

# ESP UPDATE



Fall 2006 Edition



*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*

**[www.sdcwa.org](http://www.sdcwa.org)**



San Diego County  
Water Authority

Capital Improvement  
Program

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## Tunnel Breaks Through, Connecting Lake Hodges to Olivenhain

The Water Authority's Lake Hodges Pipeline team reached a major milestone on Aug. 1, 2006, when Kiewit Pacific, the contractor, broke through to Olivenhain Reservoir – completing the 5,800-foot-long tunnel. Tunnel construction, under way since September 2005, used the drill and blast method of excavation to build the 1.25-mile tunnel.

Because Olivenhain Reservoir is already connected to the San Diego County Water Authority's Second Aqueduct, this new pipeline will link Lake Hodges to the county's imported water delivery system. This link will provide several benefits to the region, including the ability to:

- Store 20,000 acre-feet of water at Lake Hodges for use during an emergency,
- Keep Lake Hodges at a more consistent water level, and
- Reduce the amount of water that spills over Lake Hodges Dam during unusually wet winters.

### Pipe Installation Under Way

After completing excavation of the Lake Hodges tunnel, the contractor began installing the steel pipe liner. The first pipe segment was delivered to the project site in mid-September. A total of 148, 40-foot-long pipe sections will be inserted in the tunnel and welded together to form the Lake Hodges to Olivenhain Pipeline. The pipeline installation work is scheduled to be finished in spring 2007. 💧



*Pipe sections 10 feet in diameter are inserted one by one in the tunnel and welded together.*

## San Vicente Pipeline Tunneling Presses On



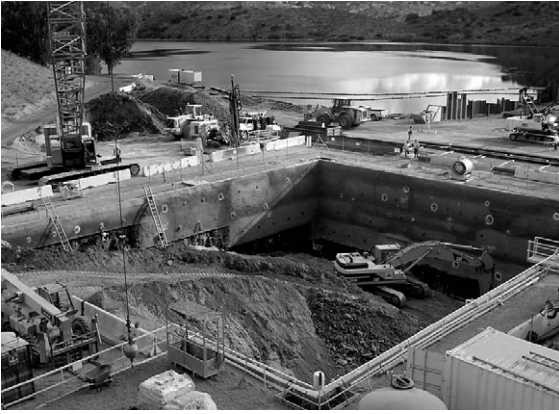
*Tunneling is under way at four locations along the 11-mile pipeline route.*

Workers and machinery continue to drill, blast, grind, and dig deep under the ground to build the longest tunnel in San Diego County. This 11-mile-long tunnel will clear the way for the 8.5-foot-diameter San Vicente Pipeline needed to link the San Vicente Reservoir to the Water Authority's Second Aqueduct. Several methods are needed to dig the tunnel because the geology changes along the route. The contractor is tunneling at four locations to speed up the project.

At the San Vicente Portal, a tunnel boring machine is chipping and grinding hard rock at a rapid pace. The westward

*See SAN VICENTE on page 2*

## Lake Hodges Pump Station Excavation Reaches 50 Feet Deep



When complete in early 2007, the pump station excavation will be 120 feet deep.

A pump station is also being constructed to pump water between Lake Hodges and Olivenhain Reservoir. Not only will the pump station send water in the new pipeline between the two reservoirs, the turbines in the pump station will also provide 40 megawatts of peak hydroelectric power to the region. A large pit is being excavated that will hold the pump station. The hole is currently 50 feet deep and will be 120 feet deep when completed. Following the excavation work, the contractor will begin pouring the concrete foundation and walls.

A temporary barrier, called a cofferdam, is also under construction in Lake Hodges. The cofferdam is being created at the lake's edge to hold back water while the contractor constructs the inlet-outlet structure. The inlet-outlet structure connects the lake to the pump station, providing water to the Lake Hodges Pipeline. The construction of the pump station and inlet-outlet structure is expected to be complete in late 2008. 💧

