

Sea Lion and Aquarium Exhibit

El Paso Zoo, El Paso, Texas



Project Statistics

Area:	45,000 SF
Completion Date:	2004
Construction Cost:	\$2.5 Million

Major Program Spaces

- New outdoor sea lion exhibit (seating for 200 spectators)
- 80,000 gallons of water
- Underwater viewing
- Small quarantine pool to isolate new, newborn or ill animals (10,000 gallons)
- Remote life support building
- Planned water fountain for interactive training and performances of sea lions
- Schematic design for future aquarium of 30,000 gallons



Alvine Aquatics' engineering professionals designed the life support systems for the outdoor sea lion exhibit.

The 90,000 gallon tank is home to sea lions and is part of the North American exhibit. The exhibit, with its rock formations, plants and landscaping, interprets the environment of the Sonoran Sea, the closest large body of water to El Paso.

Because of the remote location of the support building, pumps for the system were carefully selected to solve the challenge posed by the distance from the exhibit.

Public areas of the exhibit include an underwater observation area, numerous above ground viewing areas and a natural 200 seat amphitheater. The tank and surrounding areas were carefully designed to allow the sea lions sufficient space to maintain the same activity levels and swimming patterns that they would in the sea.

The Alvine Aquatics engineering team also completed schematic design for a future aquarium exhibit of nearly 30,000 gallons.

Water Treatment Systems

- Piping and pumping systems, as well as redundant pumping
- Sand filtration
- Water temperature control for cooling
- Ozone injection systems for disinfection
- Ozone leak detection and exhaust system for safety
- Foam fractionation for reduction of micro-particulates using ozone or air
- Ultraviolet disinfection for algae control
- Incoming city water treatment with reverse osmosis and activated carbon strips with residual ozone
- Saltwater tank reclaim backwash for responsible conservation of resources through recycling water and to minimize discharge to city sewer
- Deck wash-down systems for cooling concrete deck in hot weather
- Active carbon downstream of degas chamber to strip away any residual ozone