

Key words: recreational lake, blue-green algae, odors, impaired fishery, aquatic weeds, dissolved oxygen, clarity, stagnation, fountain



Photos: SB10000V12 in Lake #2 surrounded by densely populated housing; photo on right is an aerial shot showing SolarBee placement in the lake within the housing development.



Reservoir or Lake Use: This is a highly urbanized, fresh water lake utilized solely for recreational purposes.

System Overview and Reservoir Data: Lake # 2 is part of a 4-lake chain, totaling 68 acres. Lake #2 has a surface area of 4 acres; maximum depth is 12 ft, minimum depth is 8 ft, average depth is 10 ft; volume is 41 acre-feet. Apple Finger is 2.1 acres off of Lake #4, and Joe's Finger is 1.3 acres off of Lake #1.

Reported Problem Before SolarBee Installation: The primary objective is to provide control of blue-green algae blooms, and associated odors and unsightly algal mats. Secondary goal is to provide control of invasive aquatic weeds. This area is a dead end cove with prevailing winds pushing water to the dead end. Lake had experienced periodic fish kills due to low dissolved oxygen (DO) concentrations.

SolarBee Installation: Date: June 5, 2004. Installed one solar-powered SB10000V12. The SolarBee was set in 10 ft of water with the intake tube set at 8 ft.

Results: Following its installation, the SolarBee distributed DO throughout the water column and likely prevented an otherwise anticipated summer fish kill. Blue-greens blooms, surface scum, and noxious odors were also controlled in Lake #4 throughout the remainder of the year. During the winter, DOs generally remained above 5 mg/L in the cove and throughout the water column. Water quality continues to be good without blue-green blooms and surface algal mats, and the owners are pleased with the SolarBees' performance. Since the original installation in Lake # 2, additional SolarBees have been installed in Lake # 4 Apple Finger (SB4000v12) and Lake #1's Joe's Finger (SB1250v12). Apple Finger had a fountain that was not providing desired water quality benefits. Results show effective blue-green bloom control, elimination of surface scum and odors, and improved water clarity in these additionally treated waters. Customer gives much credit to the SolarBees for achieving and maintaining the best water quality they have seen in the lakes.

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