



GOOCHLAND COUNTY DEPARTMENT OF PUBLIC UTILITIES

ANNUAL REPORT – FISCAL YEAR 2020

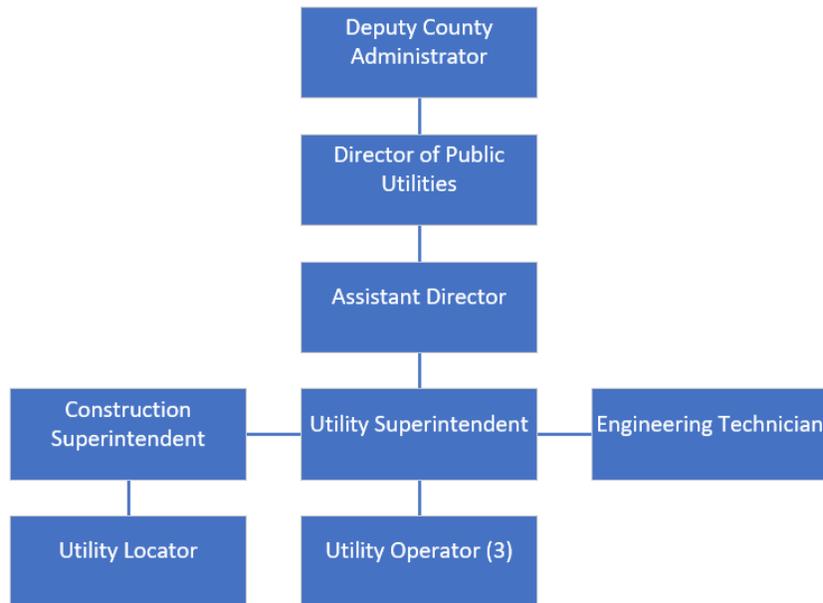


GOOCHLAND COUNTY
DEPARTMENT OF PUBLIC UTILITIES
FY2020 ANNUAL REPORT
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PUBLIC UTILITIES DEPARTMENT OVERVIEW

The Department of Public Utilities (DPU) is responsible for the operation and maintenance of public drinking water and wastewater service to the County. The Director of Public Utilities reports to the Deputy County Administrator for Community and Economic Development.



Public water and sewer is located generally in the eastern end of the County in the Tuckahoe Creek Service District and south of Patterson Avenue and in the Courthouse Village. The Tuckahoe Creek Service District (TCSD) was established in 2002 and is located in easternmost Goochland County.

Water provided in the eastern central system is purchased from Henrico.

The water source for that system is surface water from the James River which is treated by Henrico using conventional flocculation, sedimentation, and filtration processes. Sanitary sewer effluent is piped to either the Henrico or the Richmond Wastewater Treatment Plants for treatment and released back into the James River.

The Goochland Courthouse Village is also served by public water and sewer systems. The water source for this system is surface water from the James River which is treated by conventional treatment processes. The County purchases water from the Department of Corrections and owns distribution system serving the village outside the correctional center, serving about 250 customers. Current water supply capacity in the Courthouse Village stands at 1 million gallons per day, which is the projected 30-year lookout maximum need per the most recent Utility Master Plan adopted in 2015.

Several private central water systems are in operation throughout the county including the Crozier Waterworks, Pagebrook, James River Estates,



Manakin Farms, and Jenkins Mobile Home Park. James River Estates and Pagebrook have connections to the County owned system along River Road where the County supplements their primary water supply. Additionally, Jenkins Trailer Park is anticipated to connect to the County owned water system during FY21.

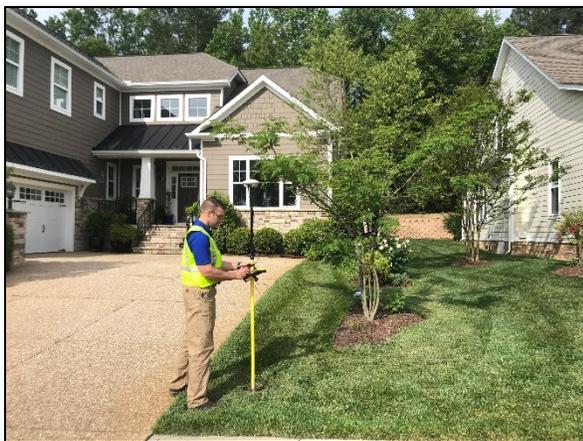
PUBLIC UTILITIES FUNCTIONS

DPU currently operates and maintains 7 sewer pump stations, 2 water booster pump stations, 3 water storage tanks, 1 chloramine booster station, and approximately 150 miles of combined water and sewer pipeline. In addition, staff reads over 1,800 meters bimonthly and processes all customer billing after each meter reading event.

