

CASE STUDY

An Affordable Wastewater Treatment Solution for Institutions and Small Municipalities

Englishton Park

Problem

The Town of Lexington, Indiana with approximately 120 homes had a serious problem with failed septic systems. The town had many homes on small platted lots with inadequate space for conventional septic systems and many of the existing systems had failed. The failed systems were causing potential health issues and pollution of nearby streams.

Solution

A Septic Tank Effluent Pumping (STEP) collection system was installed to provide primary treatment of each home's wastewater and to send the treated effluent to a package treatment plant for further treatment, disinfection and discharge to a stream.

Lexington was originally settled in 1804 and platted in 1810. It was one of eight towns that were considered for the first state capital of Indiana, but Corydon gained the honor. Since there were no other towns in the county, Lexington was selected as the county seat. After later settlement in northern parts of the county, there were several unsuccessful attempts to relocate the county seat to a more central location. This did not take place until 1874 when residents voted to relocate the county seat to Scottsburg. Records were removed from the courthouse and transferred at night to avoid a civil war between residents. The relocation of the county seat to Scottsburg created animosity between the two towns for several decades.

Lexington being an old platted town had very small lots which were not suitable for individual septic systems. Sewage was evident in nearby streams and ditches and created a health and environmental hazard. A regional sewer district was established for the county in order to obtain municipal sewers and treatment for the unsewered areas of Scott county.

Message from the President

"Our goal is to create the best solution for our client's specific needs, not just provide an off-the-shelf plant."

-Kevin Chaffee, P.E.

Institutional Market

Project Overview

Lexington, Indiana



Design Parameters

- Design flow 40,000 gpd
- 117 customers

Collection System and Primary Treatment

- STEP system with 1,500-gallon precast tanks

Secondary Treatment

- Four EnviroFilter package recirculating media filters

Tertiary Treatment

- Nitrification reactor
- UV disinfection

Effluent Quality

- < 15 mg/l BOD
- < 18 mg/l TSS
- < 1.5 mg/l ammonia (summer)
- < 125 cn/100ml E. Coli

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Institutional Market

In 2010 the sewer district obtained funding to install a sewer collection system for Lexington and to build a wastewater treatment plant. A septic tank effluent pumping (STEP) collection system was selected and the Earthtek EnviroFilter package recirculating media filter was selected for treatment of the town's wastewater.

Approximately 117 individual STEP tanks were installed throughout the town at each residence, business and the local school. The STEP tanks were 1,500-gallon precast concrete tanks with filtered pump vaults, ½ HP high-head turbine effluent pumps, float switches and control panels.

The EnviroFilter treatment facility consisted of a flow splitter, four 10,000 gpd EnviroFilter units, a nitrification polishing reactor, precast concrete building, UV disinfection, and flow monitoring prior to discharge to a pristine stream.



For more information about EarthTek systems, contact EarthTek at 800-972-9940.

