

AeroCell®

Open Cell Foam Biofilter

Quick Facts

Application:
Residential Community

Product:
AeroCell

Location:
Wild Briar Ridge, TN

Preserving Water Quality in the Great Smokey Mountains

Overview

Wild Briar Ridge is a 70-lot residential development located in the shadow of The Smoky Mountains in East Tennessee. The developers of this subdivision were faced with the prospect of building in a pristine rural setting without the advantages of urban infrastructure such as sewer.



Situation

The challenges presented by the site included shallow soil over bedrock and excessive slopes. Traditionally, each lot would be served by an individual onsite system, but the conditions made that possible for only a few of the building sites.



Features

Flexible configurations

Multiple sizes available

Lightweight pods

Synthetic media

Unique 80%/20% effluent splitting

No gravity recirculation valve needed

Solution

The answer to the problem was an AeroCell cluster with drip irrigation. The treatment system designed consists of 24 AeroCell modules located at the base of the development with all lots being upslope from the treatment cluster. Each lot is served by its own collection tank. The wastewater from these tanks is then sent to a tank farm where it initially goes to a 25,000 gallon recirculation tank. The next step is dosing of the treatment cluster. Treated water then undergoes an 80/20 split, with 80% going back for treatment and the remaining 20% being discharged into a 15,000-gallon drip dosing tank. After ultra-violet disinfection, the treated water is dosed to a 6-zone drip field. The drip system is in two large fields located at the bottom of the development that were installed using a vibrating plow.

Routine maintenance and mandatory testing are performed by a Level 5 management entity as is required by The Tennessee Department of Environment and Conservation.