Additionally, DPU completes many core functions on a daily basis such as underground utility locating of all public water and sewer lines, regulatory compliance sampling of the water distribution systems, plan review and construction inspection of all new public utility infrastructure for developer driven and County CIP projects, GIS recordkeeping of all public utility infrastructure, and customer service for all residential and commercial utility customers.



In 2020, DPU staff responded to over 3,600 VA811 underground utility locate tickets. Since public utility infrastructure is one of the largest and most vital assets of most localities, damage prevention plays a vital role in maintaining the reliability and life expectancy of this infrastructure.



DPU also maintains a vast Geographical Information System (GIS) database of all public utility assets including appurtenances such as pipes, valves, manholes, pump stations, and meters. Detailed records of this information allows for the efficient operation of our Computerized Maintenance Management System (CMMS) and subsequent timely responses by DPU staff to maintenance work orders and customer service calls. This also allows for our utility locating staff to respond to contractors and excavators in a quick and effective manner when emergency utility locates are needed.

In addition to operating and maintaining utility assets, the Department also reviews all construction plans that may impact or extend public utility infrastructure. Once projects are approved through the plan review process, DPU performs rigorous construction inspections of public utility installations and documents the methods used, quality of installation, and acceptance testing results for all new public utility infrastructure to verify that it is constructed in accordance with the County's Standards and Specifications.

PUBLIC UTILITIES ACCOMPLISHMENTS

Over the past year, the Department of Public Utilities has overseen several Capital Improvement Plan (CIP) projects in addition to new utility installations for multiple development projects throughout DPU's service areas. Ongoing CIP projects include Hickory Haven/Samary Forest Sewer Installation and Huguenot Hills Water Service – Phase 1. The Hickory Haven/Samary Forest Sewer Project is now in the final stages of design and the Huguenot Hills Water Service – Phase 1 is currently under construction.

The Department also completed the Old Oaks Community Water Service Project in FY20 and conveyed the newly constructed water service infrastructure to Aqua Virginia in February of 2020. For this project, DPU partnered with the State Department of Environmental Quality to facilitate bringing a reliable source of potable water to the Old Oaks Community whose wells had been contaminated with petroleum. This project included the construction of

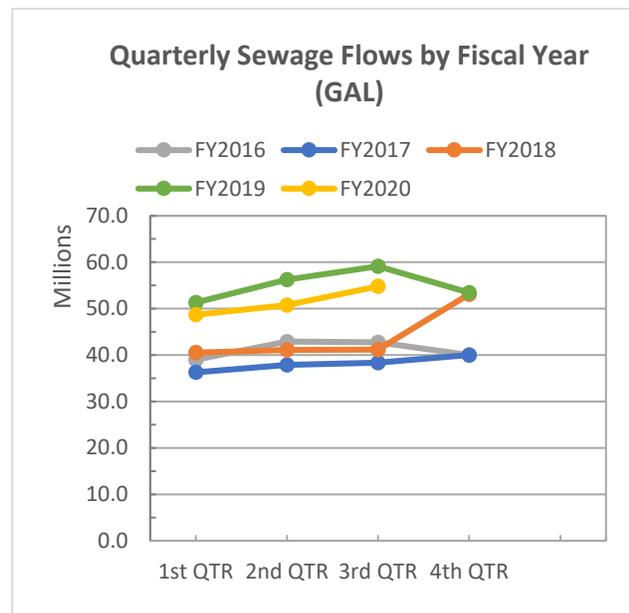
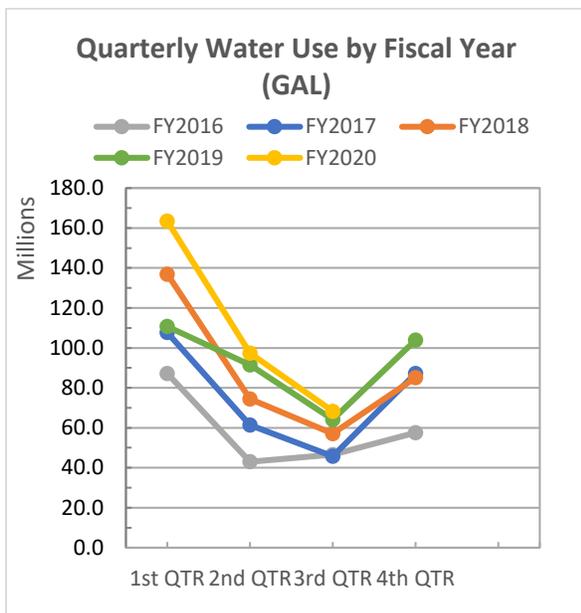


approximately 8,000 feet of new waterline in addition to extensive modifications to the existing well site including a new 10,000-gallon water storage tank.

