219

www.deq.virginia.gov

www.virginiaresources.org



# Virginia Clean Water Revolving Loan Fund

## Cost-Effective Infrastructure Financing

VRA Virginia Resources Authority

DEQ
Virginia Department of Environmental Quality

# 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

# 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

# Eligible Applicants

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.

## ***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[1] (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[2] (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[3] 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 |

[1] 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

[2] 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

[3] 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

## Potential Project: Buchanan - Lynn Camp/Looney Creek Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***52*** |

## Potential Project: Buchanan - Leemaster/Lovers Gap/Dry Fork Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***50*** |

## Potential Project: Buchanan - Lower Mill Branch/Elkins Branch Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***46*** |

## Potential Project: Dickenson - Lockhart Flats Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***51*** |

## Potential Project: Russell - Dante to St. Paul

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *15* |
| | Project Consolidates One or More Decentralized Systems into a Centralized Collection System | 15 | *15* |
| | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $20,000 per Equivalent Residential Connection | 25 | *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 | |
| | *Subtotal* | | *25* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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* |
| | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***83*** |

## Potential Project: Russell - Swords Creek Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***58*** |

## Potential Project: Russell - Castlewood Sewer Project - Phase II (Mew Road)

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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* |
| | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***56*** |

## Potential Project: Russell - Drill Mountain Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***51*** |

## Potential Project: Tazewell - Abbs Valley Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *16* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***59*** |

## Potential Project: Tazewell - Bluefield to Divides Sewer Extension Phases 2 and 3

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Points Maximum)**:** | | ***58*** |

## Potential Project: Tazewell - Route 639 (Cliffield to Baptsit Valley) Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *16* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***54*** |

## Potential Project: Tazewell - Baptist Valley West Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***53*** |

## Potential Project: Tazewell - Red Ash Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***51*** |

## Potential Project: Tazewell - Wrights Valley/ Witten Mill to Tiptop Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***49*** |

## Potential Project: Tazewell - Jewell Ridge Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***48*** |

## Potential Project: Tazewell - Tazewell to Claypool Hill Sewer Extension Alternative 1

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***48*** |

## Potential Project: Tazewell - Wrights Valley/ Tiptop to St. Clair's Crossing Sewer

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***47*** |

## Potential Project: Tazewell - Forest Hills Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***44*** |

## Potential Project: Tazewell - Kents Ridge North Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***44*** |

## Potential Project: Tazewell - Kents Ridge South Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***44*** |

## Potential Project: Tazewell - Mill Creek Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***44*** |

## Potential Project: Tazewell - Road Ridge Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***44*** |

## Potential Project: Tazewell - Willow Springs Sewer Extension Phase III

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***44*** |

## Potential Project: Tazewell - Witten Valley (Bundys Chapel - Tazewell) Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***44*** |

## Potential Project: Tazewell - Route 637 Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***43*** |

## Potential Project: Tazewell - Wardell Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***43*** |

## Potential Project: Tazewell - Green's Chapel Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***42*** |

## Potential Project: Tazewell - Route 699 Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***42*** |

## Potential Project: Tazewell - Willow Springs Sewer Extension Phase II

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***42*** |

## Potential Project: Tazewell - Witten Valley (Bundys Chapel - Liberty) Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***42*** |

## Potential Project: Tazewell - Witten Valley (Bundys Chapel - Wardell) Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***42*** |

## Potential Project: Tazewell - Bishop Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *16* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***30*** |

## Potential Project: Tazewell - Tazewell to Claypool Hill Sewer Extension Alternative 2

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum)**:** | | ***23*** |

# 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 |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *0* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***0*** |

## Potential Project: Buchanan County PSA SSES Rehabilitation

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *0* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***0*** |

## Potential Project: Dickenson - Haysi Sewer Replacement Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *0* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***0*** |

## Potential Project: Russell - Town of Cleveland WWTP Expansion Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | *Subtotal* | | *25* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***53*** |

## Potential Project: Russell - Town of Lebanon SSES Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***40*** |

## Potential Project: Russell - Town of Lebanon WWTP Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***40*** |

## Potential Project: Russell - Town of Honaker SSES Rehabilitations Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***37*** |

