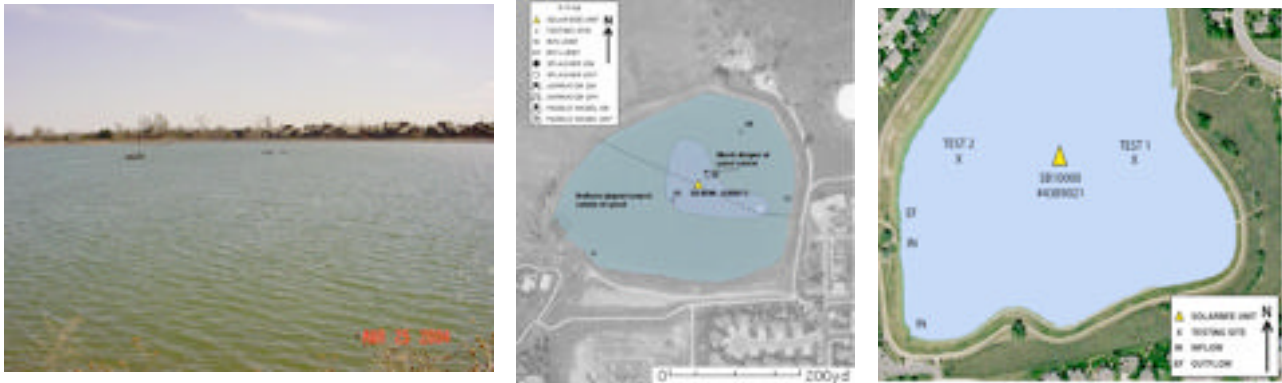


Key Words: RW reservoir, blue-green algae, taste and odor, manganese, stagnation, short-circuiting, chemical savings



Photos: First photo shows the SB4000 in reservoir 1; the second photo is an aerial photo of reservoir 1 with SolarBee placement indicated; the third photo is an aerial photo of reservoir 2 with SolarBee placement indicated.

Reservoir or Lake Use: Both reservoir 1 and reservoir 2 are raw water supply storage reservoirs for the surrounding city.

System Overview and Reservoir: Reservoir 1 covers 15 acres, with a maximum and mean depth of 22 feet and 14 feet, respectively. Reservoir 2 has a surface area of 33 acres, with a maximum depth of about 32 feet and an average depth of about 22 feet.

Reported Problem Before SolarBee Installation: Reservoir 1 reported problems with short-circuiting, algal blooms, excessive turbidity, and excessive manganese (Mn) concentrations. Reservoir 2 had a history of short-circuiting, stagnant water, and blue-green algae blooms that affected the quality of water entering the treatment plant.

SolarBee Installation: Date: April 2004, installed one (1) SB4000 with 24-hour kit in reservoir 1. April 2005, installed one (1) SB10000F unit in reservoir 2.

Results: Within a couple of months of installing the SolarBee in reservoir 1, the Mn concentrations dropped from 0.05 mg/L to 0.005 mg/L, and since then Mn has no longer been an issue. Also, the overall water quality and clarity have improved, and algae blooms have been controlled. Because of the good results in reservoir 1, the city purchased an additional SolarBee for reservoir 2 in the spring of 2005. Since then, blue-green algae blooms have been eliminated from both reservoirs so that the city has not had to add chemicals and it has been easier to treat the water. The city is very happy with the SolarBees and the good water quality they have provided.

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