FY 2024
BOONSBORO MUNICIPAL UTILITIES COMMISSION
DRINKING WATER and WASTEWATER CAPITAL PROJECTS

December 6, 2023

Drinking Water Reservoir Replacement

The priority BMUC initiative is the replacement of our 1.3 MG Drinking Water Reservoir. Built in 1954 and upgrade several times since, the structure is nearing the end of its lifespan. Age and physical damage have forced us to focus on immediately replacing it. In 2021, during the initial planning of a new facility, we estimated the cost to construct a new reservoir to be a little over $4.1 million. Due to inflation and supply issues, this has steadily increased to more than $6.5 million and is expected to continue to increase in cost before ground is broken.

Drinking Water Distribution System Lead Components Removal and Replacement

Approximately 5,000 linear feet (just under a mile) of the Town's water distribution system is made up of cast iron pipe, sealed at the joints with oakum and lead packing. Locating and removing all lead from our water system is a top priority, estimated to cost over $1 million.

Fecal Aquifer Contamination Mitigation US Route 40 Alt. Waterline Looping

In 2009, the Town worked with Maryland Department of the Environment and the Washington County Health Department to extend water service beyond Town limits to serve approximately 100 out-of-town customers along US Route 40 Alt. This water main dead-ends and there is no line available to return water to the Town's distribution system. Without circulation treated water becomes stagnant. The cost to correct this is estimated to exceed $1.2 million.

Wastewater Collection System Capacity Pipe Replacement

In 2020, the Town commissioned our consulting engineer to create a Wastewater System Master Plan and Hydraulic Model. This model is used to anticipate future infrastructure repairs and replacement, and to analyze system capacities under existing conditions and with population growth. The model identifies undersized distribution piping that will need to be replaced to support service and development. The Plan calls for replacing about 1.14 miles of sewer lines and is estimated to cost in excess of $1.6 million.

Boonsboro Wastewater Treatment Plant Lagoon Dredging & Repurposing

Before building our modern wastewater treatment plant, Boonsboro operated an open lagoon system. One of the lagoons remains and although the life expectancy of its thick rubber liner is nearing the end, it is still holding water and sludge. Dredging the lagoon will remove the possibility of negative environmental impact and will cost more than $1.2 million.

Fletcher's Grove Well & Water Treatment Plant

Currently, our most productive water source provides 1.05 million gallons per day. Any interruption in production of this well would greatly diminish our ability to meet customer demands. To create source redundancy, we hope to connect to our system the 350 Gallons Per Minute (GPM) well, located at Fletcher's Grove. Bringing this well online will require new plumbing and a water treatment facility costing more than $3 million.

Crestview Water Pressure Reduction & Bypass

Within the Crestview Subdivision, we've located a high-pressure area in the drinking water distribution system that is prone to regular leaks and in need of upgrade. The

pressure condition causes many of our new leaks and contributes to excessive of water loss. Crestview's low elevation relative to our reservoir creates high water pressures throughout the neighborhood. The static pressure of 130 psi; is well above the utility industry standard of 50 - 80 psi. Correcting this condition will cost over $800 thousand.

Drinking Water Distribution Security System

Ensuring the safety and security of drinking water storage and distribution is of paramount importance to the BMUC. Our system must be protected from terrorist attack, vandalism and other activities that could impact the health and welfare of those we serve. We have asked our consulting engineer to recommend systems and/or equipment that will provide 24-hour monitoring and enable us to react to any threat. The cost of this has yet to be determined.

Utilities Assets Ledger

We have no written record of utility-related tools and equipment belonging to our Town. We believe that a documented inventory of these items in the form of an Assets Ledger, will provide cost effective and time saving information that will aid in budgeting and resource management. Such a system could enable staff to audit listings to determine when equipment is nearing the end of its life expectancy and replace it before it fails. The Army Corp of Engineers may be able to help us with this project. No budget has been established for this program.

Electronic Metering

Our consulting engineers are currently finalizing specifications necessary to solicit proposals for an electronic meter reading system. By eliminating the need for staff to read meters in the field, we believe such a system will have a short payback period and permit the Town to quickly pinpoint service problems by having specific, separately zoned/metered areas. The cost of this has yet to be determined.

Software Integration

Whenever and wherever possible, we need to explore opportunities to integrate software. If we can decrease input time, improve accuracy and avoid duplication of data entry, we will undoubtedly reduce the need for additional FTE and lower the overall cost of operations. In the coming year, we hope to invite several software suppliers to review current systems and practices and propose integration solutions and costs.