Innovative intake protects fish, enhances recreation area

A new CH2M HILL-designed, 160-million-gallon-per-day raw water intake and pump station is currently under construction on the Sacramento River in California. Water will be drawn from the river and pumped to the local treatment plant.

The \$30 million project, funded jointly by the city of Sacramento and the Anadromous Fish Screen Program, will replace the existing 75-year-old facility, and will comply with fish screen regulations. The Sacramento River is a spawning area for migratory fish, and fish screens are required to protect the juveniles as they swim downstream to the ocean.

The new intake will be one of the first structures people see when approaching Sacramento from the north on Interstate 5. With this in mind, the city selected an architectural design firm to disguise the pump station as an attractive "boat."

A bridge designed to carry maintenance and pedestrian traffic will allow people to "board" what appears to be a docked ship and view the facilities 250 feet from the river's edge. On shore, a small plaza will welcome citizens and exhibit educational information about drinking water, while a bike-path adjacent to the river will be routed past the plaza. The area will be surrounded by native landscaping.

CH2M HILL provided structural, mechanical and electrical engineering services, and is responsible for the overall design of the pump station's functional elements.

Innovative technology helped CH2M HILL share the design vision with the client. All submittals were presented in three-dimensional renderings, allowing the client to virtually walk through the project with the benefit of 360-degree "bubble" views. Better visualization and understanding of design concepts led to early client approvals. The city also used the bubble views on their intranet site to facilitate discussion of the latest design information.



CH2M HILL is providing construction management services for the building of the Sacramento River Intake, which will be complete toward the end of 2003.