



CASE STUDY

PROJECT NAME

Giant Goose Ranch, Canton, IL

SYSTEM SPECIFICATIONS

NSF350 Water Recycling System with
500 GPD & 1000 GPD MBRs

PRODUCTS USED

Infiltrator IM-Series Tanks
EZflow by Infiltrator
Aquaworx by Infiltrator IPC Control Panels

INSTALLATION DATE

2014/2015

CONTRACTOR

Ray Tebo
New Excavating Technology, Inc.
St. Anne, IL

PUMP SUPPLIER

Champion Pump
Ashland, OH

OWNER

Herman Brothers



INFILTRATOR
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Infiltrator IM-Series Tanks with MBRs and EZflow by Infiltrator Dispersal Fields Enable Reclamation of Illinois Strip Mine into Recreational Resort

OVERVIEW

Giant Goose Ranch is an 800 plus acre reclaimed strip mine property in Fulton County, Illinois consisting of more than 50 lakes famous for incredible fishing. The Herman Brothers' family updated an existing campground by adding resort cabins and 90 campsites.

CHALLENGES

The property consists almost entirely of reclaimed coalmine spoils and lakes in close proximity to each other and posed some extremely challenging wastewater situations. The inconsistent soils, numerous lakes, and drastic elevation changes challenged system designers along with stringent new code requirements.

SYSTEM DESIGN

NSF350 water recycling membrane bioreactor systems (MBR) were installed inside Infiltrator IM-Series Tanks. The numerous MBRs are either 500 or 1000 GPD units and are built to suit the location with single units for individual cabins and 1000 GPD MBRs to serve clusters of resort cabins, beach houses, a store, and a banquet hall. Installing the MBRs in the Infiltrator IM-Series Tanks allowed the units to be constructed in a shop to specifications and delivered for installation around the property without a heavy boom truck thus saving substantial expenses. EZflow by Infiltrator was used for the treated effluent dispersal fields, eliminating heavy trucking and the spreading and compaction challenges of stone. The Infiltrator IM-Series Tanks are also used for trash and pump tanks and the dispersal fields are time dosed by Aquaworx IPC Control Panels. A blower outside the tanks in a plastic enclosure blows air to scour the membrane to keep it clean, keeping the biomass alive and growing. A 1.5-amp marine pump is attached to each MBR to slowly draw the recycled water out. The system then transitions to gravity flow to disperse to the EZflow drainfields.