



Function and Capacity of WTP and WWTP

Town Council Work Session
December 13, 2022

Function of WTP and WWTP

*Plan Warrenton 2040-
Community Facilities
Goals: CF4 and CF5*

- Plan Warrenton 2040 adopted by Council
- Community Facilities Goals
- CF-4: Ensure healthy, safe adequate water and wastewater services
- CF-5: To provide fiscally responsible infrastructure that maintains a high quality of life for residents, supports current businesses, and attracts new employers with a stable tax structure

Function of WTP and WWTP

*Plan Warrenton 2040-
Community Facilities
Goals: CF-4 and CF-5*

CF-4: Ensure healthy, safe, adequate water and wastewater services.

- **CF-4.1:** Maintain a reliable and sufficient quantity of wastewater treatment capacity and a sufficient quantity and quality of public water supply to meet the needs of expected long term residential and commercial growth.
- **CF-4.2:** Meet the future infrastructure needs through careful planning and acquisition of required permits.
- **CF-4.3:** Reduce Infiltration and Inflow (I&I) and promote sustainability within the wastewater infrastructure system.
- **CF-4.5:** Evaluate and update the Town of Warrenton – Fauquier County Master Water and Sewer Plan’s Tri-Party Agreement as needed, creating a regional strategy for future needs, and reevaluating the Town boundaries in relationship to its service areas.
- **CF-4.8:** Explore resources to help property owners and promote connection to public water and sewer within the Town boundaries.

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CF-5: To provide a fiscally responsible infrastructure that maintains a high quality of life for residents, supports current businesses, and attracts new employers with a stable tax structure.

- **CF-5.1:** Implement robust maintenance schedules on community facilities to extend the life of investments.
- **CF-5.2:** Support the Town's current and future population through the provision of timely and comprehensive community facilities.

Objective

- Provide an overview to operations at both the Water and Wastewater Treatment Plant
- Provide a holistic overview of current status for better planning
- Outline Challenges moving forward
- Provide an overview as we move forward

Background

- Growth and Capacity studies completed in 2002, 2006, and 2009 with WRA.
- Capacity study in 2014 reports and presentation was provided to Town Council in 2015 identifying several areas of concern
- Town staff has been working with WRA and contractors to move the plan forward
- Budget concerns and restraints have deferred some projects and timelines
- Staff review of 2015 study led to current study: 2022, Completed

2015 Report Highlights from 2015 Presentation to Council

- Water:
 - Buildout between 2028 and 2033
 - At buildout 92% safe yield
- Sewer:
 - Buildout 2029
 - WWTP capacity (95%) in 2022-2024

Actions Taken from 2015 Report

- Engaged in I&I efforts
- Developed a plan of plant improvements with consultants
- Used the developed plan to define CIP and CARP to move forward
- MBBR completed
- Chemical building completed
- Presented plan for current budget
- Working with Community Development to address future growth needs

2015 Report Review– 2022

- Projections were very accurate
- Did not take into consideration current condition of plant equipment
- Based on study review, we are approaching projected capacity levels causing concern
- Updated Capacity Study completed in November 2022

2022 Capacity Report

- Current Study Considered all Future Expansions
- Reviewed current capacities with improvements since 2015 report
- Provided chart analysis based on potential future expansions to include BLA adjustments

2022 Capacity Report

- Projected Build Out in 2040
- WTP 2.42 MGD reached with Build Out
- WWTP 2.92 MGD reached with Build Out
- WWTP 2.5 MGD reached by 2030
- Updated Capacity Study reenforces staying on track with Improvements moving through the next 5-8 years

Current Capacity

- WTP- at 40% of Capacity
- WWTP- at 70% Capacity