



# San Vicente Pipeline Projects

Building Water Reliability Through the Emergency Storage Project

San Diego  
County  
Water  
Authority

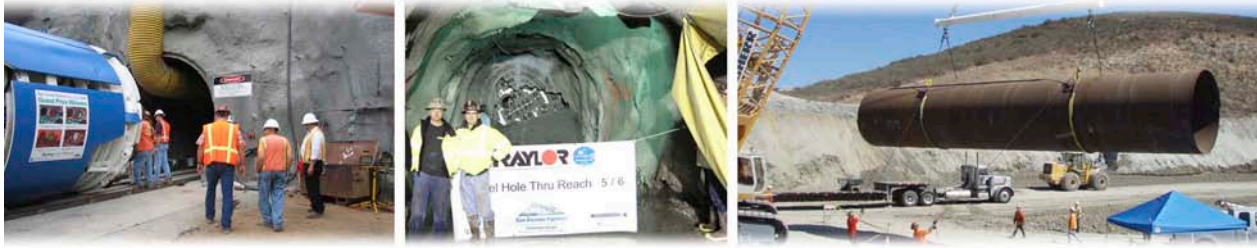
The San Vicente Pipeline projects are part of the Emergency Storage Project, a system of reservoirs, interconnected pipelines, and pumping stations designed to make water available to the San Diego region in the event of an interruption in imported water deliveries.

The 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 million residents.



San Diego County  
Water Authority

Capital Improvement  
Program



Pictured left to right: A tunneling machine prepares to enter the San Vicente Portal; the tunneling machine peeks through where two tunnels meet; a pipe segment for the San Vicente Pipeline is installed in the tunnel.

## Piping in Water Reliability

The San Vicente Pipeline projects are key components of the San Diego County Water Authority's Emergency Storage Project and important investments in the region's water reliability.

The pipeline projects will create a link from San Vicente Reservoir to the Water Authority's Second Aqueduct. In an emergency, this new connection will allow water from the reservoir to be distributed to water agencies in the southern half of the county. The projects will also improve the Water Authority's ability to move large quantities of water into storage during periods when water is abundant.

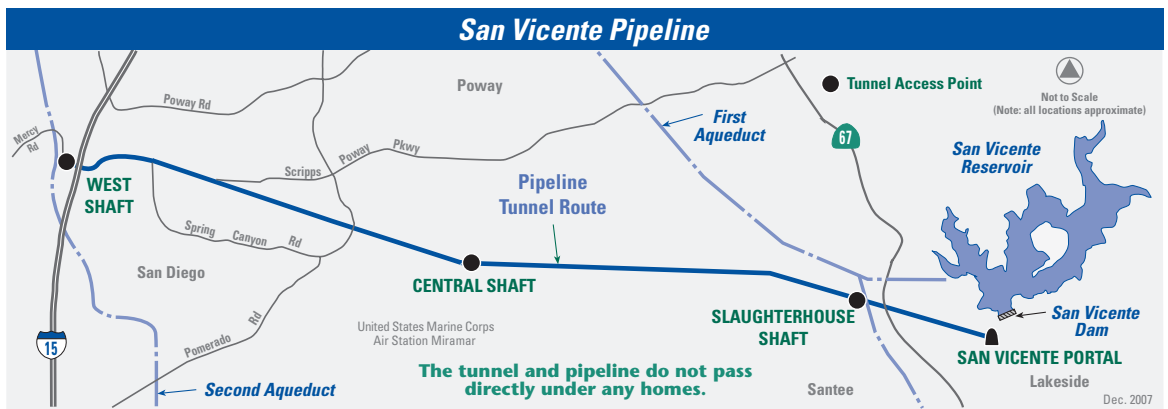
The largest component of the projects is the San Vicente Pipeline, an 11-mile-long tunneled pipeline connecting San Vicente Reservoir in Lakeside to the Second Aqueduct west of Interstate 15.

**The Emergency Storage Project will protect San Diego County by increasing the amount of water available for use if the county's imported water supply is severed.**

## Where the Action Is

Construction activity for the San Vicente Pipeline takes place at four tunnel access points, though the majority of the work is going on deep underground. The tunnel access points are used to excavate the San Vicente Pipeline tunnel and to install the pipe segments (see map below). Construction work at these sites has included inserting and extracting the tunnel boring machines; removing excavated materials from the tunnel; circulating air; and delivering equipment, pipe sections, and concrete.

