



# Out of Date and Out of Time: Mandated Wastewater System Update at Church Camp Utilizes **EZflow™** Geosynthetic Aggregate System

**Project Name**  
Cedar Camp  
LaClede County, Missouri

**Product Description**  
Camp wastewater treatment system using **EZflow** by Infiltrator 1201P-Geo with low-pressure pipe.

**Daily Design Flow**  
3000 gallons per day

**Contractor**  
Leonard Construction  
Lebanon, MO

**Engineer**  
Dickman Professional Engineering Services, LLC  
Osage Beach, MO

**Septic Tank Supplier**  
Stewart Concrete Products  
Halfway, MO

**EZflow Supplier**  
LaClede Winnelson Co Inc  
Lebanon, MO



Cedar Camp is a church camp on approximately 800 acres in LaClede County Missouri that hosts children from all over the world during the summertime. Committed to the environment and providing the best possible camping experience, the camp is continuously expanding and making improvements.

The camp includes a main house and two bunk houses with wastewater flow of 3,000 gallons per day. The original wastewater treatment system consisted of an open discharge system that sent wastewater running over a hill. The Missouri Department of Natural Resources and LaClede County required a clean up of the site and an engineered replacement system that would bring the camp's wastewater treatment to commercial property standards.

A challenge for system engineers was a lack of available aggregate for a traditional low-pressure system and the impact heavy trucks may have on the camp's infrastructure and roads. There was also concern regarding air quality at the camp which could be compromised by the dust from trucks delivering the gravel. The team looked for an alternative solution that would provide a commercial level of treatment and address these concerns.

The resulting gravelless design includes six large concrete septic tanks and 3,000 lineal feet of Low Pressure Pipe running through an **EZflow** by Infiltrator 1201P-GEO system. **EZflow** is an environmentally friendly replacement to traditional stone and pipe drainfields using an engineered geosynthetic aggregate modular design. The **EZflow** system is designed to improve drainfield performance by eliminating fines and reducing compaction and embedment associated with stone. The modular, bundled configuration of **EZflow** makes installation fast and easy in most septic drainfield applications.

At Cedar Camp, a pressurized system was required by the County because the system size was over 500 feet. The first of a possible three systems of equal size to be designed and installed at Camp Cedar, the wastewater treatment system serves the main house and two of the bunk houses at the camp. The system incorporates four zones controlled by a splitter valve, which sends effluent to 10, 75-foot lines using a dosing pump.



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