## Potential Project: Russell - Town of Honaker WWTP Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***22*** |

## Potential Project: Tazewell - Town of Richlands WWTP Upgrades and Improvements

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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* |
| | | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Town of Tazewell WWTP Upgrades and Improvements

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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* |
| | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | *Subtotal* | | *8* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Tazewell - Town of Cedar Bluff SSES Rehabilitations

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***36*** |

## Potential Project: Tazewell County PSA Falls Mills SSES Rehabilitations

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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* |
| | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***32*** |

## Potential Project: Town of Tazewell SSES Rehabilitations

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***23*** |

## Potential Project: Tazewell - Town of Richlands SSES Rehabilitations

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***21*** |

# APPENDIX J

# LENOWISCO PLANNING DISTRICT
# CENTRALIZED EXTENSIONS

## Potential Project: Lee - Sandy Ridge/North Jonesville Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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* |
| | | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *6* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***73*** |

## Potential Project: Lee - Woodway/Hickory Flats Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | | 7 | |
| | > $75,000 per Equivalent Residential Connection | | 5 | |
| | | *Subtotal* | | *10* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***60*** |

## Potential Project: Lee - Dryden Heights Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***58*** |

## Potential Project: Lee - Western Lee Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***54*** |

## Potential Project: Lee - Cross Creek to Hickory Flats Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *15* |
| | Project Consolidates One or More Decentralized Systems into a Centralized Collection System | | 15 | |
| | | *Subtotal* | | *15* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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* |
| | | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *6* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***48*** |

## Potential Project: Scott - Hiltons Community Sewer Project Phase 1-3

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***52*** |

## Potential Project: Scott - Yuma Community Sewer Project Phase 2-4

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *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* |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***51*** |

## Potential Project: Scott - AP Carter Highway Community Sewer System

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***48*** |

## Potential Project: Scott - Duffield Route 871 Sewer Extension Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***47*** |

## Potential Project: Scott - Daniel Boone Sewer Project Phase 2-3

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *7* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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* |
| | | *Subtotal* | | *5* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***46*** |

## Potential Project: Scott - Reed Hollow Community Sewer System

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***43*** |

## Potential Project: Scott - Manville Community Sewer System

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***43*** |

## Potential Project: Wise - Riverview Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $20,000 per Equivalent Residential Connection | 25 | |
| | $20,000 - $30,000 per Equivalent Residential Connection | 21 | *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 | |
| | *Subtotal* | | *21* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***65*** |

## Potential Project: Wise - East Stone Gap/Cracker Neck Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***63*** |

## Potential Project: Wise - Coeburn Mountain Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***63*** |

## Potential Project: Wise - South Coeburn Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *16* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***62*** |

## Potential Project: Wise - Cranesnest Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***60*** |

## Potential Project: Wise - Glamorgan Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***58*** |

## Potential Project: Wise - Dorchester Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | | 7 | |
| | > $75,000 per Equivalent Residential Connection | | 5 | |
| | | *Subtotal* | | *10* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***56*** |

## Potential Project: Wise - Powell Valley Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *7* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***54*** |

## Potential Project: Wise - Banner Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***54*** |

## Potential Project: Wise - Indian Creek (Wise to Pound) Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***53*** |

## Potential Project: Wise - Wildcat/Irondale Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | 7 | |
| | > $75,000 per Equivalent Residential Connection | 5 | |
| | *Subtotal* | | *10* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***52*** |

## Potential Project: Wise - Crab Orchard/Dry Fork/Bull Run Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***51*** |

## Potential Project: Wise - Upper Guest River Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *7* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***51*** |

## Potential Project: Wise - Bold Camp Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***51*** |

## Potential Project: Wise - South Fork Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | | **Potential Project Total Score** (100 Points Maximum)**:** | ***49*** |

