

## “The San Diego Aqueduct”

The water began flowing at 2:00 a.m. on November 26, 1947. Starting as a trickle, it soon grew to a torrent, pouring from a mountain tunnel to cascade a half-mile downhill into the San Vicente Reservoir. San Diego’s first Colorado River water had arrived in the nick of time, narrowly averting the worst water crisis the region had ever seen.

The newly completed pipeline tapped Arizona water from the Colorado River Aqueduct, which ran west from Lake Havasu toward Los Angeles. From a portal near Hemet, the San Diego Aqueduct brought water south for 71 miles to San Vicente.



Water flows from the Fire Hill Tunnel above the San Vicente Reservoir *San Diego Water Department*

Construction of the pipeline--or “barrel,” as the engineers called it—began as a wartime emergency. World War II had brought a massive boom to San Diego, boosting the county population less 300,000 in 1940 to over 600,000 by 1944. The needs of military and naval installations, war industries and housing, consumed an estimated 40% of the region’s water supply. Every drop of that water came from local sources, but in drought-stricken San Diego, the reservoirs were running dry.

In a letter to President Franklin D. Roosevelt in September 1944, California Senator Sheridan Downey warned that unless a new water source was built quickly, “the city and all the important naval and military establishments in the locality [would] be without water early in 1947.” The president quickly responded by authorizing the Federal Bureau of Reclamation to complete project designs and for the Navy to supervise construction of a new aqueduct. The government would bear the entire cost of the work, estimated at \$17,500,000.

The Reclamation Bureau considered two possible options for bringing Colorado River water to San Diego. The choice of San Diegans was a locally owned diversion aqueduct from the All-American Canal, which would bring water west from the Imperial Valley. But construction across the desert and mountains would take three years. The Federal water engineers chose an easier route: a pipeline linked to the existing Colorado River Aqueduct at the San Jacinto portal.

Ground breaking took place on September 12, 1945 (less than two weeks after the surrender of Japan and the final end to World War II). But the happy occasion--held in the riverbed of the San Jacinto River--was marred by a dispute between the recently organized San Diego County Water Authority and the Los Angeles Metropolitan Water District, which controlled the Colorado River Aqueduct. The MWD reminded the San Diegans that water for the new pipeline would come from *their* aqueduct and membership in the District would be necessary before the water flowed. Tempers flared before both parties agreed to put off the impasse for the time being.

A more serious row came the next month. With the war over, the Navy no longer considered the aqueduct a wartime emergency, and abruptly cancelled the project. A delegation of stunned San Diegans immediately departed for Washington D.C. to plead their case. After a twelve-day struggle, the Navy relented, realizing that viable military bases needed water as much as the local population. The Navy agreed to continue the project and the City of San Diego pledged it would lease the pipeline for \$500,000 a year until the debt was paid.

The financing agreement was altered a year later when San Diego surrendered its claim to Colorado River water to the San Diego County Water Authority. The SDCWA was then annexed by the Metropolitan Water District of Southern California on December 17, 1946. The MWD would now be responsible for the new aqueduct.

With the financing and ownership issues resolved the work began in earnest. Using precast concrete pipe, 48-96 inches in diameter, the workers began laying down the barrel to San Diego. Rolling countryside eased the task for the first third of the way. But below Temecula, the topography grew difficult. After rising to cross Rainbow Pass, the aqueduct paralleled U.S. Highway 395 and then entered thirteen miles of hilly terrain that required four tunnels.



Pipeline construction at the San Luis Rey River, looking south.  
*San Diego Water Department*

Continuing south, the pipeline passed east of Escondido and crossed the San Dieguito River before entering the Poway Valley. The barrel then passed through three tunnels before arriving above the San Vicente Reservoir.

Finding adequate unskilled labor for the project was a problem at first, despite the waves of servicemen returning home from the war. Workers were hired from as far north as Fresno for 87.5 cents an hour. Equipment operators earned \$1.75 per hour. When the project was fully underway, 850 men were on the job.

