

FRESNO CHAFFEE ZOO

## Sea Lion Cove Constructed Wetlands

Fresno, California



*California sea lion (Zalophus californianus)*

*The exhibit recovers and recycles backwash from the robust life-support filtration systems that would otherwise be lost to the sewer using a natural-systems based treatment wetland.*

Fresno Chaffee Zoo's Sea Lion Cove exhibit, which opened in August 2012, is modeled on the ecology of California's Central coast and features sea lions, seals, and pelicans in a 200,000 gallon pool. Visitors are afforded an up close and personal view 35 feet underwater through a massive glass window into the depths of the exhibit. Underwater viewing requires pristine water quality, however, and that's where Biohabitats' expertise came in. Working with lead designer The Portico Group and T.A. Maranda & Associates who designed the primary water filtration and life support systems, Biohabitats created a constructed wetlands system to recycle the backwash water

generated by the filtration system, saving the Zoo up to 200,000 gallons of fresh, potable water per year. Instead of dumping the backwashed water into the sewer, the natural treatment system first settles the water to reduce solids, then provides biofiltration of organic matter and nutrients in the subsurface flow constructed wetlands. Water recovered from the wetlands is then returned to the filtration system for polishing and disinfection before being returned to the exhibit's pools.

### **SERVICES**

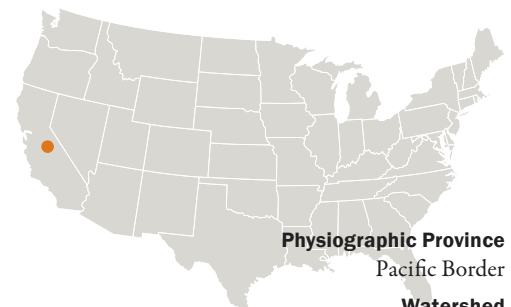
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