

Wastewater Utility Projects Update
Spring 2022
(Updated Winter 2022)

The City's Department of Public Works Wastewater Division currently has various types of projects that are underway and in different phases. These projects involve: the replacement, expansion, and upgrade of existing infrastructure; assessment and analysis of existing infrastructure; and the planning and development of future projects.

Current Wastewater Capital projects:

Celebrate Virginia Lift Station Upgrade Project – This project involves the replacement of two (2) pumps and an upgrade the electrical system to maintain current capacity requirements. This project is funded by the City's current fiscal year's Capital Budget. Completion is scheduled by August 2022. Future capacity needs for this area will be considered as part of the future Master Plan project identified below.

Update: Completed

Snowden Lift Station and Force Main Upgrade Project – This project involves the installation of air gap devices and the replacement of approximately 600 linear feet of 12-inch force main with a 12-inch pipe constructed of new material. This project is funded by the current fiscal year's Capital Budget. Completion is scheduled to be in January 2023.

Update: Completed

Wastewater Treatment Plant (WWTP) Upgrade and Expansion Project – This project involves performing various improvements at the WWTP to expand its current treatment capacity/capability from 4.5 million gallons per day (mgd) to 6.0 mgd, as well as implementing the necessary upgrades to ensure compliance with the City's Virginia Pollutant Discharge Elimination System (VPDES) permit at the proposed higher flows.

The Preliminary Engineering Report (PER) on the WWTP has been completed. This document has been included with the recent submittal of a Water Quality Improvement Fund (WQIF) application to the Virginia Department of Environmental Quality (VDEQ). The PER is also to be included in a Request for Qualifications (RFQ) to solicit Statements of Qualifications (SOQs) from design-build teams interested in contracting to design and construct improvements to upgrade and expand the City's WWTP. The RFQ was released in April 2022. Selected teams will be requested to submit a Request for Proposals (RFP) for further consideration. Contract negotiations with a final team is anticipated to be completed by the end of calendar year 2022.

Update: Two design-build teams were selected and they have submitted their Proposals. The City team is in the active negotiation process with both. One will be selected to move through the final process. It is anticipated that an interim agreement will be executed, by the end of the calendar year, to begin the project as negotiations are finalized for the final Construction Agreement.

The City is currently identified in the Governor's proposed budget to receive \$27 Million in grant funds (\$15 Million the City's Wastewater Treatment Plant Project and \$12 Million for projects targeted to reduce the sanitary sewer collection system's infiltration and inflow) administered through VDEQ for this project. In addition to City funds, the City will also be seeking other State and Federal grants and loans to fund the project. The overall project is currently estimated at a cost of \$101 Million. The improvement and expansion construction project is scheduled to be completed by the end of calendar year 2025.

Update: New estimate for the wastewater treatment plant upgrades has grown roughly 50%. The City received the \$27 Million grant through an ARPA appropriation in the Governor's adopted budget. An application for this project was also submitted in September to the Virginia Department of Environmental Quality (DEQ) through its Enhanced Nutrient Removal Certainty program for additional funds in the amount of \$29.4 Million. To support rate payers, and due to increasing construction costs, the City is aggressively pursuing additional state and federal monies.

Infiltration and Inflow (I&I) Assessment Project – This project involves the deployment of flow monitors in various sanitary sewer manholes within the City's Sanitary Sewer Collection System for the purpose of assessing flow conditions during normal and wet weather conditions to identify areas experiencing I&I (leaks/breaks in the system). The City's consultant has collected flow monitoring data in 3 of the 8 sewer sheds and is analyzing the collected data. The flow monitors' deployment in the other sewer sheds is in process. This project will assist the City in identifying areas that require further evaluation and inspection to determine the source of the I&I, as well as to determine the most effective means to address identified issues and for the development of future CIP projects. This project is funded in the current fiscal year, and is to be completed in January 2023.

Update: The consultant has completed the data collection in all eight sewer sheds. Reports and data have been submitted for six of the eight sewer sheds, which is being reviewed by City staff. The consultant is preparing the reports for the final two sewer sheds based on the recently completed data collection.

WWTP Supervisory Control and Data Acquisition (SCADA) System Project – This project involves replacement and upgrade of the WWTP's SCADA system and installation of additional equipment for the purpose of monitoring plant operations and to comply with state requirements. This project is funded in the current fiscal year. Final project completion is scheduled for July 2022.

Update: Completed

Future CIP projects

Tidewater Lift Station and Force Main Upgrade Project – This project involves relocation and construction of a new lift station and force main with the decommissioning and removal of the existing lift station and a portion of the existing force main. This project is proposed to be funded utilizing City funds and is recommended in the City’s upcoming CIP. The project is anticipated to be completed in 2024.

Update: No change, still in process.

Sewer and Water Master Plan Project – This project will involve a comprehensive analysis and assessment of the Sanitary Sewer Collection and Water Distribution Systems to determine the systems’ abilities to meet current and future capacity needs of the City. Part of this assessment is to identify and prioritize future CIP projects for immediate, 5, 10, 15-year time periods. This project will also include development of a Pro Rata cost share program which, if approved, can be updated annually or as determined necessary. This project is proposed to be funded utilizing City funds and is recommended in the City’s FY2023 Fiscal Budget. The project is anticipated to be completed in the first part 2024.

Update: No change, still in process.

Sewer System Improvements Project – This project involves performing various types of repairs and improvements on the City’s sanitary sewer collection system for the purpose of reducing I&I. This will alleviate system and capacity issues created by the additional flows associated with I&I. This project is in support of the above Infiltration and Inflow (I&I) Assessment Project.

This project is proposed to be funded utilizing City funds and is recommended in the City’s upcoming FY2023 Fiscal Budget. The City is currently identified in the Governor’s proposed budget to receive \$12 Million in grant funds administered through VDEQ for this project. In addition to City funds, the City will also be seeking other State and Federal grants and loans to fund the project. This is an ongoing project endeavor identified for inclusion in subsequent CIPs.

Update: Again, \$12 million has been awarded (a portion of the \$27 million award) to the City of Fredericksburg. Otherwise, no change in status as this remains a work in progress.

Note: A new Assistant Director of Public Works for Utilities was hired in September 2022 which enable additional forward progress on all of the above critical projects.