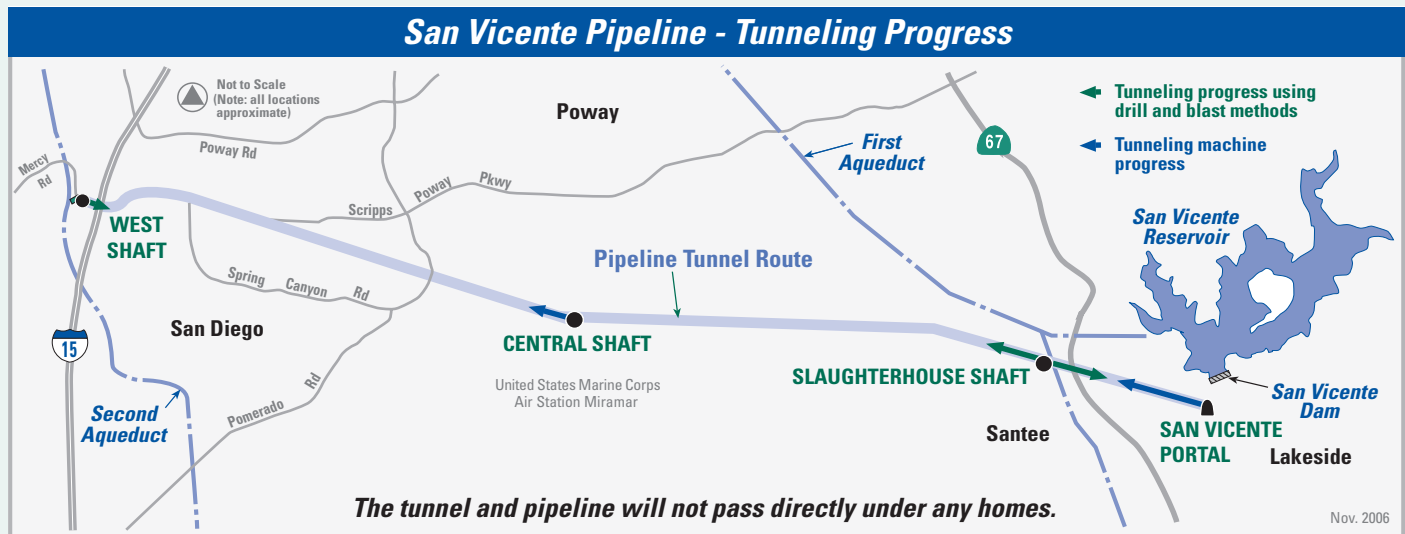
## SAN VICENTE *continued from page 1*

tunneling progress has been brisk with over 3,300 feet tunneled since July 2006. In December, when the tunnel boring machine finishes about 4,000 feet, it will be backed out, disassembled, and transferred to the West Shaft, where it will dig another three-quarters of a mile eastward through more hard rock.

Meanwhile, 400 feet has been tunneled eastward at the West Shaft using controlled blasting, making room for the entire length of the tunnel boring machine. The machine will arrive at the West Shaft in late 2006 or early 2007 after completing its work at the San Vicente Portal.



Water pipes are already being manufactured to insert into the San Vicente Pipeline tunnel.



A second tunneling machine is digging through a softer conglomerate material at the Central Shaft. Using a pick and paddle apparatus at the front of the machine, it has excavated westward 850 feet since August 2006. Immediately behind the machine, workers install concrete reinforcements to stabilize the tunnel walls. The tunnel route from the Central Shaft runs below the San Diego Gas & Electric transmission lines and Scripps Poway Parkway. The tunnel does not pass directly under any homes.

At the Slaughterhouse Shaft, tunneling is proceeding in both directions using controlled blasting. Blasting is necessary at this location due to the mixed geology. Since January 2006, over 3,000 feet have been excavated. Another 2,000 feet of tunnel blasting must be completed to reach the geology suited for the more efficient tunneling machines. 💧



## Portion of Trail at Lake Hodges Site Closed Until Late 2008

In recent months, the Water Authority studied several options to reopen the portion of the Coast to Crest Trail that runs through the Lake Hodges project site. Because of intense construction activity and limited space on site, there is no safe way to open the trail during construction. The Water Authority also studied an off-site trail route and found it was not feasible because of steep terrain, sensitive vegetation, and property ownership issues. For these reasons, this portion of the trail must be closed until construction of the pump station and inlet-outlet structure is complete in 2008.

The Water Authority prepared a draft supplemental environmental impact report (SEIR) that addresses the Coast to Crest Trail closure. The Water Authority board of directors will review the final SEIR for the Lake Hodges Pump Station Project at the Nov. 30, 2006, board meeting. To view a copy of the final environmental document, visit the Water Authority's website at [www.sdcwa.org](http://www.sdcwa.org), click on "Infrastructure," then "ESP," and finally "Lake Hodges Projects." 💧

## San Vicente Reservoir Closure News

Two projects that will close public access to San Vicente Reservoir remain on schedule. The first, scheduled to begin in early 2007, will be a surge control facility on top of the hill overlooking the dam and marina access road. Controlled blasting during construction will require the marina access road to be closed to protect public safety. The second project, scheduled to begin in 2008, is the San Vicente Dam raise construction. It will require a complete, long-term closure of the reservoir.

### Current Closure Schedule

Based on the current construction timeline for these projects, the reservoir closure schedule is as follows:

**January – April 2007 and October 2007 – Early 2008:** The reservoir will be closed Monday through Friday due to construction activity near the marina access road. Boating will be permitted only on Saturday and Sunday during this time. The reservoir should be open on its normal Thursday-through-Sunday schedule during the peak use months, May through September 2007.

