

## **FREDERICK WATER**

### **CURRENT CONDITIONS**

The Sewer and Water Service Area (SWSA) is an important policy tool used by Frederick County to determine where public water and sewer service may be provided. The Board of Supervisors approves the location of the Urban Development Area (UDA) and SWSA boundaries through the adoption of the Comprehensive Plan and amendments thereto. As a result, properties located within the SWSA may enjoy access to public water and sewer.

Frederick Water has the primary responsibility to manage the provision of water and sewer services in Frederick County. Other public entities may serve properties within Frederick County, if approved by the Board of Supervisors; this is the case in some areas adjacent to the City of Winchester and in the vicinity of the Town of Middletown and the Town of Stephens City. The Middletown/Lord Fairfax and Middletown/Reliance Road Area Plans established the Sewer and Water Service Areas (SWSA) with the express stipulation that the Frederick Water will be the party responsible for providing water and sewer in this area. This may be done in cooperation with those adjacent public entities.

#### *Water and Sewer Services*

The location of public sewer and water lines within the Urban Development Area (UDA) and SWSA determines where urban development can occur. The UDA defines the general area in which more intensive forms of residential development can occur. Commercial, industrial, and institutional land uses are also encouraged within the UDA. The SWSA is consistent with the UDA in many locations. However, the SWSA may extend beyond the UDA to promote commercial, industrial, and institutional land uses in areas where residential land uses are not desirable.

It is the clear policy of the Comprehensive Plan that extensions of sewer and water service will be within the boundaries of the UDA and SWSA. The extension service into areas outside of those boundaries will require an amendment to the Comprehensive Plan. All sewer and water mains extended shall be publicly owned.

Frederick Water has the responsibility for the treatment, transmission, and distribution of potable water and the collection and conveyance of wastewater. Most of the sewer and water mains and laterals in the County are owned, operated, and maintained by Frederick Water.

Frederick County and Frederick Water have executed a Facilities Planning Agreement which sets forth procedures for the planning of sewer and water mains in the County. The agreement includes: provisions for adopting a water and sewer facilities plan as a part of the Comprehensive Plan; specifies the location of water and sewer mains over eight inches in size; provides for review and update of the plan and for including sewer and water facilities projects in the Frederick County Capital Improvements Plan.

## PUBLIC FACILITIES

---

The City of Winchester owns and maintains sewer and water lines in portions of the County adjacent to the City corporate limits. Such lines have been extended into the County following a previous agreement between the City and the County, and often predate Frederick Water's ability to provide said services. The Frederick County Board of Supervisors prefer that all future water and sewer services in the County be provided by Frederick Water.

### *Wastewater Facilities*

The Frederick-Winchester Service Authority (FWSA) provides wastewater treatment service for Frederick Water and the City of Winchester. The FWSA currently owns the Opequon Water Reclamation Facility, the Parkins Mill Wastewater Treatment Plant and the Crooked Run Wastewater Treatment Plant and has operational agreements with the City and Frederick Water for wastewater treatment plant operations. The City operates and maintains the Opequon Facility while Frederick Water is responsible for operation and maintenance of the Parkins Mill and Crooked Run Facilities.

Treatment of wastewater generated from within the County's Sewer and Water Service Area (SWSA) is undertaken at all plants. The Opequon Service Area is comprised of the Abrams Creek drainage area which includes the City of Winchester and adjacent drainage areas located east, west and north of the City of Winchester. The Parkins Mill Wastewater Treatment Plant serves Frederick Water customers located in the upper Opequon Creek, Wrights Run, and Stephens Run drainage areas along with the Town of Stephens City. The Crooked Run Service Area services the Lake Frederick/Shenandoah Community in southeastern Frederick County.

The Opequon Water Reclamation Facility presently has a treatment capacity of 12.6 million gallons per day. The Parkins Mill Wastewater Treatment Plant which has a treatment capacity of 5.0 million gallons per day. The Crooked Run Wastewater Treatment Facility opened in support of the Lake Frederick development and has an ultimate capacity of 0.626 million gallons per day, with a current treatment capacity of 0.25 million gallons per day.

