

# Large-Scale and Commercial Treatment Systems

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## **MBRs enable strip-mining site to become resort**

**Problem:** Giant Goose Ranch is a reclaimed strip-mine property in Fulton County, Illinois, covering more than 800 acres and with more than 50 lakes famous for fishing. Plans to rehab an existing campground to add resort cabins and 90 campsites required a new wastewater treatment system. The inconsistent soils, lakes, drastic elevation changes, and stringent code requirements challenged system designer Ray Tebo of New Excavating Technology.

**Solution:** The water-recycling membrane systems designed include Bio-Microbics BioBarrier Membrane systems installed within Infiltrator Water Technologies IM-Series tanks. The numerous MBRs are either 500 or 1,000 gpd units built to suit the location; single units serve individual cabins and 1,000 gpd MBRs serve clusters of resort cabins, beach houses, a store and a banquet hall. IM-Series tanks are also used for trash and pump tanks. Dispersal fields are time-dosed by Aquaworx IPC control panels. A blower outside the tanks blows air to scour clean the membrane, which keeps the biomass alive and growing. A 1.5-amp marine pump attached to each MBR slowly pulls the recycled water out and then transitions to gravity flow to the dispersal fields.

**Result:** Installing the tanks allowed offsite assembly of the units and delivery and installation without a heavy boom truck, resulting in substantial cost savings. EZflow by Infiltrator was used for the treated effluent dispersal fields, eliminating heavy trucking and the spreading and compaction challenges of stone....