

San Vicente Pipeline

San Diego
County
Water
Authority

Building Water Reliability through the Emergency Storage Project

The San Vicente Pipeline is 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 a prolonged interruption in imported water deliveries.

The San Diego County Water Authority is a public agency serving the San Diego region as a wholesale supplier of water from the Colorado River and Northern California. The Water Authority works through its 23 member agencies to provide a safe, reliable water supply to support the region's \$130 billion economy and the quality of life of 3 million residents.



San Diego County
Water Authority
Capital Improvement
Program

Piping In Water Reliability

The San Vicente Pipeline will be an 11-mile-long pipeline connecting the San Vicente Reservoir in Lakeside to the Water Authority's Second Aqueduct west of Interstate 15. This project is a key component of the Water Authority's Emergency Storage Project and an important investment in the future reliability of San Diego County's water supply.

The Emergency Storage Project will protect the region's \$130 billion economy, job base and quality of life by increasing the amount of water available within the county for use during emergencies. A drought or major earthquake could interrupt the delivery of imported water to the county for up to six months, and some communities could be without water within three to four days. The San Vicente Pipeline will provide access to water set aside for such emergencies. The pipeline will also improve the Water Authority's ability to move water around the county to serve the region's nearly 3 million people.

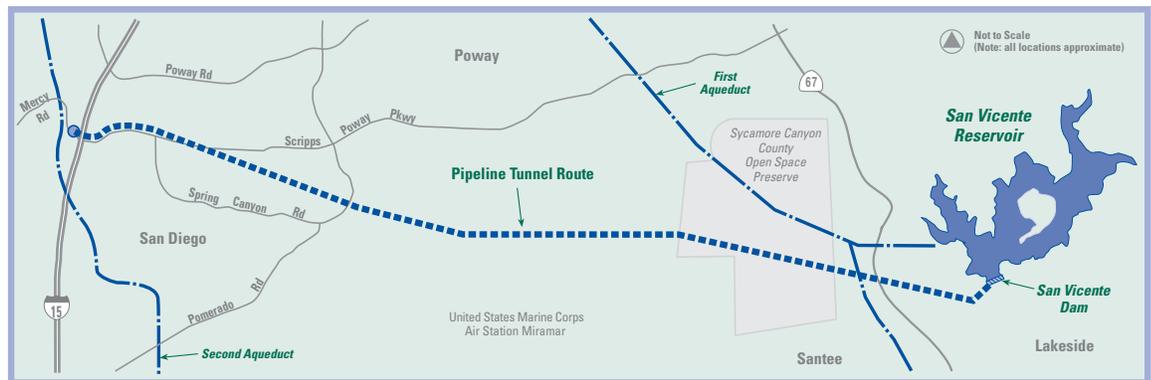


San Vicente Reservoir.

How Tunneling Works

At 102 inches, this large-diameter pipeline will be built in a tunnel rather than a trench at a depth ranging from 50 to 600 feet below the surface. Tunneling will enable the Water Authority to build the pipeline with fewer impacts to land surfaces and the surrounding communities.

The Water Authority's contractor will use two or more tunnel boring machines to excavate the majority of the tunnel. A tunnel boring machine excavates rock using a rotating cutterhead to break rock into small pieces.



The route for the tunnel and pipeline begins at San Vicente Dam and will continue in a northwesterly direction. As the tunnel approaches more densely populated areas in Scripps Ranch, it will be below San Diego Gas & Electric transmission lines and Scripps Poway Parkway. The tunnel route ends just west of I-15 at Mercy Road. The tunnel and pipeline will not pass directly under any homes.

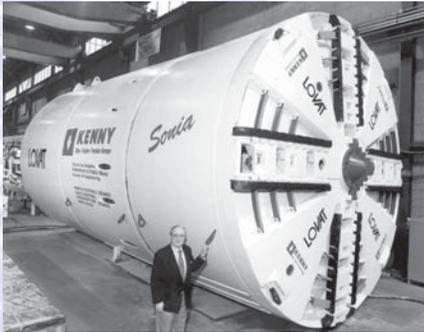
The small pieces of rock and dirt then exit behind the boring machine for disposal and will be removed by either haul trains or a conveyor belt. The tunnel boring machine can excavate at a rate of 50 to 130 feet a day, depending on rock conditions.

