

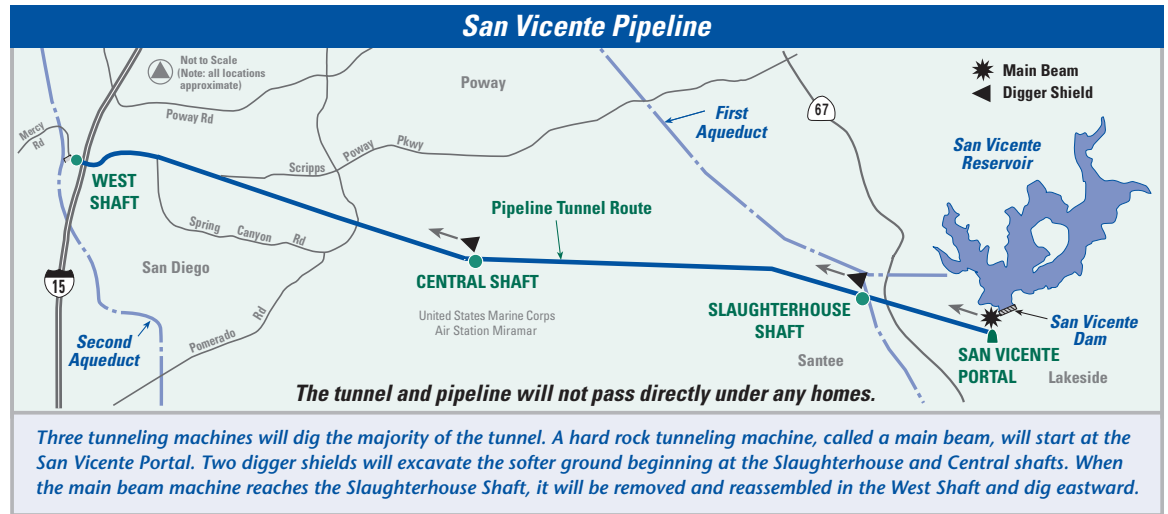
ESP UPDATE



Winter 2006 Edition

Tunneling the San Vicente Pipeline

Shaft and portal development is nearly complete for three of the four access points needed to dig the tunnel for the 11-mile San Vicente Pipeline (see map). Three tunneling machines will be used to dig the majority of the tunnel. One of the machines, called a main beam tunnel boring machine, will excavate hard rock using a



See SAN VICENTE PIPELINE on page 2

Lake Hodges Tunnel Project on Schedule; Pump Station Project Starting Soon

Progress continues on the Lake Hodges Pipeline Project, which will connect the Olivenhain Reservoir with Lake Hodges, thereby linking the lake with the San Diego County Water Authority's water delivery system.



The Lake Hodges tunnel is now more than 2,000 feet long.

Kiewit Pacific, the contractor for the project, has excavated more than 2,000 feet of the 5,800-foot-long tunnel. Tunneling began in September 2005 and is on schedule to be completed in August 2006. Once tunneling is finished, the contractor will begin installing pipe. The 10-foot-diameter steel pipe will be delivered to the Lake Hodges construction site in 40-foot-long sections.

The next component of the Lake Hodges Projects is the pump station and inlet. See LAKE HODGES on page 2

Inside This Issue

- San Vicente Pipeline Update** - Pg 1
- Lake Hodges Tunneling/Pump Station** - Pg 1
- San Vicente Reservoir Closure This Fall** - Pg 2
- Dam Raise Frequently Asked Questions** - Pg 3

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.



San Diego County Water Authority

Capital Improvement Program

SAN VICENTE PIPELINE *continued from page 1*

rotating cutterhead to break the rock into small pieces. The other two, called digger shields, will use a digging arm equipped with a bucket or rotary cutter to excavate softer ground. Small train cars behind the tunneling machines will haul excavated rock and dirt to the access points. There, the material will be removed from the tunnel.

The machines are scheduled to arrive at the worksites between March and April 2006 and will be digging a 12-foot diameter tunnel at depths ranging between 50 and 600 feet underground. Tunneling work is scheduled to last until March 2008. The excavation rate is estimated to be 50 to 130 feet a day, depending on rock or soil conditions. The rate could be slower if the digger shields encounter hard rock. Controlled blasting, a much slower process, will be used in these cases.



