



County of Prince George, Virginia

“A global community where families thrive and businesses prosper”

Memorandum

To: Percy Ashcraft, County Administrator
Jeff Stoke, Deputy County Administrator
Betsy Drewry, Deputy County Administrator
Julie Walton, Deputy County Administrator
Daniel Whitten, County Attorney

From: Frank Haltom, Director of Engineering & Utilities

Date: January 22, 2020

Subject: **Engineering and Utilities Capital Projects Update**

Jordan on the James Filter Replacement

After receiving bids in November for full replacement of equipment at the JOJ well system, all bids were rejected due to costs being higher than planned. As a result, the plans and specifications have been revised to solicit bids to replace the filter and associated appurtenances. The bid documents for this work were advertised on January 13th with bids due on January 31. Staff will make a recommendation to award the contract at the Board's February 11th meeting. Upon award of the contract, it is anticipated to take 30-45 days for the filters to be fabricated and delivered. Depending on the contractor's methods, the removal of the old filters and installation of the new filters could take up to 14 days, including the time to disinfect, obtain samples for testing, and receive confirmation from the lab the water is safe to drink. After installation, staff will flush the water system. During the installation, it is not anticipated that water use restrictions will be put in place. However, should there be a delay, water use restrictions may be necessary. However, we will take measures to increase the total water volume available to avoid water restrictions as best as possible. Based on the above time frames, the filter replacement will be completed by May 14.

Appomattox River (AR) Water Intake Permit

There has been no activity since the last update in November. The AR intake permit application package was submitted on April 2, 2019. The review period is expected to take about 1 year, during which DEQ will issue a Public Notice with the intent to receive comments from the general public and other water companies on our proposal to withdrawal raw water from the AR. The public notice could be expected during the upcoming winter months. A public hearing may be necessary should there be a significant public response. We expect to receive a permit by December 2020.

Blackwater Swamp Wastewater Discharge Permit

DEQ issued a Public Notice of our intent to discharge treated wastewater into the Blackwater Swamp on January 9th with the intent to receive comments from the general public. There has been no other activity since the last update in November. The application was submitted to DEQ on October 28th. The review

period is expected to take 4 to 5 months. A public hearing may be necessary should there be a significant public response. We expect to receive a permit by May 2020.

Condition Assessment/Update to Master Plan

In an effort to develop a comprehensive asset management program (AMP) to reduce operational inefficiencies and minimize replacement and rehabilitation costs, staff has pursued a program that will provide work order tracking and reporting, ongoing data collection and management, and a preventive maintenance (PM) program. This AMP will take advantage of our current GIS software to build an asset inventory, perform a condition assessment of the assets, create a PM scheduler and work order system. This effort has obviously delayed the update to the condition assessment found in the current Master Plan. However, to avoid duplicative work and to realize the long-term benefit of an AMP, I recommend continuing to develop the AMP. Ultimately, the AMP will include the condition assessment, recommended improvements and cost estimates of the improvements. In addition, it will allow updates to the condition assessment on a daily basis as corrective work orders and PM are performed. The AMP will also prioritize worker orders and PM based on asset life, probability of failure and risk of failure score. The AMP is developed in multiple phases. Each phase could take several months to complete. Upon completion of the condition assessment phase, if the Board so chooses, the Master Plan can be updated to reflect the new condition assessment.

Food Lion (Route 460) Water System Improvements & Route 156 Water Line Extension Project

1. The construction plans for the Route 460 water line extension were submitted to Virginia Department of Health (VDH) and VDOT for review. Approval has been received by VDH. Some minor comments were received by VDOT requiring to resubmit the plans for further review. The critical path for the project is the easement acquisition process. Easement plats have been prepared and the property owners have been notified. Meetings with property owners are currently taking place to negotiate easement acquisitions. It is expected the project can be advertised for bid in March 2020.
2. The Route 156 water line construction plans are scheduled to be completed and submitted to VDH the week of Feb 3. This process will follow the same path as the Route 460 project anticipating the project to be advertised for bid in April 2020.
3. Food Lion Booster Station Upgrades –The construction plans are complete and were submitted December 10 to VDH for their review. Minor comments were received and VDH approval is expected by February 11. Since this project cannot begin until after the Route 460 project is nearly complete, it is expected this project will be advertised for bid in July 2020.