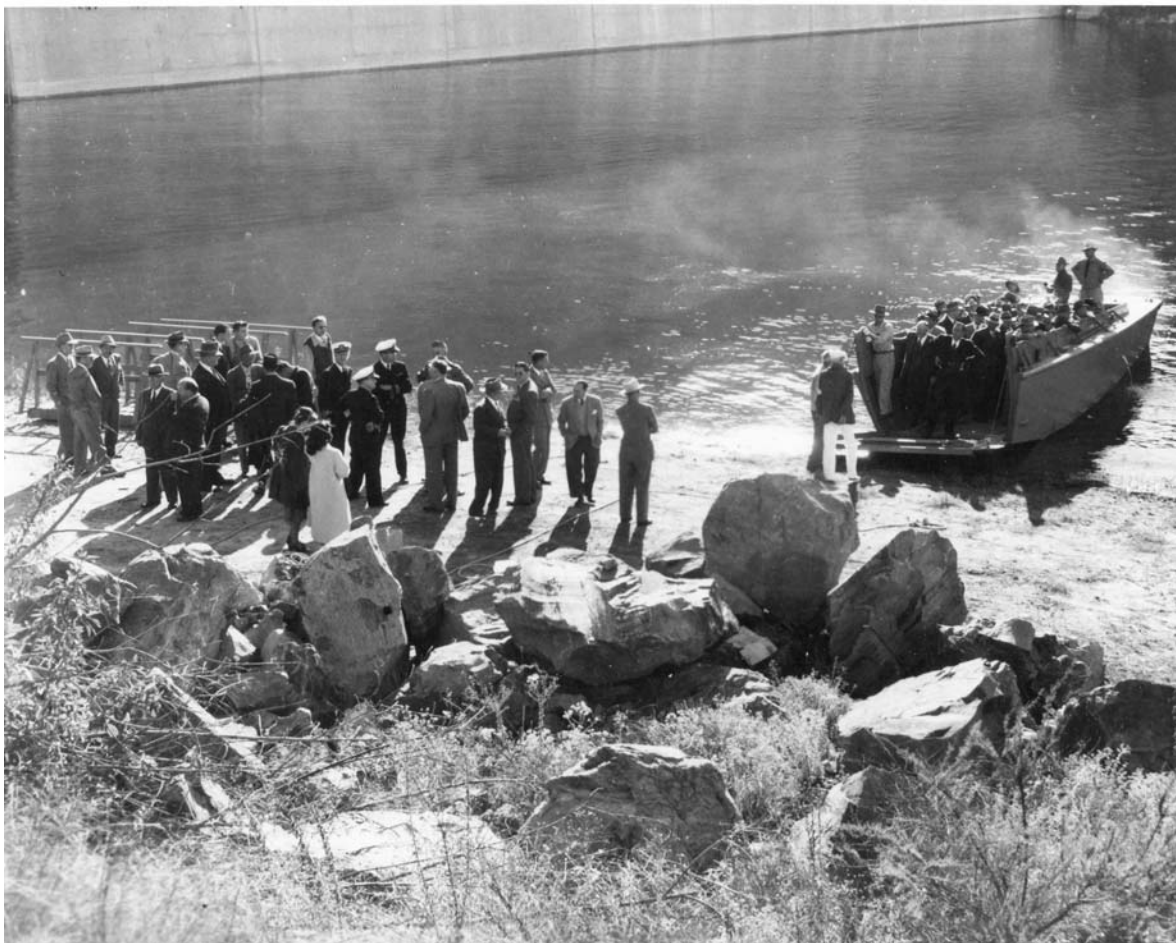
In the southern portions of the route the men worked without telephones lines and used two-radios to communicate. Tunnel work was the most difficult part of the project. There were seven tunnels to bore, each eight feet in diameter and ranging in length from 500 to 5,700 feet. The tunnels comprised 14% of the total aqueduct length.

Labor stoppages were costly to the schedule. An interruption in 1946 was caused by strikes in the nation's coal and steel industries. The resulting delays in shipping steel cost the project three months. A local interruption in January 1947 occurred when the project was two-thirds completed. Two A.F.L. unions squabbled—laborers vs. carpenters—over who was entitled to build the forms for pouring the concrete lining for the tunnels. One hundred men were idled.

The pipeline project had been scheduled to take fifteen months but the stoppages added ten months to the job. Despite the extra time, the San Diego Aqueduct would finish under-budget, costing only \$14.1 million—three million less than original estimates.

By late November 1947, fifty million gallons of Colorado River water was flowing into the semi-dry San Vicente Reservoir each day. “It was just in time,” Water Authority secretary William H. Jennings recalled. “The whole area of San Diego County had less than three week’s water supply remaining.” In next several weeks feeder pipelines began carrying the water to San Diego communities. The City of San Diego received their first Colorado River water on February 27, 1948.

At the formal dedication of the San Diego Aqueduct on December 11, officials congratulated themselves for securing a 20 to 30 year water supply. But San Diego’s addiction to imported water had only begun. An additional pipeline—paralleling the first barrel--was added to the aqueduct in 1954. And a new 94-mile San Diego Aqueduct opened in 1960, carrying water further south to the Otay Reservoir. A fourth pipeline was added to that in 1973.



At the dedication ceremony on December 11, 1947, dignitaries were ferried across the San Vicente Reservoir in a Navy landing craft boat. *San Diego Water Department*

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