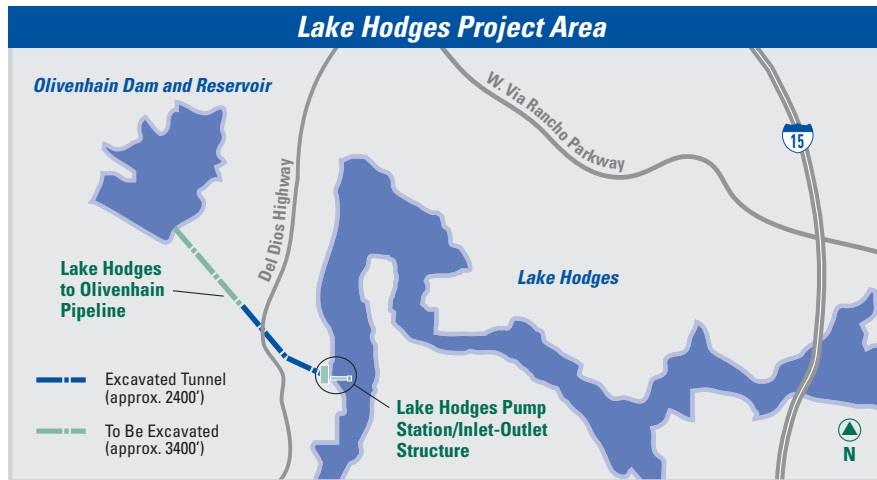
The Slaughterhouse Shaft (seen here) and the Central Shaft have been excavated to the depth of the tunnel, and the San Vicente Portal development is about 75 percent complete. Work on the West Shaft recently began.

Another component of the project, the San Vicente Interconnect Pipeline, will begin construction in mid-2006. This project will connect San Vicente Reservoir to the Moreno-Lakeside Pipeline, providing additional raw water to the Helix Water Treatment Plant. 💧

LAKE HODGES *continued from page 1*

outlet structure, which will be constructed under a separate contract. Contractor bids were received on Jan. 24. Once a contractor is selected, mobilization and site preparation will begin in March, with construction beginning in early April.

The Lake Hodges Pump Station will move water to and from Lake Hodges. The pump station building will be 130 feet below ground with an above-ground structure measuring 30 feet wide, 50 feet long, and 18 feet high. The inlet-outlet



structure and pipe will be 15 feet in diameter and will connect the pump station to Lake Hodges.

Pump station construction work will take place in very close proximity to the Coast to Crest Trail, which will require closure of the trail for extended periods. Safety is the Water Authority's number one priority. To check the current status of the Coast to Crest Trail, you can access the Water Authority's website at www.sdcwa.org. Click on "Infrastructure," then "ESP," then "Lake Hodges Projects." 💧

San Vicente Reservoir Closure on Weekdays Starts Fall 2006

Construction activity for the San Vicente Pipeline Surge Control Facility will require the reservoir to be temporarily closed during weekdays from fall 2006 through spring 2007. Recreation will only be allowed on weekends and holidays during this time.

The surge control facility will protect the San Vicente and Moreno-Lakeside pipelines from extreme pressure fluctuations. The surge control facility will be located on the hill overlooking the reservoir, adjacent to the reservoir access road. Project construction will require a great deal of controlled blasting, requiring the access road to be closed to the public.

Complete closure of San Vicente Reservoir is planned to begin in mid- to late 2008 because the water level will be lowered for dam raise construction. Please see the "San Vicente Dam Raise Frequently Asked Questions" article for more information. 💧



San Vicente Dam Raise

Frequently Asked Questions



San Vicente Reservoir will be closed for an extended period during construction for the San Vicente Dam Raise and the San Vicente Pipeline Projects. To raise awareness and provide information about the San Vicente Reservoir closure, for the second consecutive year, the Water Authority staffed a booth with the city of San Diego at the San Diego Boat Show in January. The Water Authority also plans to be at the Fred Hall Fishing, Tackle & Boat Show in March. Water Authority staff were visited by boaters, fishermen, and water-skiers who had many questions about the project. The following were the most frequently asked questions posed at the boat show.

◀ Water Authority staff distributed San Vicente Reservoir closure information at the San Diego Boat Show, Jan. 5-8.

Question: Why is this project needed?

