

ESP UPDATE



Winter 2010 Edition



Mitigation Projects Reduce Environmental Impacts

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The Emergency Storage Project is a system of reservoirs, interconnected pipelines, and pumping stations designed to make water available to the San Diego region in the event of an interruption in imported water deliveries.

The Emergency Storage Project is part of the San Diego County Water Authority's Capital Improvement Program to enhance and increase the operational flexibility of its water delivery system.

This newsletter is one way the San Diego County Water Authority is keeping communities like yours informed about the project's progress.

For more information, please call toll free

(877) 426-2010

or visit our website at

cip-esp.sdcwa.org.

Breaking Through: Final San Vicente Pipeline Tunnel Sections Converge

After more than three years, 9,000 worn-out digger picks, 500 replaced tunnel boring heads, and dedicated effort by hundreds of workers, the entire 11 miles of tunneling for the San Vicente Pipeline is complete. In September 2009, the remaining tunneling machine broke through the final stretch of rock under the Central Shaft. This marks a major milestone as the project approaches completion.

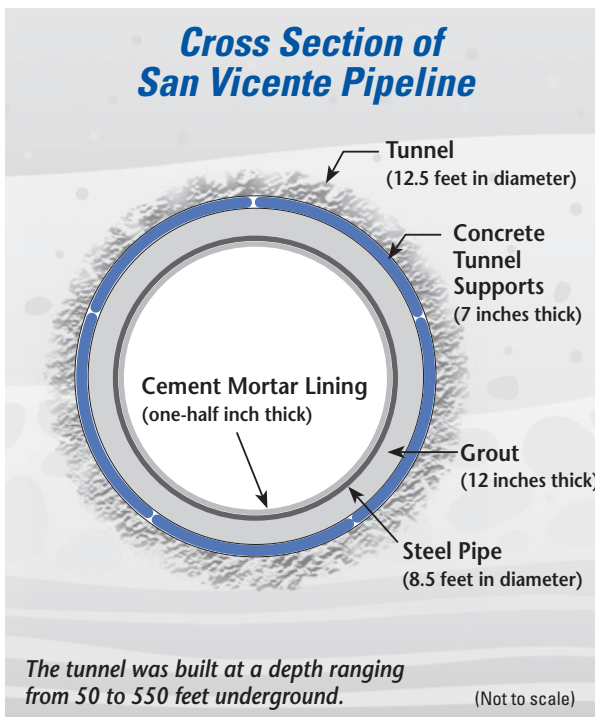
Crews are now installing 50-foot-long steel pipe segments in the eastern half of the tunnel between the San Vicente Portal and Central Shaft. Once in place, crews pump grout material outside the pipe to secure it within the tunnel. It will take about 3 million cubic feet of grout for the entire tunnel, enough to fill more than 6,000 backyard swimming pools. The final step will be applying a cement mortar lining to the inside of the pipe to protect it from corrosion. The contractor anticipates completing all phases of the pipe installation work for the eastern half of the tunnel in the spring.



Crew members pose in front of the tunnel breakthrough near the Central Shaft.

On the western half of the tunnel, the contractor completed pipe installation and grouting in October 2009.

See PIPELINE on page 2



Preserving Habitats Across the County

The San Diego County Water Authority is committed to minimizing the effects of its construction activities on surrounding environments. Unfortunately, some environmental impacts cannot be avoided. To compensate for impacts from the Emergency Storage Project, the Water Authority is creating or enhancing nearly 40 acres of wetland habitat and has funded the acquisition of nearly 600 acres of upland habitat areas, all located within San Diego County.