People near the tunnel route may perceive a subtle, low-level vibration for several days as the tunnel boring machine approaches and proceeds past their location. This low-level vibration during tunneling will not impact surface structures such as homes, swimming pools or patios. It is possible that the tunnel boring machine could



Tunnel Facts

- The tunnel will be 11 miles in length and 13 feet in diameter.
- The pipeline will be approximately 8 1/2 feet in diameter.
- The project budget is approximately \$205 million.
- The tunnel depth ranges between 50 and 600 feet underground.



Example of a tunnel boring machine.

encounter a very large boulder that it cannot excavate. In this case, it may be necessary to remove the boulder through controlled blasting. Residents and property owners near the blasting site would be notified in advance.

Tunnel Access and Construction

Three shafts and one portal will be used to construct the tunnel and pipeline. A shaft is a hole in the ground that extends down to the tunnel. A portal is a hole located in the side of a hill and is usually used at the beginning and/or end of a tunnel. The portal site is located near the San Vicente Dam and the shaft sites are located in Slaughterhouse Canyon, south of Beeler Canyon (Central Shaft) and off of Mercy Road near Interstate 15 (West Shaft). The shafts and portal are needed for personnel and materials to access the tunnel, to insert and extract the tunnel boring machines, remove excavated materials from the tunnel, circulate air and deliver equipment, pipe sections and concrete.

Excavated materials from the tunnel will primarily come from the San Vicente Portal and Central Shaft, with a limited amount from the West Shaft. Materials excavated from the Central Shaft will be placed and graded on site and will not be hauled off the property. Materials excavated from the San Vicente Portal may be hauled to a nearby commercial quarry. The materials from the West Shaft may be hauled to a commercial quarry and/or used as fill at a San Diego Gas & Electric property.

When tunnel and pipeline construction is completed, some permanent facilities will remain at the San Vicente portal and Central and West shafts to allow for future access for tunnel inspection and maintenance. Appropriate fencing, cameras and motion-activated lighting will be installed at the permanent sites for security and safety purposes.

Project Schedule

- Environmental documentation – Certified in January 2004
- Tunnel and pipeline design – Ongoing through mid 2004
- Tunnel and pipeline construction – Early 2005 through 2008

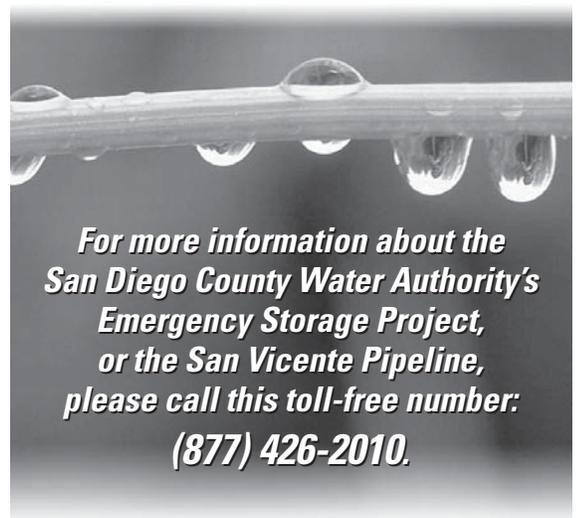
Environmental Mitigation and Documentation

The Water Authority is committed to avoiding impacts to the community and the environment from project construction activities whenever possible and to minimizing unavoidable impacts. In 1996, the Water Authority board certified an Environmental Impact Report/Environmental Impact Statement for construction of the San Vicente Pipeline as either a cut-and-cover trench or a tunnel. In 2001, the Water Authority selected tunnel construction for the pipeline which significantly reduced the traffic and community impacts of construction that would occur along a trenched pipeline route.

The Water Authority prepared a Subsequent Environmental Impact Report to evaluate elements of the pipeline project that had changed since 1996. These elements included re-routing a portion of tunnel alignment, locating access shafts needed during construction and adding a surge control facility near the San Vicente Dam. The Water Authority board of directors certified the SEIR in January 2004.

Public Participation

Throughout construction, the Water Authority will communicate with the communities along the tunnel route to provide updates on the project and respond to questions and concerns. The Water Authority will use newsletters, community meeting briefings, mailings and a toll-free project information line to keep stakeholders informed and receive comments and questions. The Water Authority will make every effort to minimize inconveniences created by construction.



*For more information about the San Diego County Water Authority's Emergency Storage Project, or the San Vicente Pipeline, please call this toll-free number:
(877) 426-2010.*