When tunnel and pipeline construction is complete, some permanent facilities will remain at the San Vicente Portal and the Central and West shafts to allow Water Authority personnel to enter the pipeline for inspection and maintenance.



The route for the tunnel and pipeline begins at San Vicente Dam and continues in a northwesterly direction. As the tunnel approaches more densely populated areas in Scripps Ranch, it is below San Diego Gas & Electric transmission lines and Scripps Poway Parkway. The tunnel route ends just west of I-15 at Mercy Road.



## Keeping Our Promises

The Water Authority is committed to minimizing impacts to the community and the environment whenever possible. Environmental specialists closely monitor the work sites throughout construction to ensure that the project is built in an environmentally-sensitive manner and to enforce conditions of environmental permits.

## Providing Project Updates to the Community

The Water Authority uses newsletters, community meetings, and mailings to provide updates to residents and stakeholders. These updates, as well as a photographic tour, are available on the Water Authority's website at [cip-esp.sdcwa.org/esp-sanvicente.phtml](http://cip-esp.sdcwa.org/esp-sanvicente.phtml).

## Tunnel Facts

- **The tunnel will be 11 miles in length and approximately 12 feet in diameter.**
- **The finished pipeline will be 8.5 feet in diameter.**
- **The tunnel depth ranges between 50 and 550 feet underground.**
- **Construction is scheduled to be complete in 2010.**

To view the current status of the tunneling and pipe installation progress, visit [cip-esp.sdcwa.org/esp-sanvicente.phtml](http://cip-esp.sdcwa.org/esp-sanvicente.phtml).

## Beyond a Tunnel – San Vicente Pipeline Gets Pipe

At 102 inches, this large-diameter pipeline is being built in a tunnel at a depth ranging from 50 to 550 feet underground. Tunneling, rather than cut-and-cover trenching, allows the Water Authority to build the pipeline with fewer impacts to land surfaces and the surrounding communities. The Water Authority's contractor has used three tunnel boring machines to excavate the majority of the tunnel. The rock and dirt excavated by the boring machines is removed from the tunnel by haul trains.

Pipe installation is the other major construction



*Large 50-foot-long pipe sections will create the San Vicente Pipeline.*

component necessary to complete the pipeline. Steel pipe sections 50 feet long and 8.5 feet in diameter are lowered into the tunnel by a crane at the Central Shaft and San Vicente Portal locations. Two pipe segments at a time are hauled on a narrow sled inside the tunnel to the final location for placement. Following pipe installation, the contractor places concrete around the exterior of the pipe to secure it in the tunnel. More than 1,000 pipe sections are needed to build the pipeline.

## More than a Pipeline

During emergencies, the San Vicente Pipeline will operate with other Water Authority facilities to deliver water from San Vicente Reservoir. These other projects include the following:

**San Vicente Pump Station** – The pump station will move approximately 300 million gallons of water each day from San Vicente Reservoir, if needed in an emergency. For perspective, this amount of water can serve nearly half of the San Diego region's average, daily water use. The pump station will also be used to regulate the water level of the reservoir.

**San Vicente Surge Control Facility** – From the pump station, water will be pumped up to the surge control facility on a hilltop near the dam. From the surge control facility, water will flow by gravity through the San Vicente Pipeline to the Water Authority's Second Aqueduct. The surge control facility will also protect the San Vicente and Moreno-Lakeside pipelines from extreme pressure fluctuations in the rare event of a pump or valve failure in the system.

**San Vicente Reservoir Interconnect Pipeline** – The San Vicente Reservoir Interconnect Pipeline will move water stored in San Vicente Reservoir to the San Vicente Pump Station in an emergency. From there, water will flow through the rest of the pumping facilities and then to the San Vicente Pipeline.



*For more information about the San Diego County Water Authority's Emergency Storage Project or the San Vicente Pipeline Projects, please call toll free (877) 426-2010, email [ESPinfo@sdcwa.org](mailto:ESPinfo@sdcwa.org), or visit our website at [cip-esp.sdcwa.org](http://cip-esp.sdcwa.org).*