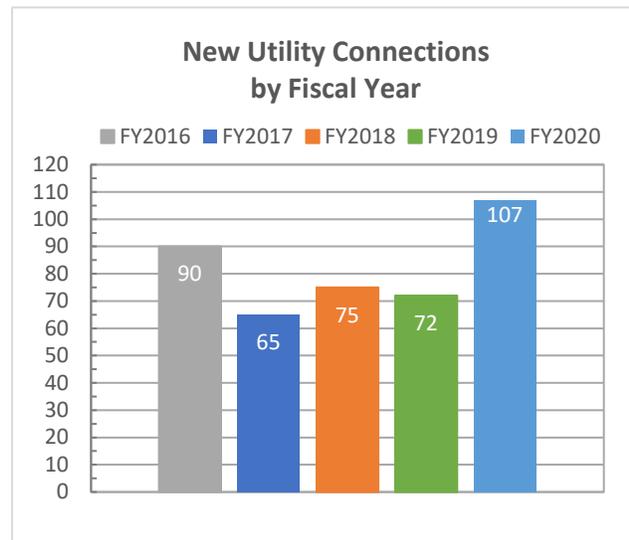
For development driven projects, DPU inspected and accepted public utility infrastructure on multiple commercial and residential projects including: Readers Branch – Sections 2 & 3, Tuckahoe Pines Retirement Community, Residence Inn, Sheltering Arms, Avery Point, and Mosaic at West Creek, among others.

PUBLIC UTILITIES KEY INDICATORS, PERFORMANCE, AND WORKLOAD MEASURES

Through three quarters of FY20, Public Utilities has seen a 24-percent increase in the amount of water consumed since the same period of FY2019. Roughly 339 million gallons of water was used during this period as compared to 266 million gallons in FY19. This consumption can be mostly attributed to a sharp increase in irrigation usage as the central Virginia region approached preliminary drought conditions in the summer and fall of 2019. Conversely, sewer collections decreased through the first three quarters of FY20 from the same period in FY2019 by approximately 12 million gallons, totaling 154 million gallons through the first three quarters in FY20. This may also be attributed to the lack of rainfall during this period in FY20 as compared to FY19, leading to a noticeable reduction in inflow and infiltration into the sanitary sewer system.



In the context of new utility connections to the public system, development in the County has increased in FY20 by nearly 50% compared to recent years. Through the first ten months (April) of FY20, 107 new utility connections were established, comprised of 99 residential connections and 8 commercial connections. During the next 5-year lookout, DPU anticipates new utility connections to remain consistent as residential and commercial development projects continue to build out.



To ensure the safety of our water, the Department of Public Utilities completes monthly water compliance bacteriological sampling along with quarterly and yearly sampling for disinfection byproducts in accordance with Virginia Department of Health (VDH) guidelines. Additionally, DPU completes sampling for Lead and Copper in the distribution system on a triennial basis. In FY20, we successfully reached our goal of 100% sampling compliance with zero 'Notice of Violations' issued by VDH. As a measure of transparency and to summarize our sampling results, DPU publishes Consumer Confidence Reports each year detailing all regulated contaminants detected in both public water systems; these reports are made available to the general public on the County website and in print when requested.

LOOKING FORWARD IN PUBLIC UTILITIES

The Utilities Department will:

- Complete construction of Huguenot Hills Water Service – Phase 1 project;
- Begin engineering and design of Huguenot Hills Sewer Service project;
- Begin construction of the Hickory Haven/Samary Forest Sewer Service project;
- Complete regional sewer model study in partnership with Henrico County to determine best ways to optimize EGPS sewer flows.
- Continue engineering of VADOC's Courthouse WWTP for additional wastewater treatment capacity.
- Begin Inflow and Infiltration (I&I) study for Courthouse sewer collection system.
- Continue to meet and exceed all state and federal standards for drinking water quality.
- Continue to provide training and licensing opportunities for all DPU staff;
- Continue to sample and monitor water quality parameters in both public water systems;