## Potential Project: Wise - Timberville Acres Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***49*** |

## Potential Project: Wise - North Fork Community Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***49*** |

## Potential Project: Wise - Hoot Owl Hollow Sewer Project

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***41*** |

# APPENDIX J

# LENOWISCO PLANNING DISTRICT
# EXISTING SYSTEM UPGRADES

## Potential Project: Lee - Pennington Gap Wastewater Treatment Plant Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***50*** |

## Potential Project: Lee - Rose Hill Wastewater Treatment Plant Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***44*** |

## Potential Project: Lee - Pennington Gap SSES Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Lee - Rose Hill Sewer SSES Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***41*** |

## Potential Project: Lee - Dryden Sewer SSES Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***41*** |

## Potential Project: Lee - Town of Jonesville I/I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***41*** |

## Potential Project: Scott - Duffield Wastewater Treatment Plant Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***47*** |

## Potential Project: Scott - Duffield I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Scott - Weber City I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Scott - Nickelsville I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Scott - Dungannon I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Scott - Holston Regional Wastewater Treatment Plant Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Scott - Dungannon Wastewater Treatment Plant Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Scott - Nickelsville Wastewater Treatment Plant Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***38*** |

## Potential Project: Scott - Gate City I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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* |
| | | *Subtotal* | | *10* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***37*** |

## Potential Project: Wise - Pound WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *29* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *25* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***76*** |

## Potential Project: Wise - Town of Pound I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *25* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***67*** |

## Potential Project: Wise - Appalachia Elementary School WWTP to Forcemain Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *25* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***61*** |

## Potential Project: Wise - Town of Coeburn I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***54*** |

## 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 |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***48*** |

## Potential Project: Wise - City of Norton SSES Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***47*** |

## Potential Project: Wise - Big Stone Gap WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***45*** |

## Potential Project: Wise - Town of Appalachia I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Wise - St Paul SSES Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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* |
| | *Subtotal* | | *1* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***40*** |

## Potential Project: Wise - CNW I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Wise - St Paul WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Wise - CNW WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| | ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| | ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| | ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| | ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

# APPENDIX J

# MOUNT ROGERS PLANNING DISTRICT
# CENTRALIZED EXTENSIONS

## Potential Project: Bland - Rocky Gap Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *7* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***43*** |

## Potential Project: Bland - Bland Sewer System

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *7* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***42*** |

## Potential Project: Carroll - Cana Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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* |
| | | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***32*** |

## Potential Project: Grayson - Stevens Creek / Eagle Bottom Extensions

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *7* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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* |
| | | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | *2* |
| | | *Subtotal* | | *2* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***50*** |

## Potential Project: Grayson - Providence Extensions

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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* |
| | | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | *8* |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *8* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | *2* |
| | | *Subtotal* | | *2* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***48*** |

## Potential Project: Grayson - Independence North / South Extensions

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $20,000 per Equivalent Residential Connection | 25 | |
| | $20,000 - $30,000 per Equivalent Residential Connection | 21 | *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 | |
| | *Subtotal* | | *21* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***36*** |

## Potential Project: Grayson - Fairview Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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* |
| | | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***31*** |

## Potential Project: Grayson - Elk Creek System

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***17*** |

## Potential Project: Washington - Benhams Road

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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* |
| | | *Subtotal* | | *5* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***59*** |

## Potential Project: Washington - Mock Hollow

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***57*** |

## Potential Project: Washington - Lee Highway

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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* |
| | | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | | **Potential Project Total Score** (100 Points Maximum)**:** | ***56*** |

## Potential Project: Washington - East Central

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *7* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | *10* |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***55*** |

## Potential Project: Washington - Larwood

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *16* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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* |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***55*** |

## Potential Project: Washington - High Meadows

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *16* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | *6* |
| | < 100 Equivalent Residential Connections | 4 | |
| | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***54*** |

## Potential Project: Washington - Clinchburg

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | *10* |
| | $60,000 - $75,000 per Equivalent Residential Connection | | 7 | |
| | > $75,000 per Equivalent Residential Connection | | 5 | |
| | | *Subtotal* | | *10* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***53*** |

## Potential Project: Washington - Buchanan Road

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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 | *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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***50*** |