See HABITATS on page 2



San Diego County Water Authority

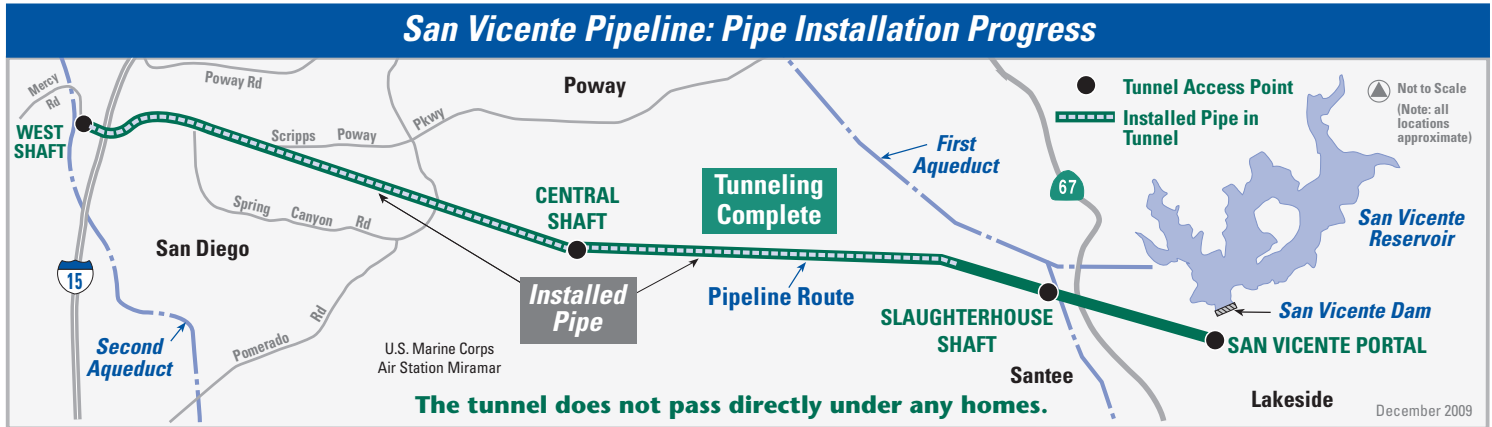
Capital Improvement Program

Pipeline *continued from page 1*

Now the application of mortar lining to the pipe interior is under way. Remaining tasks include connecting the new pipeline to existing Water Authority facilities and restoring the construction areas at the four tunnel access points.

All work for the San Vicente Pipeline is scheduled to be complete in summer 2010. 💧

To view the video footage of the final tunnel breakthrough for the San Vicente Pipeline, please visit www.sdcwa.org/infra/esp-sanvicente.phtml.



The San Vicente Pipeline is an 11-mile tunnel and a large-diameter pipeline that will connect San Vicente Reservoir in Lakeside to the Water Authority's Second Aqueduct. The pipeline will function with other Water Authority facilities to provide water to the region in an emergency.

Habitats *continued from page 1*

Wetland Habitat

Wetland habitats are typically found along streams and creeks. To recreate these habitats, the Water Authority changes dry areas into areas that can support plants that thrive in wet soil. Generally, the sites are graded to allow streams to flow onto the land, then planted and seeded with native wetland plants. Once the plants take root, the Water Authority monitors and maintains the sites until they can survive on their own. The three wetland habitat projects supporting the Emergency Storage Project are:

Manchester Wetlands Creation Site: Added wetlands habitat to the San Elijo Lagoon Ecological Reserve on lands damaged from years of farming and grazing. To be completed in 2010.

Escondido Creek Wetlands Enhancement Project: Enhances sensitive habitat along Escondido Creek. Expected to be complete in 2012.

Tijuana River Valley Wetlands Mitigation Project: Will create native wetlands. Expected to begin in 2010.

Upland Habitat

Since 2001, the Water Authority has provided funding to set aside four parcels of land for upland habitats. Upland habitat areas are dry for most of the year and support plants not requiring much water to survive. Local jurisdictions own and manage these upland sites to conserve threatened and endangered plants and wildlife. These projects are now complete (see "Mitigation Lands" map). 💧



Safety is Top Priority During Dam Raise Construction

The priority of the San Diego County Water Authority is to keep San Vicente Dam safe during construction and build the San Vicente Dam Raise project to the highest safety standards. The construction team works very closely with the state of California's dam safety regulator – the California Department of Water Resources, Division of Safety of Dams (DSOD).

DSOD is responsible for reviewing and approving the engineering designs for dams in California and overseeing their construction. The division's approval is required at each phase of the San Vicente Dam Raise project.

