CASE STUDY

An Affordable Wastewater Treatment Solution for Institutions and Small Municipalities

Harrisville, Ohio

Problem

The village was an unsewered community with failing septic systems.

Solution

EarthTek was selected to assist with the design, and to supply a 33,000 gpd SABRE sequencing batch reactor (SBR) treatment plant.

The village of Harrisville, with a population of 235, had failing on-lot septic systems. In October 2009, OWDA awarded the village a planning and design loan in the amount of $200,500 to encourage the unsewered community to seek a centralized solution.

The village hired the consulting firm of ADR and Associates to develop a plan for a collection system and treatment plant. The firm's project engineer, Jeff Carr, P.E. evaluated several treatment options, eventually selecting EarthTek of Batesville, Indiana to provide the SABRE sequencing batch reactor (SBR) treatment plant for the project.

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

Harrisville, Ohio

Design Parameters
- Population of 235

Primary Treatment
- 35,000-gallon primary FRP tank

Secondary Treatment
- 35,000-gallon EarthTek SABRE SBR

Dispersal
- Surface water discharge with NPDES permit

Operation
- Part-time operator

Influent Quality
- < 250 mg/l BOD5
- < 250 mg/l TSS
- < 40 mg/l NH3-N

EarthTek SABRE Effluent Quality
- < 10 mg/l BOD5
- < 12 mg/l TSS
- < 1 mg/l NH3-N

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Harrisville, Ohio

Institutional Market

EarthTek's SABRE SBR system was selected due to:

- Ability to fit into a long, narrow site the village owned
- Utilized buried fiberglass tanks to be aesthetic, and minimized odors due to the plant being located right next to the village's baseball park
- Simple to operate and maintain, with minimal operating expenses
- Cost-effective compared to other systems

The package wastewater system included a 35,000-gallon, 10' diameter, two-compartment buried primary fiberglass (FRP) treatment tank, one 35,000-gallon, 10' diameter, single-compartment buried FRP SBR tank for secondary treatment, followed by effluent flow monitoring, and composite sampling of the treated effluent. ADR also provided tertiary drum filtration, UV disinfection, and cascade post aeration.

The treated effluent has met the regulatory discharge permit limits of 10 mg/l BOD5, 12 mg/l TSS, and 1 mg/l Ammonia as Nitrogen since it was commenced into operation in May of 2015.

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

earthTek Clean Water Solutions

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