ECOLOGICAL STRATEGIES FOR HARMFUL ALGAE BLOOM MITIGATION

Floating IslandsWest LLC
...for solutions above & below the waterline

Oregon Lake Association 2019

ECO LAKE SOLUTIONS

EAST LAKE
YORBA LINDA, CA

ECO LAKE
SOLUTIONS

EAST-LAKE RESTORATION

The Challenge:

East Lake in Yorba Linda, California is a 15-acre lake surrounded by 191 homes and a large clubhouse. In 2013 East Lake contracted Golden Algae (Prymnesium parvum), a harmful algae resulting in a total fish kill. Copper sulfate was applied to treat the infestation though minimal improvements occurred leaving the lake in a condition unable to sustain a healthy fish population leaving lake resident's and lake management extremely frustrated.

Our Strategy:

Eco Lake implemented a two-pronged strategy, beginning with Floating Islands. Floating Islands provide the matrix for beneficial plant root ecology. In this aerobic zone, the water is flushed through the roots of the plants and the associated beneficial bacteria. Observations have been made that during golden algae blooms fish move towards highly aerobic areas, where these floating islands would provide a safe haven for them. High efficiency aeration is the second component and creates "hydraulic flushing manipulation." This strategy has been proven successful in studies at Texas A&M Department of Wildlife and Fishery Science and Oceanography. At East Lake, using highly efficient aeration systems we will be able to achieve the required flushing rates using three, 0.5 horsepower piston compressors with each unit pushing 12.5 million gallons per day though the treatment zones.

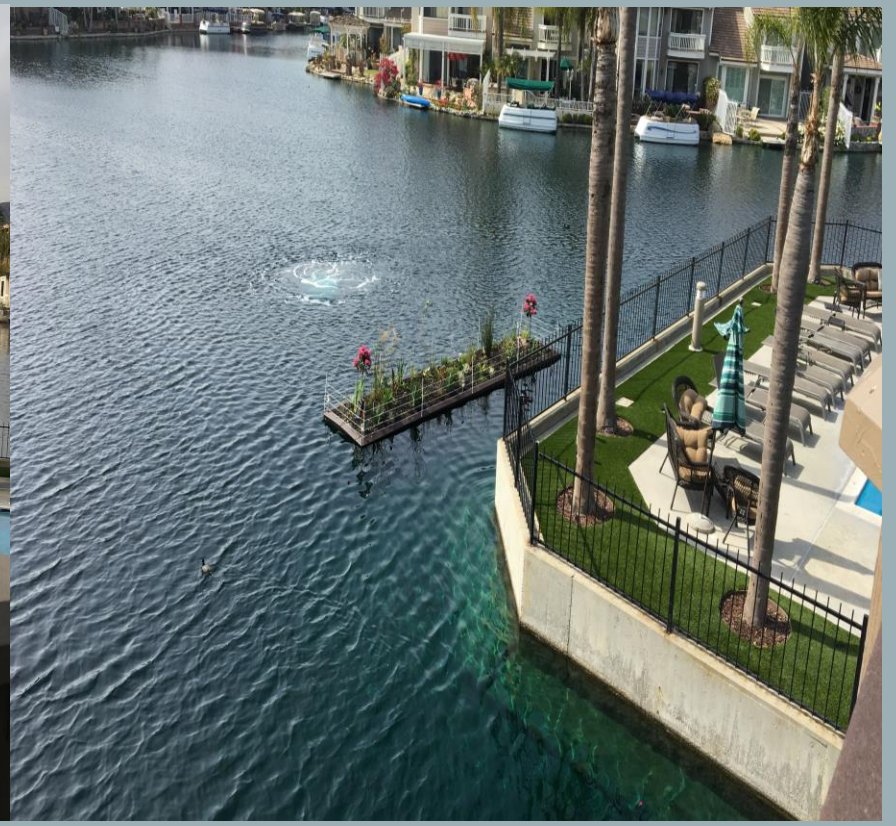
Our Impact:

