



HOBBS, UPCHURCH & ASSOCIATES, P.A.

Consulting Engineers, Land Surveyors, and Planners
800-849-1861 info@hobbsupchurch.com

Camden Village Wastewater Treatment Plant

The Nags Head office of Hobbs, Upchurch & Associates designed the Camden Village Core Wastewater Treatment Plant for Camden County, North Carolina. The project consisted of preparing a Preliminary Engineering Report, applying for grants, and detailed design of the system.

In preparing the Preliminary Engineering Report, the sewer service area was determined by examining land use patterns, soil characteristics, availability of useable potable water, and growth projections. A combination of gravity sewer and force mains were proposed for the collection system. The treatment facility will consist of a mechanical treatment plant providing tertiary treatment utilizing spray irrigation for disposal.

Grants were applied for and received from the USDA Rural Center and the Clean Water Management Trust Fund (CWMTF). The Rural Center contributed \$3,000,000 in the form of an Unsewered Community Grant. The CWMTF contributed \$2,564,011 due to the failing septic systems in the project area. The Camden County School system provided \$450,000 since they will be one of the major users of the system and Camden County provided \$500,000 through a Tax Growth Loan.

Due to recent changes in North Carolina Environmental Policy Act, the project required an Environmental Assessment. The initial flow for the first phase of the project is 60,000 GPD. Additional flow is expected from three developers currently negotiating agreements with Camden County. The collection system consists of 6,200 LF of 8-inch PVC gravity sewer, 7,800 LF of 4-inch PVC force main, 2,000 LF of 6-inch PVC force main, 93,500 LF of 8-inch PVC force main, and nine pump stations. The mechanical treatment plant consists of aeration clarification with sand filters to provide treatment to reuse standards. This is necessary due to the spray field site. The spray field site is former agricultural land that has parallel ditches spaced approximately every 200 feet. By treating to reuse quality standards the ditch buffers are reduced from 100 feet to 25 feet. Green Ash trees will be planted and harvested every 10 to 12 years for wood chips that may be used for pulp, energy, or mulch.