EMERGENCY STORAGE PROJECT
San Vicente Pipeline Update
Presentation Summary

DATE: Nov. 9, 2005  TIME: 7 p.m.
EVENT: Stonebridge Estates Community Meeting
MEETING LOCATION: Scripps Ranch Community Service Center
PRESENTER: Andrew Oleksyn, SDCWA
STAFF RESOURCES: Shannon Reed, SDCWA
Jessica Berlin, Katz & Associates

PRESENTATION SUMMARY:

Andrew Oleksyn introduced himself as the construction administrator for the San Vicente Pipeline project and provided an overview of the Emergency Storage Project. Up to 95 percent of San Diego’s water is imported from the Colorado River and Northern California. There are two aqueducts that bring water to San Diego County. In the early 90s the Water Authority recognized that our system is vulnerable because those two aqueducts cross fault lines. If one of those aqueducts was severed because of an earthquake, some communities could be without water in as little as three days. So, the Water Authority decided to increase its water storage capacity within the county and also improve its ability to move water around the county and that became the Emergency Storage Project.

Phase 1 of the Emergency Storage Project, the Olivenhain Dam and Reservoir and related pipelines that connect to the Second Aqueduct, is complete. Phase 3 of the Emergency Storage Project, which is also under construction, is a pipeline connecting Olivenhain Reservoir to Lake Hodges so the Water Authority can use additional storage capacity in Lake Hodges.

Phase 2 of the project is the San Vicente Pipeline, which will allow water that's stored in San Vicente Reservoir to be pumped out to the Second Aqueduct to use in emergencies. The fourth and final phase of the Emergency Storage Project is to raise the height of San Vicente Dam in order to maximize the water storage capacity within San Vicente Reservoir.

Andrew said the San Vicente Pipeline will be 11 miles long and will connect San Vicente Reservoir to the Second Aqueduct located just west of I-15 at Mercy Road. The tunnel will be 12 feet in diameter and there will be four construction access points – one at either end (San Vicente Portal and the West Shaft) and two in the middle (Central Shaft and Slaughterhouse Shaft).

This is the largest project the Water Authority has undertaken so far with a construction cost of nearly $199 million and it is key to meeting the goals of emergency storage. The construction will last for 42 months – work began in August 2005. Currently about 50 percent of the shaft is constructed at the Slaughterhouse Shaft and work recently began at the Central Shaft.
The Central Shaft, which is located within the Stonebridge Estates community, will be 30 feet by 60 feet and will be elliptically shaped. The shape will allow pipe segments to more easily be lowered into the shaft. The shaft construction should be complete in January 2006. The tunnel boring machine, which will be delivered to this location in spring, will be a “digger shield”, which means the front end will be open and a digging arm will come out of the front and pick at the material. The digger shield tunnel boring machine is better for the type of material at this location because it is mostly dirt and rock mixed together. The tunnel boring machine will operate for about a year and a half through October 2007, and then pipe will be put into the shaft starting in November 2007 through about December 2008.

At the Central Shaft, the main access road for construction deliveries will be through the Vulcan access off of Kirkham Road. Deliveries are only allowed from 9 a.m. to 7 p.m. Currently, construction is on a single 10-hour shift, but we do have the authority to work 24 hours. Evening activities are restricted to those relating to tunneling – the tunnel boring machine will be working 24 hours inside the tunnel. Any surface activities in the evening will be restricted to those related to tunneling only. All of the material that comes out of the Central Shaft will stay on site – there will be no trucks taking material off site, which will reduce truck traffic on nearby roads. The crews will stockpile the material on the site and then spread it out to raise the height of the site. But you will not be able to see the stockpile from the road because an eight foot tall fence will be constructed on top of the berm that is already there.

Questions and Comments During the Presentation:

Q. Will you break up the larger rocks as you’re tunneling?
A. It depends on the size of the rocks, but for some of the larger ones, we could drill holes into the rock and then blast the rock from the inside. Blasting is possible, but we don’t expect much blasting in your area.

Q. Will you notify us if you are planning to blast?
A. Yes, the community will be notified if blasting is expected.

Q. Is the tunnel under any homes?
A. No, the tunnel and pipeline alignment will not pass directly under any homes. It stays under the SDG&E power line easement and then it will pass under Scripps Poway Parkway for a portion of the alignment.

Q. How far underground is the pipeline?
A. The tunnel depth ranges from 50 to 600 feet underground.

Q. What is the overall elevation of the pipeline?
A. The high point of the pipeline is at the Central Shaft and then it goes down on both sides. The maximum elevation difference is about 200 feet.

Q. How does the water flow through the pipeline?
A. The water flows by gravity into the San Vicente Reservoir and then if we need the water in an emergency or for something else, then we will pump it out of San Vicente Reservoir to the Second Aqueduct.
Q. How far can the tunnel boring machine go in one day?
A. The contractor wants to go as quickly as possible, but it really depends on the type of material they're going through. We think they'll be able to go about 50-100 feet in day.

Q. What runs the tunnel boring machines?
A. They're electric and run by hydraulic pumps.

Q. Will houses that are close by be able to feel the vibrations from the tunnel boring machines?
A. There is a chance that homes nearby could perceive low level vibrations, but at the Central Shaft a digger shield tunnel boring machine will be used. With that type of machine you're less likely to be able to feel the vibrations because they won't be grinding through rock, but they'll be digging the material away. Also, the homes in this area are typically built on top of the hills, so those homes probably won't feel anything. Vibrations travel through rock much easier than they do through dirt and cobble, which is primarily the geology of this area.

Q. When the construction is complete, what will the Central Shaft area look like?
A. The shaft will still be at the back of the property site and there will be an access road so the Water Authority can continue to maintain the pipeline and access the shaft. But, the Water Authority has no plans to construct anything on the site. We will most likely sell the majority of the property back to McMillan and they could build a park, school or something to that effect. The site is zoned for institutional use, so homes or businesses cannot be built on the site.

Q. What kind of power will be on the site – will there be generators?
A. There is buried electrical distribution on the site. We've been working with SDG&E to make sure we had power on the site. There is minor permanent power to operate the shaft lighting, security, etc. Large generators will not be used to power the digger shield, but they are currently using a medium sized generator for their offices and site set up until the permanent power can be connected by SDG&E.

Q. If there was an emergency, how much time would we have before the water would run out and how much more water is the Emergency Storage Project going to add?
A. Without the Emergency Storage Project, some communities could run out of water within three to four days. With the Emergency Storage Project, a two month emergency water supply will be available without any water having to be imported from outside the county and a six month supply of water would be available if we were still able to get some water imported from outside.

Q. When did the Water Authority start planning the Emergency Storage Project?
A. Planning began in about 1990 or 1991 and the original EIR for the project was approved in 1996. The design for the San Vicente Pipeline began in about 2001.