### *Water Facilities*

Frederick Water manages a system with a water capacity of 7.42 Million Gallons per Day (MGD), with an average daily use of 6.5 MGD. Various quarries provide the majority of the system's water supply, with an agreement with the City of Winchester supplementing the system with up to 2MGD.

Two water treatment facilities are owned and operated by Frederick Water. The James H. Diehl Water Filtration Plant, put into operation 1994, treats up to 3 million gallons of water per day. Additional pumps can increase this capacity to 5-MGD. The water sources include ground water pumped from Frederick Water owned quarries on the west side of Stephens City, and wells at Bartonsville and Orchard View Elementary School.

## PUBLIC FACILITIES

---

The James T. Anderson Treatment Plant, opened in 2002, has an initial capacity of 4 MGD expandable to 6 MGD. The water source is a quarry in Clearbrook and nearby wells.

In addition, the Authority has in operation two elevated tanks and three ground storage tanks with a total capacity of 10 million gallons of system water storage.

### **FOCUS FOR THE FUTURE**

The Frederick County Board of Supervisors establishes the framework for where development is to occur, and Frederick Water is tasked with accommodating and serving this new development.

The Comprehensive Plan utilizes the UDA and SWSA to designate those areas that are envisioned to be developed within the next 20 years. Therefore, areas within the SWSA should be provided public water and sewer service over the next 20 years as development advances. Those areas identified with future land uses but are not presently within the SWSA are expected to develop over the next 20-40 years; public water and sewer should be planned to serve these future areas. It is the role of Frederick Water to plan for and accommodate sewer and water service to these areas of anticipated new growth and development.

Historically, the County and Frederick Water have collaborated on long range planning efforts, and this has previously been reflected in the Comprehensive Plan. Continued cooperation and collaboration between Frederick Water and the Board of Supervisors is necessary in implementing the 2035 Comprehensive Plan.

In addition, Frederick Water should update its water and sanitary sewer master plans to reflect Frederick Water's current plans to service land inside the SWSA and to include an overview of their plans to service future land uses outside of the current SWSA boundary. Such master plans should build upon the future water and sewer needs of the County and the Town of Stephens City and guide the development and acquisition of water resources and wastewater treatment options. Frederick Water should proactively identify major capital projects aimed at increasing the County's water supply or implementing the anticipated future land use plan.

As noted in the Natural Resources Chapter of the Comprehensive Plan, water supply is critical to both the natural and built environment, and viable sources are essential for future economic development in the County. The future focus of Frederick Water and County should continue to be to protect the water supply and to identify and secure viable sources of water for the future growth and development of the County.

### **COMMUNITY BENEFIT**

Frederick Water is a non-profit organization whose mission statement is to provide affordable and reliable water and wastewater service to our customers while protecting public health and the environment. The ultimate benefit to the Community is significant and noted throughout this Plan.

**GOALS/STRATEGIES**

**GOAL:        PROTECT GROUNDWATER SOURCES AND THE AREAS THAT CONTRIBUTE RECHARGE TO ENSURE THAT ADEQUATE WATER SUPPLIES ARE MAINTAINED, AND WORK TOWARD DEVELOPING INCREASED WATER SUPPLIES TO MEET FUTURE NEEDS.**

**STRATEGIES:**

- Frederick County and Frederick Water should continue to coordinate the planning of sewer and water facilities following the procedures described by the Facilities Planning Agreement.
- The Frederick County Board of Supervisors, with the support Frederick Water should work with adjacent communities to evaluate regional water supply issues. As a result, a regional water supply partnership could be formed that would combine water resources and address water supply issues as one regional entity to ensure common goals.
- Water and sewer service should be provided to service areas in the UDA and SWSA through an orderly process following the Facilities Planning Agreement and using the Capital Improvements Plan.