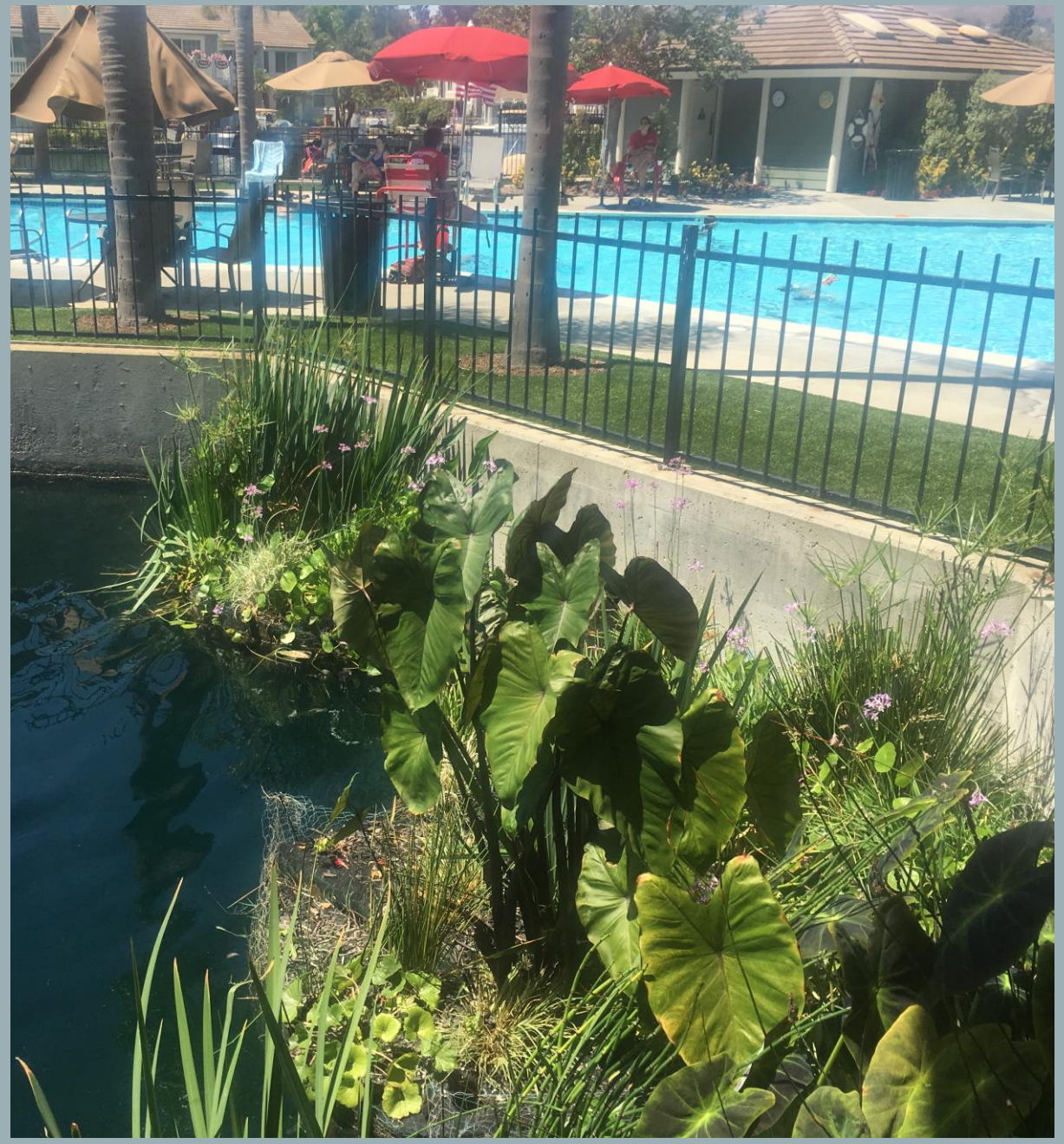
Three years ago, Eco Lake Solutions installed a pilot in the eastern section of the lake to manage golden algae in that zone. The pilot was significantly more successful than expected in terms of improved water quality throughout the entire 15-acre lake. Since the installation of the natural ecological system, the lake has reported Golden Algae non-detect and the aesthetics, odor and water quality have improved dramatically and the fish population is thriving.

"Eco Lake Solutions and Floating Islands West have transformed our lake. What was budgeted to be a pilot, proved to keep the entire lake clear of any ill effects from the Golden Algae. The water quality, clarity, and overall health of the lake are better than in my memory going back to childhood. We have original homeowners on our lake that have lived here for over thirty years coming in to tell us how wonderful the water looks and that it has never looked anywhere near this nice. Using ecological design strategies, Eco Lake Solutions and Floating Islands West have transformed this lake without the use of any chemicals. We have not treated our lake with any form of chemical in almost two years."

Jeff Leinen, Operations Manger
East Lake Village Community Association

BEFORE AND AFTER





STOP

OWS
Natural Biological Wastewater Solution - Limoneira
Before
After

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