## Potential Project: Washington - Old Mill Road

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***47*** |

## Potential Project: Washington - Spoon Gap

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***46*** |

## Potential Project: Washington - Rush Creek

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Points Maximum)**:** | ***44*** |

## Potential Project: Washington - Seven Springs

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Washington - Wyndale

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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 | |
| | *Subtotal* | | *16* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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* |
| | *Subtotal* | | *8* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***40*** |

## Potential Project: Washington - Damascus Area

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***20*** |

## Potential Project: Wythe - Wytheville East Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *6* |
| | | | **Potential Project Total Score** (100 Points Maximum)**:** | ***35*** |

## Potential Project: Wythe - Route 21 South Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(25 points total)* |
| | < $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* |
| | *Subtotal* | | *5* |
| ***Regionalization*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | 10 | |
| | 200 - 300 Equivalent Residential Connections | 8 | |
| | 100 - 200 Equivalent Residential Connections | 6 | |
| | < 100 Equivalent Residential Connections | 4 | *4* |
| | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | 2 | |
| | *Subtotal* | | *5* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***34*** |

## Potential Project: Wythe - Cripple Creek Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | |
| | < 100 Equivalent Residential Connections | | 4 | *4* |
| | | *Subtotal* | | *4* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***17*** |

## Potential Project: Wythe - Barren Springs Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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 | |
| | | *Subtotal* | | *7* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***15*** |

## Potential Project: Wythe - Poplar Camp/Foster Falls Sewer Extension

## New Centralized Collection System Extension Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(25 points total)* |
| | < $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* |
| | | *Subtotal* | | *5* |
| ***Regionalization*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Equivalent Number of Residential Connections Served (4,200 Gallons/Month/ERC)*** | | | | *(10 points maximum)* |
| | > 300 Equivalent Residential Connections | | 10 | |
| | 200 - 300 Equivalent Residential Connections | | 8 | |
| | 100 - 200 Equivalent Residential Connections | | 6 | *6* |
| | < 100 Equivalent Residential Connections | | 4 | |
| | | *Subtotal* | | *6* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *0* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***14*** |

# APPENDIX J

# MOUNT ROGERS PLANNING DISTRICT
# EXISTING SYSTEM UPGRADES

## Potential Project:

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***0*** |

## Potential Project: Bland - Bastian SSES Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *17* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***46*** |

## Potential Project:

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***0*** |

## Potential Project: Carroll - I-77 Exit 1 Wastewater Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *25* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *10* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***50*** |

## Potential Project: Galax - Collection System I/I Reductions

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| | ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| | ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| | ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***45*** |

## Potential Project: Carroll - Town of Hillsville SSES Rehabilitation

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***26*** |

## Potential Project: Grayson - Independence Sewer Line CIPP & Manhole Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| | ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| | ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| | ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***37*** |

## Potential Project: Grayson - Fries WWTP Improvements

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *10* |
| | Fries WWTP | | | |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | *2* |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***34*** |

## Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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* |
| | | *Subtotal* | | *33* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***79*** |

## Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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* |
| | | *Subtotal* | | *33* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***79*** |

## Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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* |
| | | *Subtotal* | | *33* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***73*** |

## Potential Project: Bristol - BC-1301 Sewer System Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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* |
| | | *Subtotal* | | *33* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***71*** |

## Potential Project: Bristol - Beaver Creek Interceptor Rehabilitation - Phase 2

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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* |
| | | *Subtotal* | | *33* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***71*** |

## Potential Project: Bristol - Little Creek Interceptor Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | *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* |
| | | *Subtotal* | | *25* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***62*** |

## Potential Project: Bristol - Sinking Creek Sewer System Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***57*** |

## Potential Project: Bristol - Gate City Highway Sewer System Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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* |
| | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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* |
| | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***57*** |

## Potential Project: Washington - Abingdon Phase 1 Sewer Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***44*** |

## Potential Project: Washington - Abingdon Phase 2 Sewer Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***44*** |

## Potential Project: Washington - Abingdon Walden Road Sewer Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Washington - Abingdon Phase 3 Sewer Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Washington - Abingdon Phase 4 Sewer Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *16* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Washington - Abingdon Phase 5 Sewer Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| | ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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* |
| | | *Subtotal* | | *16* |
| | ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| | ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| | ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *5* |
| | ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| | ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Washington - Wolf Creek Water Reclamation Facility Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | *Subtotal* | | *5* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***34*** |