Now that construction is in progress, DSOD staff members visit the work site regularly to inspect construction in the field and ensure that the work meets dam construction standards. These inspections will continue throughout construction. Once the work is complete, DSOD will also oversee the refilling of the reservoir and inspect San Vicente Dam annually, as it does for all dams in the state.



Representatives from California's dam safety regulator inspect the work as crews place concrete to build a strong foundation for the new dam.

Through spring 2010, construction crews will be preparing the dam's surface, blasting away hard rock, and cleaning and preparing foundations – all to get ready to raise the height of the dam 117 feet. Meanwhile, the reservoir continues to provide water to the city of San Diego. Throughout construction, it will contain about 40,000 acre-feet of water – enough to serve 80,000 households in a year.

This first phase of San Vicente Dam Raise construction is expected to be finished in summer 2010. The second phase is the dam raise itself and is slated from spring 2010 to late 2012. 💧

Want to See the Dam Raise in Action? Visit the Online Photo Tour

See construction crews removing pieces of concrete from the dam, excavating the foundation, and demolishing the marina area by visiting the online photo tour at www.sdcwa.org/infra/esp-sanvicentendamraise_phototour.phtml. The photo tour will be updated throughout the project, so check back often. You can also sign up for project update emails by visiting cip-esp.sdcwa.org and entering your email address in the box at the top of the page.

Staying on Track with Conservation

San Diego's summer and fall 2009 water use brought some good news: residents and businesses were terrific water savers during the hottest months of the year when water use is typically at its highest. All across the county, customers met or exceeded the Water Authority's conservation goal of 8 percent reduction over 2008 (see the chart below).

2009 Water Use Compared to 2008

November	Down 5%
October	Down 17%
September	Down 8%
August	Down 10%
July	Down 16.5%



Even more impressive is comparing San Diego County's water use today with what it was 19 years ago. Between 1990 and 2009, the county's population increased almost 20 percent. However, the total water use this year is about the same as it was in 1990.

Looking ahead, customers will need to keep conserving water, even if San Diego County is drenched with rain this winter. Most of our water supply is imported from hundreds of miles away from Northern California and the Colorado River. Those regions have been locked into a pattern of recurring years of drought, meaning that less water is available to Southern California.

As of November 2009, 8 of the 12 major water reservoirs in the California statewide water system were only 50 percent full or less. Moreover, federal regulatory restrictions have cut the amount of water that can be pumped into the California Aqueduct for delivery to Southern California.

Rainfall and runoff into the lower Colorado River have been dramatically low for 8 of the last 11 years. Water stored by Hoover Dam in Lake Mead is at 42 percent of normal, a record low.

Clearly, water conservation must become the "new normal." When it rains, please remember to turn off your sprinklers.

Customers will need to keep conserving water, even if San Diego County is drenched with rain this winter.

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Hodges Cofferdam – A Thing of the Past

The Lake Hodges Projects cofferdam kept water out of the construction area for more than two years. This allowed the contractor to work on the bottom of the reservoir to build a concrete channel, or inlet-outlet structure. Crews completed the dismantling of the cofferdam in September 2009.

To restore areas disturbed by the Lake Hodges Projects, landscaping work is expected to begin in March. All aspects of the Lake Hodges Projects are anticipated to be complete in fall 2010. 💧



Conservation *continued from page 3*

Even better, install a sensor that automatically shuts the system down when it rains. After it rains, keep the sprinklers off until the top two to three inches of soil feel dry.

More water conservation tips are available at:
www.20gallonchallenge.com.

You can also keep up with the latest conservation news, legislation, and other Water Authority topics on Facebook. Go to www.facebook.com and search for "San Diego County Water Authority." 💧



For More Information

about the San Diego County Water Authority's
Emergency Storage Project,
please call toll free **(877) 426-2010**,
email ESPinfo@sdcwa.org,
or visit our website at cip-esp.sdcwa.org.

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San Diego County
Water Authority

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The Water Authority is a public agency serving the San Diego region as a wholesale supplier of water. The Water Authority works through its 24 member agencies to provide a safe, reliable water supply to support the region's \$171 billion economy and the quality of life of 3.2 million residents.



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