**GOAL:        FACILITIES AND SERVICES SHOULD BE CAREFULLY PLANNED TO MEET PROJECTED NEEDS. APPROPRIATE SERVICES AND FACILITIES SHALL BE PROVIDED TO SERVE PLANNED LAND USES AND DEVELOPMENT.**

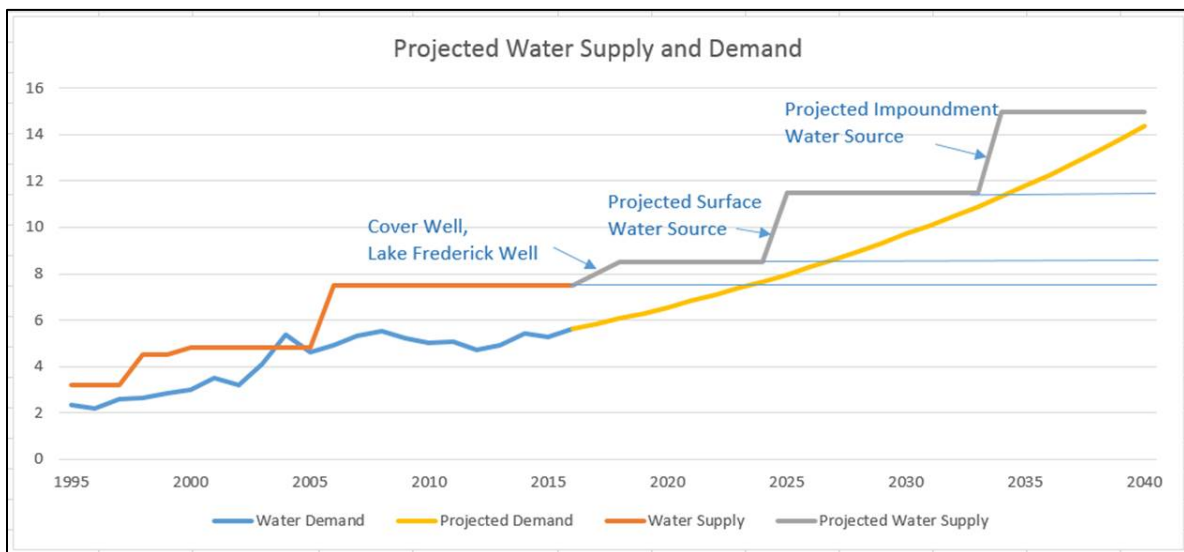
**STRATEGIES:**

- Carefully monitor sewer and water use and develop up-to-date improvement plans for sewer and water facilities.
- Develop and maintain formal and regular relationships and procedures between the County and providers of facilities and services, including Frederick Water, the City of Winchester, the Frederick-Winchester Service Authority, and the Towns of Middletown and Stephens City.
- Identify those areas in the SWSA that are better situated to be served with water and sewer and prioritize facility and infrastructure development to more effectively serve those areas and the SWSA.
- Any sewer or water main eight inches in diameter or larger, extended or existing within an area proposed for inclusion within the SWSA or UDA, should be dedicated as a public line to be owned and maintained by Frederick Water or City of Winchester when appropriate.