## Potential Project: Washington - Abingdon Sewer Lift Station Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *5* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***34*** |

## Potential Project: Wise - Pound WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *29* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *25* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***76*** |

## Potential Project: Wise - Town of Pound I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *25* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***67*** |

## Potential Project: Wise - Appalachia Elementary School WWTP to Forcemain Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *25* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *2* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***61*** |

## Potential Project: Wise - Town of Coeburn I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***54*** |

## 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 |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***48*** |

## Potential Project: Wise - City of Norton SSES Improvements Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *17* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***47*** |

## Potential Project: Wise - Big Stone Gap WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *20* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***45*** |

## Potential Project: Wise - Town of Appalachia I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *2* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***42*** |

## Potential Project: Wise - St Paul SSES Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***40*** |

## Potential Project: Wise - CNW I&I Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Wise - St Paul WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Wise - CNW WWTP Improvement Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| | ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| | ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| | ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *4* |
| | ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| | ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | ***Readiness to Proceed with Project*** | | | *(8 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***39*** |

## Potential Project: Wythe - Rural Retreat SSES Rehabilitation

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 to Be Public Health Hazards | | 17 | *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 | |
| | | *Subtotal* | | *17* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***50*** |

## Potential Project: Wythe - Wytheville SSES Rehabilitation Project

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 to Be Public Health Hazards | | 17 | *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 | |
| | | *Subtotal* | | *17* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***50*** |

## Potential Project: Wythe - Fort Chiswell WWTP Expansion

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | *(42 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | *(25 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | *(4 points maximum)* | |
| | 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* |
| | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | *(17 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | *(4 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | *(8 points maximum)* | |
| | 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 | |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Points Maximum): | | ***40*** |

## Potential Project: Wythe - Rural Retreat WWTP Expansion

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | *(42 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | *(25 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | *(17 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | *(4 points maximum)* | |
| | 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* |
| | | *Subtotal* | | *4* |
| ***Readiness to Proceed with Project*** | | | *(8 points maximum)* | |
| | 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 | |
| | | *Subtotal* | | *0* |
| | | **Potential Project Total Score** (100 Points Maximum): | | ***40*** |

## Potential Project: Wythe - Max Meadows SSES Rehabilitation

## Existing Wasterwater Collection or Treatment System Upgrades Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Targeted Project Types / Outcomes*** | | | | *(42 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Concerns - Priority Watersheds*** | | | | *(25 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Environmental Concerns - Enforcement / Compliance History*** | | | | *(4 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| ***Commission on Local Government Composite Fiscal Stress Index Ranking*** | | | | *(17 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *12* |
| ***Potential Bonus Points for Towns or Cities*** | | | | *(4 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Readiness to Proceed with Project*** | | | | *(8 points maximum)* |
| | 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* |
| | | *Subtotal* | | *1* |
| | | | **Potential Project Total Score** (100 Points Maximum): | ***37*** |

# APPENDIX J

# DECENTRALIZED PROJECTS

## Potential Project: Buchanan - Hurley

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***73*** |

## Potential Project: Tazewell - Hillcrest

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***73*** |

## Potential Project: Russell - Carbo

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *6* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***69*** |

## Potential Project: Lee - Stone Creek

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *6* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***69*** |

## Potential Project: Russell - Old Castlewood

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***67*** |

## Potential Project: Dickenson - McClure/Stratton

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***65*** |

## Potential Project: Dickenson - Nora

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***65*** |

## Potential Project: Wise - Honey Branch

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***65*** |

## Potential Project: Buchanan - Greenbrier

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***63*** |

## Potential Project: Wise - Dunbar

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | *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 | |
| | *Subtotal* | | *25* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(20 points maximum)* |
| | < $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 | |
| | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *5* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | *(15 points maximum)* |
| | 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 | |
| | RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems | 5 | |
| | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Point Maximum): | | ***61*** |

