

**Key words:** Palmdale, CA., potable water, stratification, water age, chlorine



**Photos:** First photo shows crane installation of SB1250v12PW; second photo shows SolarBee installation through the tank hatch.

**Reservoir or Lake Use:** This is an enclosed potable water system that consists of two above-ground potable water tanks. The system utilizes chlorine for disinfection.

**System Overview and Reservoir Data:** One tank has a capacity of 1.5 MG, with a maximum depth of 29 ft and an average depth of 24 ft when containing 1.1 MG. Average flow is about 0.5 MG per day. The second tank has a 5 MG capacity with averages depth of 32 ft with 4.8MG and 28 ft with 4.2MG. Average flow is about 1.2 MG per day.

**Reported Problem Before SolarBee Installation:** Objectives were to thoroughly mix the water to prevent stratification, to maintain uniform water age, and to maintain chlorine residual.

**SolarBee Installation:** Date: Dec 2004; two (2) SolarBee SB1250v12-PW units were installed, one in each tank. Each unit was placed just off center of the tanks, favoring the hatch side. Subsequent installations in additional tanks of similar size: March 2006, two (2) SB1250v12-PW; August 2006, one (1) SB1250v12-PW. Total SolarBee installations to date: five (5) units.

**Results:** Production and Control Superintendent expressed sincere appreciation for the great work by the SolarBee installation crew. Results show that the SolarBees prevent thermal stratification and maintain uniform water age in the tanks. Because of this complete mixing, the owner has been able to reduce their chlorine boosting by 50% and still maintain a consistent chlorine residual of 0.83-0.90 mg/L in the tanks. Due to the realized benefits achieved with the first two units, Palmdale Water District has purchased additional units for other tanks in their system. The owner is very pleased with benefits of the SolarBees, as well as with the customer service and after-sale support from SolarBee, Inc.

*Last updated: 4-23-07*