

## Case Study

USGARW-2003.001

**IXOM**  
WATERCARE

# Cyanobacteria & Odor Control For A Source Water Lake

Significant treatment savings and a fast payback achieved with SolarBee circulation.

**Topics:** raw water, cyanobacteria, cyanotoxins, taste and odor, treatment savings, improve fishery, water clarity



### Location & Contact Information:

Further information may be available upon request. Please contact Ixom Watercare by phone at 866-437-8076 or by e-mail, [watercare@ixom.com](mailto:watercare@ixom.com)

**Reservoir Overview:** This is an 850+ acre man-made reservoir feeding a County operated water treatment plant (WTP) in Georgia. The WTP production capacity was ten (10) to twelve (12) million gallons per day (mgd) at the time of this project with future flows forecasted to be over twenty-five (25) mgd. Not only is this lake an important raw drinking water source for the local residents, it is also known for its excellent recreation activities, fishing and large avian habitat.

**Pre-Deployment Conditions:** This reservoir experienced water quality issues associated with cyanobacteria (blue-green algae) blooms. Cyanobacteria can contribute to taste & odor problems in drinking water and is potentially toxic to fish & wildlife.

Environmentalists had identified an emerging neurological problem with certain bird species. They speculated cyanotoxins emitted by cyanobacteria are a likely cause. High levels of these cyanotoxins have been verified in the lake during certain time periods.

The County had previously used chemicals to control cyanobacteria proliferation; however, increasing

costs for these chemicals led county leaders to research new options.

In early 2013, the Georgia Environmental Finance Authority approved financing for the SolarBee® project.

**Project Objectives:** Control harmful cyanobacteria blooms and associated taste & odor issues via epilimnetic circulation.

**Solution:** Twelve (12) SolarBee® SB10000HWv18 Lake Circulators (April 2013). This deployment was designed as a partial lake application treating approximately 360 lake surface acres in front of the WTP equating a three-week raw water supply.

**Results:** The County saved ~\$250,000 in annual chemical costs the first year alone with a total return on investment under four years. SolarBee® circulation has completely eliminated the need for algacide applications and have lowered powdered activated carbon (PAC) usage by at least 75%. Cyanobacteria associated taste & odor issues were also resolved.

The customer is very pleased with the results of this project and is happy to serve as a positive reference.

**Update (April 2019):** This water system was voted "Best Water in Georgia" by the Georgia Association of Water Professionals.