## Potential Project: Smyth - St. Clairs Creek

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(20 points maximum)* |
| | < $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 | |
| | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | *(15 points maximum)* |
| | 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 | |
| | RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems | 5 | |
| | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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 | |
| | *Subtotal* | | *3* |
| | **Potential Project Total Score** (100 Point Maximum): | | ***61*** |

## Potential Project: Russell - Rosedale

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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* |
| | | *Subtotal* | | *15* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | | **Potential Project Total Score** (100 Point Maximum): | ***60*** |

## Potential Project: Wise - Russell Creek

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | | **Potential Project Total Score** (100 Point Maximum): | ***59*** |

## Potential Project: Lee - Keokee

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *10* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***58*** |

## Potential Project: Scott - Natural Tunnel Parkway

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *5* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***58*** |

## Potential Project: Russell - Clinchfield

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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 | |
| | | *Subtotal* | | *6* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***56*** |

## Potential Project: Wise - Little League Road

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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* |
| | | *Subtotal* | | *15* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *5* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *3* |
| | EJScreen Composite State Percentile for 8 Socioeconomic Indicators in Range of 30 - 50 | | 2 | |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***53*** |

## Potential Project: Tazewell - St. Clair Heights Subdivision

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***52*** |

## Potential Project: Tazewell - Ebenezer Subdivision

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *15* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***52*** |

## Potential Project: Wythe - Ivanhoe

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems | | 5 | |
| | | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *8* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *4* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***52*** |

## Potential Project: Washington - Clinchburg

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *10* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | *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* |
| | | *Subtotal* | | *5* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***50*** |

## Potential Project: Scott - Spring Valley Subdivision

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | Score | Points |
|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | *(30 points maximum)* |
| | 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 | |
| | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | *(20 points maximum)* |
| | < $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 | |
| | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | *(15 points maximum)* |
| | 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 | |
| | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | *(15 points maximum)* |
| | 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 | |
| | RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems | 5 | |
| | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | *(10 points maximum)* |
| | > 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 | |
| | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | *(10 points maximum)* |
| | 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* |
| | *Subtotal* | | *4* |
| | **Potential Project Total Score** (100 Point Maximum): | | ***49*** |

## Potential Project: Wythe - Speedwell

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | *20* |
| | Project Consolidates One or More Permitted Discharging Systems into a Decentralized System | | 15 | |
| | | *Subtotal* | | *20* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *20* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems | | 5 | |
| | | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *3* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***48*** |

## Potential Project: Wythe - Crockett

## New Decentralized Collection & Treatment System Type Project

| Inputs | Criteria | | Score | Points |
|---|---|---|---|---|
| ***Project Outcomes, Health Hazards, & Water Quality Problems*** | | | | *(30 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *30* |
| ***Affordability / Project Implementation Cost Per Equivalent Residential Connection (4,200 Gallons/Month/ERC)*** | | | | *(20 points maximum)* |
| | < $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 | |
| | | *Subtotal* | | *10* |
| ***Community Involvement & Willingness to Participate*** | | | | *(15 points maximum)* |
| | 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 | |
| | | *Subtotal* | | *0* |
| ***Responsible Management Entity Considerations for Ownership and Operation*** | | | | *(15 points maximum)* |
| | 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 | |
| | RME's Has Prior Experience in Owning & Operating 2 - 4 Decentralized Wastewater Systems | | 5 | |
| | | *Subtotal* | | *0* |
| ***Average Residential Customer's Annual Sewer Bill as a Percentage of Project Area's Median Household Income*** | | | | *(10 points maximum)* |
| | > 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 | |
| | | *Subtotal* | | *5* |
| ***Environmental Justice - EPA EJScreen Report for Project Area*** | | | | *(10 points maximum)* |
| | 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* |
| | | *Subtotal* | | *2* |
| | | **Potential Project Total Score** (100 Point Maximum): | | ***47*** |