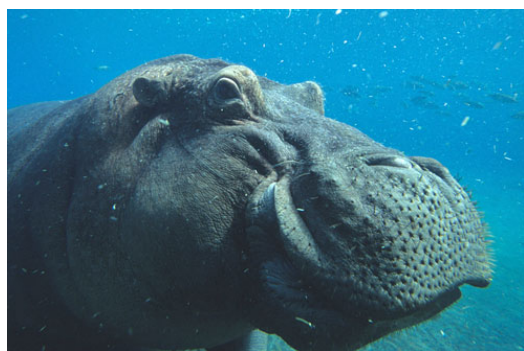


# Hippo Exhibit Assessment

San Diego Zoo, San Diego, California



## Project Statistics

Area: 210,000 gallons

Completion Date: August 2004

Since opening in 1997, the hippo exhibit at the San Diego Zoo was challenged to handle an increasing bio load. Alvine Aquatics was given the opportunity by San Diego Zoo to assess the water quality and life support systems of the hippo exhibit and provide recommendations for water quality improvement. The zoo recognized that cleaner and higher quality water would positively impact the exhibit for the animals and the public.

Through evaluation of the current systems, several short-term goals and solutions, which would immediately provide higher quality water while limiting costs to the zoo, were provided to the zoo's Water Quality Department. With a pool volume of 210,000 gallons the life support systems were challenged to support the large pool volume. Previous improvements did increase water quality however with the addition of more animals, the exhibit and life support systems were not able to keep up with the filtering needed. Two juvenile animals are very active and playful, and stir up particulates that would otherwise settle out and be more easily removed. A lot of organic matter sits on the surface of the pool water. Less than optimal turnover rates and the water hydraulics inside the pool diminish the skimmers' effectiveness to collect the organic material floating on the water surface.

Alvine Aquatics' engineering team suggested recommendations which provided a means of eliminating air that is drawn into the system, improving backwash water quality and reducing the amount of bubbles which were limiting visibility.

In addition, long-term improvements with cost estimates were provided for the exhibit so zoo staff could plan for future budgets and exhibit changes. Some of the long-term recommendations included reconfiguring supplies to the pool, increasing filter area through filter change outs and pool hydraulic improvements.

