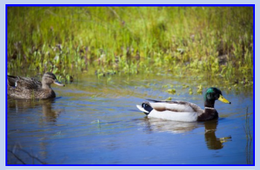
The San Francisco Public Utilities Commission (SFPUC) delivers water from the Hetch Hetchy Reservoir in Yosemite National Park to 2.6 million people in the Bay Area. Many portions of the Hetch Hetchy System are aging and in need of upgrades. As part of its Water System Improvement Program, the SFPUC will be decommissioning its older pipelines where they cross the San Francisco Bay and replacing them with a new Bay Tunnel.

Protecting the Environment

The project areas are home to a wide variety of plants and animals.

The SFPUC has studied the environmental impacts on sensitive species within the three sites and is implementing special mitigation measures. These include monitoring programs during construction to protect the plants and animals that call these areas home. All personnel on site receive special training to identify critical species such as burrowing owls, red legged frogs, and tricolor black bird, to name a few.

Environmental inspectors and biological monitors are also on site regularly to ensure compliance with the project's environmental mitigation measures, regulatory permits and other best practices.



Wetlands adjacent to the Receiving Shaft site in Newark are being protected during construction activities.

If you have questions about the project, please call our 24-hour answer line: 800-571-6610 or e-mail us at baydivision@sfwater.org. For more information please visit our website at www.sfwater.org/baytunnel.

Hetch Hetchy Regional Water System
Services of the San Francisco Public Utilities Commission

San Francisco Water, Power and Sewer
Communication and Public Outreach
525 Golden Gate, 6th Floor
San Francisco, CA 94103

HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM

Bay Tunnel Project Update
Fact Sheet

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

www.sfwater.org/BayTunnel Fall 2012

The Bay Tunnel Project consists of a five-mile-long tunnel under the San Francisco Bay, passing through environmentally-sensitive marshlands and mudflats, There are vertical shafts at each end of the tunnel.

Construction Details:

Contractor:	Michels/Jay Dee/ Coluccio Joint Venture
Contract Value:	$215.2M
Percent Complete:	69% as of November 2012
Construction Start:	April 2010
Final Completion:	May 2015
<u>The Tunnel:</u>	
Length:	5 Miles
Diameter:	15-ft excavated diameter
Tunnel Lining:	10-in thick pre cast Concrete segments;108-in diameter steel pipe

<u>The Shafts:</u>

Launch Shaft:	San Mateo County 124-ft finished depth; 58ft inside diameter
Receiving Shaft:	Newark, CA 86-ft finished depth; 28ft inside diameter
<u>The Tunnel Boring Machine (TBM):</u>	
Diameter:	14Ft-11-5/10in (4.56m)
Trailing Gear:	600-Ft

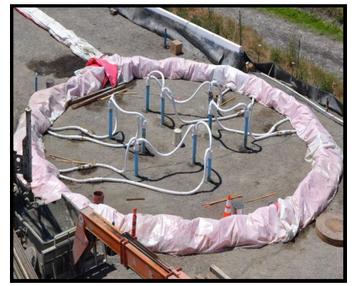
Work on the Bay Tunnel is Moving Forward

Work on the Bay Tunnel is proceeding at a fast pace. With more than four and a half miles of tunnel excavation now complete, the project is preparing for the "hole through" at the retrieval shaft in the next few weeks.

Recently, crews completed the excavation of the 86-foot-deep receiving shaft for the tunnel in Newark.

Due to the sensitive-surrounding environment and wetlands, the Bay Tunnel Project utilized different technology to build the receiving shaft than what was used for the TBM launch shaft on the Peninsula. For example, crews froze the ground that was to be excavated at the shaft. In addition the contractor installed 50 freezing pipes, each 128-feet-long that formed a 28-foot-diameter circle to shape the tunnel shaft, so that the contractor could excavate solid material. At the center of the tunnel shaft, 10- 160-feet-long pipes were installed to freeze what would become the bottom of the receiving shaft. All this work was done to prevent groundwater from entering or exiting the area during construction of the receiving shaft.

The freezing pipes on the perimeter of the shaft also prevented the frozen ground from defrosting while excavation took place. For every five feet of excavation, crews installed a double steel ring with wood siding to support and form the walls when concrete is poured. It took around four days to install each section.



Close-up of the installation of freezing pipes 128 feet down into the ground to form the retrieval shaft.

Crews are currently installing the entrance seal for the TBM to breakthrough at this location; it consists of a 10ft steel pipe with a rubber blowup seal to prevent the ground material to enter the shaft when the TBM brakes through.

The overall Bay Tunnel Project is nearly two-thirds complete and estimated final completion in Spring 2015.

Components of the TBM entrance seal put together. This will be lowered to the bottom of the shaft and installed on the west wall.

View into the retrieval shaft: Crews installing the structure for the entrance seal for the TMB to breakthrough.