**Early/mid-2008 – 2013:** Reservoir completely closed every day for San Vicente Dam raise construction and concrete curing.

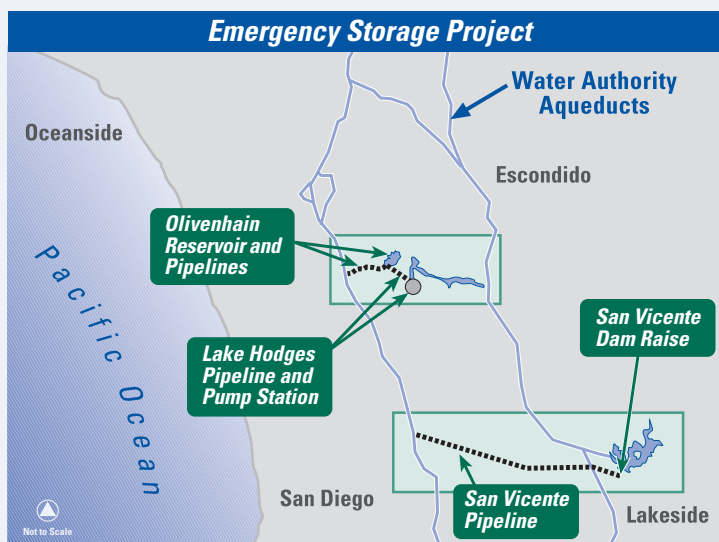
**2014 – 2017:** Boating will resume as soon as the water level reaches the new boat launch. The amount of time needed to refill the reservoir will depend on rainfall and water supply and demand. The Water Authority is working with the city of San Diego to reopen the reservoir to recreation as soon as possible. 💧

## The Emergency Storage Project – San Diego County's Water Insurance

Three times a year for the past six years, the Water Authority has produced this newsletter to provide up-to-date Emergency Storage Project information. Why is the Emergency Storage Project so important and why is the Water Authority spending \$970 million on its components?

Many San Diego County residents are unaware that the majority of the water flowing through our faucets has traveled hundreds of miles from Northern California and the Colorado River. The pipelines that bring us this water must cross several major fault lines along the way. An earthquake along any of these faults could damage the pipelines and prevent water from reaching us. The Emergency Storage Project provides the San Diego region with water insurance – water we can use during an emergency until necessary repairs are made to the system.

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### Major Project Components

- The 318-foot-high Olivenhain Dam and 24,000-acre-foot reservoir (completed in 2003)
- A pipeline connecting the new Olivenhain Reservoir to the Water Authority's Second Aqueduct (completed in 2002)
- A pipeline connecting the new Olivenhain Reservoir with Lake Hodges (under construction and scheduled to be complete in spring 2007) – see page 1
- A pipeline connecting San Vicente Reservoir to the Water Authority's Second Aqueduct (under construction and scheduled to be complete in 2009) – see page 1
- Raising San Vicente Dam by 54 feet to provide over 52,000 acre-feet of water storage (construction/concrete curing scheduled for early/mid-2008 through 2013) – see left


## Environmental Study Begins on San Vicente Dam Raise

The Water Authority is preparing an environmental study to address the potential impacts from raising the San Vicente Dam an additional 63 feet beyond the 54 feet planned for the Emergency Storage Project. The study will be called the Carryover Storage and San Vicente Dam Raise Project Environmental Impact Report and Environmental Impact Statement (EIR/EIS).

On Oct. 10, 2006, the Water Authority issued an EIR/EIS Notice of Preparation. From Oct. 10 through Nov. 9, the Water Authority welcomed comments from the public on what information the EIR/EIS should contain. To provide more project information and receive comments, the Water Authority held an open house and scoping meeting on Nov. 1. Attendees had the opportunity to meet with project staff members, have their questions answered, and submit comments.

A copy of the draft EIR/EIS will be available for public review in spring 2007 on the Water Authority's website at [www.sdcwa.org](http://www.sdcwa.org).

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The Emergency Storage Project increases the county's emergency water storage capacity and connects reservoirs to the Water Authority's aqueduct system, enabling water to flow even if our access to imported water is severed. This water insurance policy upholds the Water Authority's commitment to providing a safe, reliable water supply to the region, even during an emergency. 

For more  
information

about the San Diego County Water Authority's  
Emergency Storage Project,  
please call toll free (877) 426-2010  
or visit our website at: [www.sdcwa.org](http://www.sdcwa.org).

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San Diego County  
Water Authority

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*The San Diego County Water Authority is a public agency serving the San Diego region as a wholesale supplier of water. The Water Authority works through its 23 member agencies to provide a safe, reliable water supply to support the region's \$150 billion economy, job base, and the quality of life for more than 3 million residents.*

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