Construction estimates are being revised based on revisions to address VDH and VDOT comments. Please be aware the construction costs may be impacted by the current market trends and new tariffs.

Connection Fee for properties along new water line construction.

Although existing properties along the Route 460 and Route 156 water extensions are not required to make the physical connection to the water line, they are required to pay the connection fee per the county ordinance. However, residential properties are eligible for a discount of the connection fee. The County ordinance states the following:

Sec. 82-313. - Continuation of individual system; fees.

Where an existing individual water supply system is providing adequate service to a premise, such a system may continue in service as long as the system is operated at all times in strict accordance with federal, state and local requirements. **The applicable availability fee and user fees must still be paid in accordance with [section 82-110](#) and [section 82-262](#), respectively.**

Sec. 82-110. - New connections; application and fee.

(e) Applicants along newly constructed water lines may be eligible to receive a discount from established connection fees as approved by the director, provided:

- (1) The connection is for a single-family dwelling;
- (2) Application for service is made within 60 days of notification by the director of availability of the utility line; and
- (3) All applicable charges and fees are paid in full within a two-year period from the date of application of service.

Potential options to address the connection fee for property owners along the new water line:

- Amend the ordinance to remove the requirement for existing homes along newly constructed water lines to pay the connection fee. This option could also include a discount of the connection fee should the property owner choose to connect.
- Discount the connection fee. Determining a discount can be subjective as many factors could be used to set an amount, such as: homeowners may have recently invested in their own water system, connections fees are used to offset cost of the extension and as a means of negotiation to acquire easements.
- No Action – all property owners would pay the appropriate connection fee based on meter size.

Water line Extension to Route 10 Corridor (JOJ and Beechwood Manor)

The Jordan on the James/Beechwood Manor (JOJ/BM) water system within the Route 10 service area is supplied through groundwater wells with a combined DEQ groundwater withdrawal limit of 135,700 GPD. This limit includes 2 additional wells which have been approved for Chappell Creek subdivision and have not been put into service. Based upon projected future demands, the service area is expected to exceed its groundwater withdrawal limitations. In order to provide a long-term water supply solution to the Route 10 service area, a connection to VAWC or ARWA water supply is recommended in the Master Plan.

The Master Plan for the Route 10 service area proposes the following improvements:

1. Construction of a 0.5 MG elevated storage tank located on Route 10 near the intersection of Ruffin Road. Alternative locations also exist along Ruffin Road.
2. Construction of approximately 6 miles of 12-inch water supply along Route 106 and Route 10 connecting the JOJ/BM water system to either the VAWC supply line in the City of Hopewell or to the ARWA supply line on Sandy Ridge Road.
 - a. Connection at Sandy Ridge Road allows us to better utilize the ARWA source; and if a water plant is built, it will allow us to use the plant's water in the future. This also keeps the improvement within the County instead of paying for improvements within Hopewell, which allows us to control the design and timeframe.
 - b. Connection to VAWC is about 1 mile closer and could reduce the cost by approximately \$1million. But this scenario does not consider improvements within Hopewell.
3. Construction of a 0.75 MGD booster pump station (expandable to 1.5 MGD) to pump water into the Route 10 service area. This station was sized based on connection to VAWC.

The Master Plan estimates the cost to be approximately \$7 million to connect to VAWC. However, it is recommended to budget \$9 million to include design, construction and property/easement acquisition. This project will allow the utility to avoid approximately \$1.8 million in maintenance and rehabilitation costs of the JOJ/BM water system and potentially incentivize development of the Route 10 corridor.

It is recommended the Board authorize a Preliminary Engineering Report (PER) to have both scenarios investigated and more accurately estimate the costs.