CAMPHILL SOLTANE Camphill Soltane Natural Wastewater Wetlands Treatment System

Glenmoore, Pennsylvania



The Camphill Soltane campus

are for the planet" is a key principle of Camphill Soltane, a nonprofit organization that helps adults with special needs discover their talents and grow their capacities through educational and vocational programs. Located on a 50-acre landscape that features rolling hills, forest, and an apple orchard, the organization's main campus includes nine residential houses, an apartment building, and three multi-use buildings. On-site sewage disposal systems and domestic water supply wells

A biologically robust, low-energy system allows a nonprofit to sustainably and efficiently manage wastewater on site as it expands campus facilities.

had adequately served the campus in the past, but when its Facility Master Plan called for seven additional residences and nine additional supporting structures, Camphill Soltane needed a new, upgraded strategy for treating and managing wastewater—one that would demonstrate their commitment to the environment.

Biohabitats designed a sustainable, low-energy, on-site wastewater treatment system to process up to 11,500 gallons of wastewater per day, treat it to tertiary standards using biological and mechanical processes, and return it to groundwater. The system includes primary treatment tanks and a network of pump tanks with effluent filters, a small diameter collection system, constructed wetlands planted with native vegetation, a recirculating sand filter, and a land application dosing tank. Some of the existing septic tanks were able to be repurposed as part of the new system.

Once treated, effluent is dispersed via land application using a drip irrigation system to a 1.35-acre field, where it slowly infiltrates back into the land. Evans Mill Environmental, a local environmental engineering firm provided design of the land application system and collaborated on local permitting and construction administration.

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