

Puraflo®

Peat Fiber Biofilter

Quick Facts

Application:
Rural Community

Product:
Puraflo®

Designer:
Wayne Bishop, P.E.,
K.E. McCartney and
Associates, Inc.

Installer:
Stillion Brothers

Location:
Shenandoah, OH

Small Community Chooses Decentralized Puraflo Solution to Replace Failing Systems

Situation

The unincorporated hamlet of Shenandoah in Richland County Ohio, north of Mansfield, has 35 homes, a church, a general store and a community center. In 2003, wastewater was discharging into an open ditch and the local health department found 36 failed onsite systems. The EPA ordered the Richland County Commissioners to acquire a decentralized sewer system for the hamlet.

Solution

The commissioners hired Wayne Bishop, P.E. of K.E. McCartney Associates of Mansfield, Ohio.

According to Wayne, "We considered every possible treatment alternative. The solution had to be cost-effective for the residents, have innovative and effective technology to help acquire funding, satisfy Ohio EPA requirements and meet criteria for grants being pursued. It was a difficult balancing act that finally came to fruition in 2007".

Bishop's design combined low-pressure sanitary sewers (LPSS), conventional gravity sewers, settling tanks and Puraflo peat biofilters discharging to elevated sand mounds. Shenandoah's decentralized system became the first decentralized household sewage treatment system in Ohio.



Results

After seeing the results, officials view the system as the possible answer for hundreds of small communities far from municipalities. Peat in the Puraflo modules suppressed odor. Treatment performance averages were less than 5 mg/l for TSS and BOD and there was 99 percent reduction in fecal coliform with no pathogens prior to discharge into a large mound system.

The cost was \$7,763 per property which is paid for with a \$25 monthly assessment to the 38 homeowners' sewer bills. Shenandoah residents pay the same rates as other Richland County Sewer District (RSCD) customers. RSCD operates and maintains the system and the county health department monitors all influent and effluent on a weekly basis.

This gives Shenandoah residents, as well as the RCSD, peace of mind.