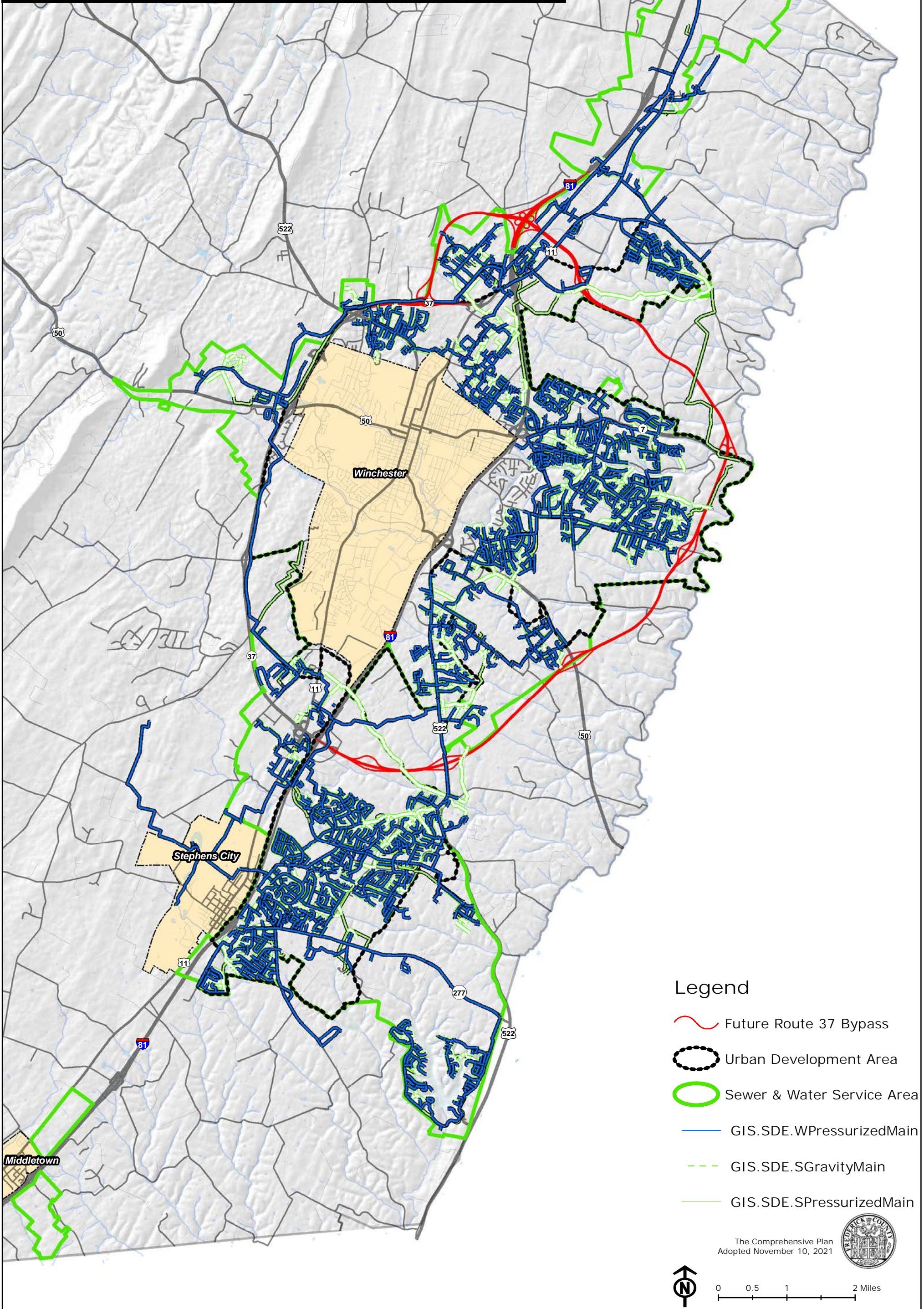
## PUBLIC FACILITIES

- Plans for new facilities should be based on demand projections as derived from population projections in the Comprehensive Plan and from future land use plans which depict the planned future land uses that will accommodate the anticipated community growth.
- Together with the County and the City, Frederick Water and the Frederick-Winchester Service Authority should carefully plan needed sewage treatment capacity based on trends in usage.







### PROJECTED WATER SUPPLY AND DEMAND CHART



# Sewer and Water Service Area, Urban Development Area, & Water & Sewer Lines



## Legend

-  Future Route 37 Bypass
-  Urban Development Area
-  Sewer & Water Service Area
-  GIS.SDE.WPressurizedMain
-  GIS.SDE.SGravityMain
-  GIS.SDE.SPressurizedMain

The Comprehensive Plan  
Adopted November 10, 2021



0 0.5 1 2 Miles