



# Bayview Community Wastewater Treatment System Cheriton, VA on Virginia's Eastern Shore

**Project Name:**  
**System Specifications:**  
**Virginia Distributor:**

**BAYVIEW REVITALIZATION PROJECT  
MICROFAST TREATMENT UNITS  
NATURE WORKS, Inc.**

## Overview

Formed just after the Civil War, "Bayview" is a 300 year-old predominately African American community. The residents of the community organized and created the Bayview Citizens for Social Justice In 1998. The group formed partnerships to improve the lives of the community by installing a water and wastewater treatment system. Funding came from multiple Federal, State and County sources but principally the US Department of Agriculture Rural Assistance Program.



## Challenges

The project replaced housing and utility infrastructure of one of Virginia's poorest communities. The previous community consisted of poorly maintained and substandard housing with poor to non-existent sanitary facilities, consisting mostly of outhouses, and no commercial facilities. The source of water was from shallow wells that were mostly contaminated by surface water and nearby pit privies.

The water and wastewater system allowed the construction of 32 new rental homes and ten single family homes. The blighted structures were torn down to prevent re-occupancy.

## System Design

The wastewater system consists of septic tanks and pumps that discharge to a sewer system that flows by gravity to a main pump station located on the east side of State Road 684, The main pump station discharges the collected sanitary sewer flow to a concrete splitter box that divides the flow to three MicroFAST 9.0 wastewater

--- continued ---





treatment units. Each MicroFAST 9.0 unit has the ability to treat the residential strength wastewater at 9,000 gallons per day for a combined treatment capacity of 27,000 GPD.

To comply with the Virginia Department of Health and Department of Environmental Quality regulations the MicroFAST units treat to TL-2 or 30 mg/L of BOD and 30 mg/L TSS. According to the Eastern Shore Department of Health, there is no current nitrogen, ammonia or phosphorus limit to receiving drainfields. There is a nitrate limit of 5 mg/L at the boundary edge of the drainfields and above the water table. The drainfield uses Low Pressure pipe Dispersal. A later phase for 10 additional homes added a MicroFAST 4.5 (4,500 GPD treatment unit).

The Bayview wastewater collection and treatment system was placed in service in 2003 at the same time as the water system. The original plan called for the Bayview Committee to provide maintenance of the system but an effective program never materialized. From 2003, to 2009 the WWTP received very little attention. That it continued to operate is a testament to the simplicity of the engineering design and the robustness of the FAST treatment process.

In 2009, the Northampton County took over maintenance and began a “catch up” program.

#####

**About Bio-Microbics:** In 1996, Bio-Microbics, Inc. was founded by a wastewater conglomerate to commercialize the FAST® Technology, first developed in 1969 for workboats and ships, to treat wastewater for decentralized homes and communities. Today, Bio-Microbics now has more than 50,000 installations in over 60 countries. Whether in a residential setting or commercial property, these innovative, decentralized treatment systems are designed for new/existing residential developments to high-strength commercial and municipal capabilities.

As a global leading manufacturer of decentralized wastewater, septic system enhancements, and stormwater systems products, Bio-Microbics has decades of real world operating history. Through a worldwide distributor network, Bio-Microbics has been recognized as a leader in exporting our decentralized equipment with receiving the 2011 KS Exporter of the Year Award and the 2012 President’s “E” Award for Excellence in Exports. Used successfully in municipal, industrial, marine, commercial and residential type applications for over 35 years, Bio-Microbics popular wastewater treatment systems are based on environmentally sound and simple scientific principles to deliver consistent high performance. Ideal for fiberglass, steel, or locally-made concrete tanks, our systems are pre-engineered in a simple, modular design for easy shipment around the globe.