Improving INFRASTRUCTURE

Piping in Water Reliability

The San Vicente Tunnel and Pipeline System is a vital component of the San Diego County Water Authority’s Emergency & Carryover Storage Project – an important investment in the region’s water reliability.

The system creates a link from the San Vicente Reservoir to the Water Authority’s Second Aqueduct. This connection allows water from the reservoir to be distributed to water agencies in the southern half of San Diego County. The facilities also improve the Water Authority’s ability to move large quantities of water into storage in San Vicente Reservoir during periods when water is abundant.

The new facilities provide more flexibility in the Water Authority’s storage and aqueduct system to respond to water supply emergencies and periods of severe drought. The total cost of the system was approximately $418 million, which includes the pipeline, a pump station, a surge control facility and $8 million for anticipated pump station enhancements to meet future water demands.

San Vicente Pipeline

The 11-mile-long pipeline can deliver water in either direction between San Vicente Reservoir and the Second Aqueduct. Most often it conveys water to the reservoir to maintain an emergency supply for the region. In a water supply emergency or during extreme drought, the pipeline can also deliver water westward from the reservoir to the Second Aqueduct. This large-diameter pipeline was built in a tunnel, allowing the Water Authority to reduce environmental and

San Vicente Tunnel & Pipeline System

Emergency & Carryover Storage Project

The San Vicente Tunnel and Pipeline System is part of the Emergency & Carryover Storage Project, a system of reservoirs, interconnected pipelines and pumping stations designed to make water available to the San Diego region during an interruption in imported water deliveries.

The San Vicente Pipeline was completed in January 2011. The pipeline cost $300 million.

The San Diego County Water Authority sustains a $231 billion regional economy and the quality of life for 3.3 million residents through a multi-decade water supply diversification plan, major infrastructure investments and forward-thinking policies that promote fiscal and environmental responsibility. A public agency created in 1944, the Water Authority delivers wholesale water supplies to 24 retail water providers, including cities, special districts and a military base.
other impacts to the surrounding communities during construction.

**San Vicente Pump Station**

The pump station enables San Vicente Pipeline to move water from San Vicente Reservoir westward to the Second Aqueduct for delivery to water agencies. Inside the pump station, three 7,000-horsepower pumps lift water uphill to the surge control facility on a nearby hilltop.

**San Vicente Surge Control Facility**

The surge control facility is an open circular tank that receives water from the pump station for delivery to the San Vicente Pipeline. It also protects the San Vicente and Moreno-Lakeside pipelines from extreme pressure fluctuations in the rare event of a pump or valve failure in the system.

The pump station and surge control facility move water from San Vicente Reservoir.

The San Vicente Pump Station (left) and surge control facility (right) were completed in February 2010 at a total cost of $110 million. The Water Authority has allocated $8 million for future pump station upgrades.

**Quick Facts**

- 11 miles: length of San Vicente Pipeline
- 12 feet: diameter of tunnel
- 8.5 feet: diameter of the pipeline
- 1,200+: number of pipe sections welded together
- 7,000 Hp: size of each pump
- 4.5 million gallons: capacity of surge control facility
- 1 million kWh: annual energy savings from variable frequency drives in pump station

**For More Information**

For more information about the Water Authority’s Emergency Storage & Carryover Project or the San Vicente Tunnel & Pipeline System, go to sdcwa.org/emergency-storage-project.

Workers weld the joints between pipe sections.