

**Key Words:** stormwater, blue-green algae, water quality, fishery, muck reduction, dissolved oxygen, aquatic weeds



**Photos:** First photo is an aerial shot of the lake with SolarBee placements indicated by yellow triangles; second photo shows one of the units in the mist at the time of installation.

**Reservoir or Lake Use:** The lake is a historic treasure located near downtown of the surrounding city. Recreational in nature, there are walking paths, boat ramps, beautiful gardens and an amphitheatre.

**System Overview and Reservoir:** The lake is fed primarily by stormwater from the city via over a dozen drainage pipes throughout the basin. The lake is approximately 110 surface acres, with a maximum depth of 7 ft and an average depth of 4 ft.

**Reported Problem Before SolarBee Installation:** The city reported blue-green algae (cyanobacteria) problems with associated reduced water clarity. There was inadequate circulation in the lake to keep the water clean, harming recreational beneficial uses. Excessive aquatic weed growth was also reported.

**SolarBee Installation:** Date: February 2005, installed four (4) SB10000v12 units (see photo above).

**Results:** Within 2 months after installation there were public reports that the lake looked better than it had in recent history. Blue-green algae blooms are no longer a problem, and dissolved oxygen concentrations are excellent. As a result, the lake fishery has improved and lake recreationists are increasing in numbers. For example, an organization has a paddleboat/canoe rental concession on the lake, and rentals doubled the year after SolarBees were installed. There is also some evidence of sediment muck reduction along shorelines, and the city has a long-term study to document trends. The dependability of SolarBees was noted by the city's Stormwater Service Manager, who told us that "you folks make those things too well. Our crews are out on the lake every two weeks and the machines are always running whenever they check them." Both the city and the community are very pleased with the considerably improved water quality and enhanced recreational enjoyment in the lake due to the SolarBees.

138-USNCST-LOC93.001, Last updated: 11-30-10