

CASE STUDY: U.S. Naval Station Recreational Pool

The Naval Station San Diego (aka "32nd St. Naval Station") provides shore support, living quarters and pierside berthing services for 56 Pacific Fleet Surface Force ships.

Heliocol manufactures and distributes the industry's highest-performing solar products for commercial and residential applications. Founded in 1977, Heliocol maintains its position as the world's largest manufacturer of solar pool heating systems.

Industry: Military Installation

Project Type: Solar Pool Heating

Challenge:

To design a solar pool heating system that will maintain a comfortable 82°F year-round water temperature for an Olympic-sized, outdoor swimming pool at the Naval Station San Diego in southern California. The available installation space for the collectors was atop a third-story flat roof, in a high-wind area.

Solution:

Heliocol designed a system using 200 Heliocol HC-50 collectors totalling 10,000 square feet. Pump house connections required 6" PVC pipe for the main feed and return



QUICK VIEW

Pool Surface Area	7,500 Sq Ft
Installed System Size	10,000 Sq Ft of Heliocol Collectors

Direct Outcomes

After Heliocol Panel Installation

Average Solar Heated Temperature	82°F Year-round
Return on Investment:	Less than 12 Months

lines. Heliocol installed an additional 15 HP pump with an automatic differential controller to give the added boost for the water to reach the third-floor roof.

Due to the high-wind region of the installation, it was necessary to use Heliocol collectors. Heliocol's patented individual tube design virtually eliminates any lifting force on the collectors. Heliocol's patented "Gator Clamps" were mounted onto 6' x 6' stainless steel plates, then glued to the roof to avoid penetrating the flat roof membrane.

Results:

The Heliocol solar pool heating system continues to generate the required heat for the pool year-round using free energy from the sun, saving taxpayers hundreds of thousands of dollars in pool heating bills. This installation enabled the Naval station to become a candidate for the Navy Energy Conservation Award.

