

I. INTRODUCTION

The City of Romney Wastewater Treatment System is designed to provide treatment of the wastewater flow from the City for the next twenty years, and beyond. Employees are responsible for providing the best possible service to the city.

The treatment plant was designed to meet the requirements of the Chesapeake Bay Agreement for tertiary treatment standards, including nutrient removal. The treatment plant consists of rehabilitation of three (3) lift stations and the construction of a new wastewater treatment plant to meet the Chesapeake Bay requirements. The new plant includes the installation of a new plant building/headworks with mechanical fine screen vortex grit removal, two (2) SBR basins, two (2) digesters, cloth tertiary filters, new effluent flow meter, public works building, sludge belt press, post-lime system, and screw conveyor, multiple chemical feed systems, new laboratory/office/plant building, conversion of the RBCs to chlorine contact basins, and conversion of the existing clarifiers and digesters to additional post-SBR equalization basins. To build the plant at the existing site, the public works building has to be replaced. The treated effluent is currently discharged into Big Run, a tributary of the South Branch of the Potomac River through Outlet No. 001; however, when the new plant is completed, the City of Romney Wastewater Treatment Plant will discharge effluent into Outlet No. 002 of the Big Run.

In addition, the project provided sanitary sewer service to approximately 1,034 customers, in the municipality and surrounding areas. The City of

Romney Wastewater Collection System, located in Hampshire County, West Virginia, consists of approximately 9.38 miles of gravity sewer lines, 1.59 miles of force main, three (3) lift stations, six (6) grinder pump stations, approximately 413 manholes, and other miscellaneous equipment required to maintain the collection system.

The major processes within the treatment plant are shown in Illustration No. 1. They are fine screening, grit removal, sequencing batch reactor (SBR) treatment, post-SBR equalization, tertiary treatment, chlorine disinfection and dechlorination, aerobic digestion, sludge dewatering, a chemical feed system and a non-potable water system. The SBR treatment process is designed to treat screened influent through time-managed aeration for biological treatment in the treatment basins and cloth media filters located in the tertiary filter tanks.

Tertiary treatment is provided at the City of Romney Wastewater Treatment Plant, and the plant is designed to treat an average flow rate of 750,000 gallons per day, with a peak flow rate of 2,250,000 gallons per day.