

# CASE STUDY

## An Affordable Wastewater Treatment Solution for Institutions and Small Municipalities

### Pintlala Water Systems

#### Problem

A small subdivision in Montgomery County, AL faced increasing state regulated effluent quality standards.

#### Solution

An EarthTek EnviroFilter treatment unit, granular activated carbon polishing filter, UV disinfection unit, and flow meter were added to receive pretreated effluent from an existing lagoon.

The Pintlala Water System serves over 1,500 water customers in the southern portion of Montgomery County, AL. To gain additional water customers, they purchased a water utility owned and utilized by the homeowners of a small sub-division in their service area. With that purchase, they also assumed ownership of the existing wastewater treatment system that served those homeowners.

The subdivision's wastewater treatment system utilized a facultative lagoon that treated the water and discharged into a nearby creek. In 2007, renewal of the wastewater discharge permit issued by the Alabama Department of Environmental Management (ADEM) required a significant increase in the level of treatment quality.

The engineering firm for Pintlala Water considered various alternatives for upgrading the treatment capability of the lagoon and determined that the most cost effective solution for complying with these more stringent effluent treatment levels was to install a pre-engineered, pre-packaged EarthTek EnviroFilter onsite wastewater treatment system after the lagoon.

#### 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.

### Municipal Market

#### Project Overview

#### Montgomery County, AL



#### Design Parameters

- Average flow of 4,900 gallons per day

#### Primary Treatment

- An existing lagoon

#### Secondary Treatment

- Earthtek EnviroFilter package recirculating media filter unit

#### Tertiary Treatment

- Tertiary Filter
- UV Disinfection

#### Influent Quality

- < 250 mg/L BOD5
- < 250 mg/L TSS

#### Effluent Quality

- < 10 mg/L BOD5
- <10 mg/L TSS
- < 1 mg/L Ammonia

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**Pintlala Water Systems**

Municipal  
Market

The EnviroFilter unit was added between the lagoon and the discharge point at the creek, and receives pretreated effluent from the lagoon. The EnviroFilter provides advanced treatment of the lagoon effluent, removing BOD, TSS, and ammonia. An ultraviolet (UV) disinfection unit is used to provide pathogen inactivation prior to disposal in the stream.

Not only did the EnviroFilter meet the higher effluent treatment levels required by ADEM, the overall lifecycle costs, especially the operation & maintenance cost, were significantly lower than the other project alternatives.



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



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