Answer: San Vicente Dam will be raised 54 feet as part of the Emergency Storage Project to increase the reservoir's storage capacity by 52,000 acre-feet. The project will increase the amount of water available for use within the county during emergencies in the event of an interruption in imported water deliveries. The dam could be raised an additional 69 feet beyond what is planned for the Emergency Storage Project. A recent Water Authority study identified a need for an additional 100,000 acre-feet of stored water for use during droughts or other times of shortage. Throughout the project, the Water Authority will work with the city of San Diego, which owns and operates the dam and reservoir.

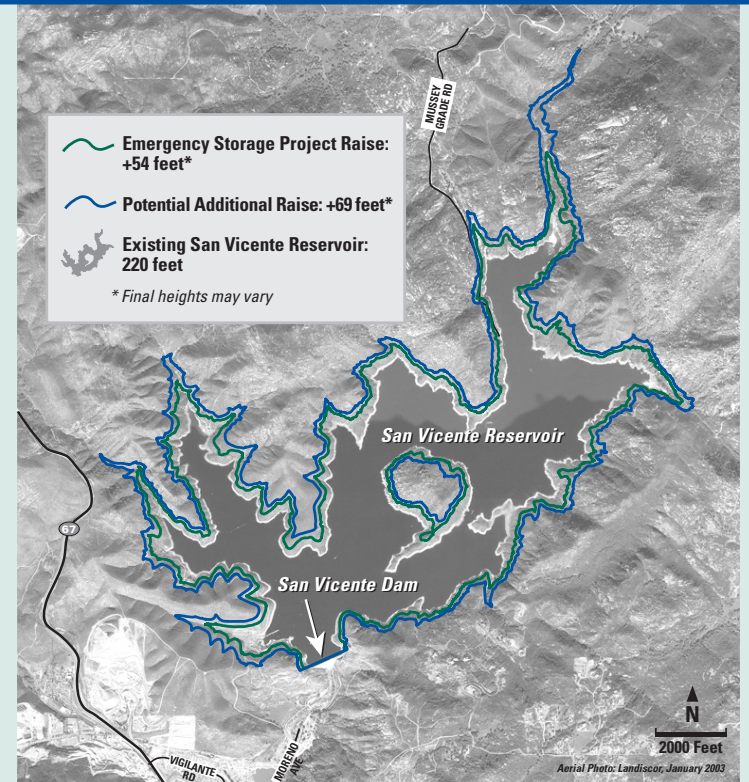
Question: Why will the reservoir be closed for so long?

Answer: The reservoir will be closed to all types of boating, fishing, and all other public uses for an extended period to ensure public safety during several years of construction and to allow time to refill the reservoir. The current timeline for reservoir closure is as follows, and may be revised as the project schedules are finalized:

- **Fall 2006 - spring 2007:** Reservoir closes Monday through Friday; opens weekends and holidays
- **2008 - 2013:** Complete closure during San Vicente Dam raise construction and concrete curing
- **2014 - 2017:** Reservoir reopens as soon as water reaches new boat launch

Recreational boating can resume when the water level reaches the new boat launch. Refilling the reservoir completely could take two to five years, or more, depending on rainfall and water demand and supply in San Diego County. The Water Authority is working with the city of San Diego to identify ways to shorten the length of the closure, and the above schedule could change as the project proceeds.

San Vicente Reservoir High Watermarks



Many interested in the project asked where the final waterline will be once the reservoir is full. The green line reflects approximately 25 percent more water surface area than the current water area, and the blue line shows about 55 percent more than the current water area.



See QUESTIONS on page 4

QUESTIONS *continued from page 3*

Question: What city of San Diego reservoir will be the main water-ski substitute for recreation while San Vicente is closed?


Answer: *The city of San Diego has identified El Capitan Reservoir as one substitute and is considering other options. The city has determined that Lake Hodges is not a good option because it is too small for water skiing and because noise pollution is a problem for the nearby neighbors. The state of California Department of Health Services (CDHS) regulates recreation uses of drinking water reservoirs. The city would need a new permit from CDHS to expand the current recreational uses at its reservoirs.*

Question: Will the access road leading to the marina be improved or moved to another location?

Answer: *Yes to both. The current access road will be relocated and widened to provide access to the new marina facilities. The new road is planned to be a safer, two-lane paved roadway with*

a maximum slope of around 15 percent. This will be significantly lower than the current grades, which approach 23 percent.

Question: How can I find out more about the project?

Answer: *Additional information is available on the Water Authority's website, www.sdcwa.org; click on "Infrastructure," then "ESP."* 

*For more
information*

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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.

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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 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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