

COLORADO RIVER AQUEDUCT (CRA)



A 242-MILE WATER CONVEYANCE SYSTEM, BUILT AND MAINTAINED BY THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA.

1+ BILLION GALLONS PER DAY

The CRA is one of two major water delivery systems that supplies imported water to Orange County. The 242-mile aqueduct begins at Parker Dam, straddling the border between California and Arizona, and terminates at Lake Mathews in Riverside County. Capable of moving more than 1 billion gallons of water each day, the CRA provides water for 19 million California residents. It takes 72 hours for the water to make its way through the CRA.



DID YOU KNOW?

The Colorado River Basin covers 246,000 square miles and includes parts of Wyoming, Utah, Nevada, New Mexico, Colorado, California and Arizona. Approximately 40 million people are dependent on the Colorado River, including a significant portion of southern California.



THE CITY OF ANGELS

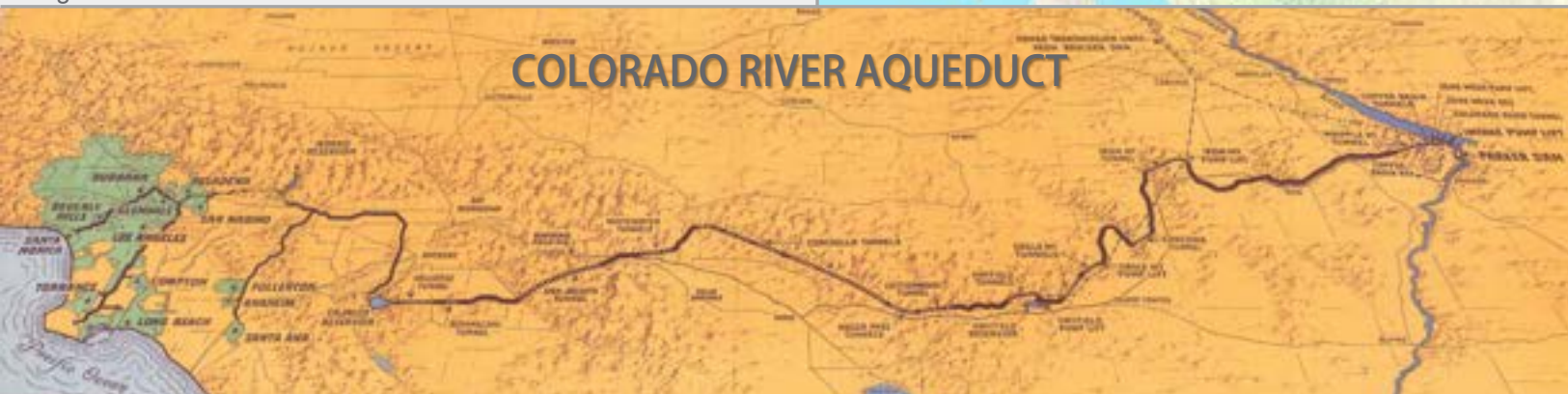
During the 1900s the population of Los Angeles outgrew local water supplies, and planners had to look elsewhere to meet the area's water needs. The Los Angeles Aqueduct was LA's solution, bringing water from the Owen's Valley in central California to Los Angeles. By 1926, LA's population had doubled and the LA Aqueduct was not enough to support the population boom. A new water source needed to be found!



METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

The CRA is an American engineering marvel and essential water delivery system for Southern California. Planning and construction of the CRA was the reason for the creation and approval of the Metropolitan Water District of Southern California by the state Legislature in 1928.

COLORADO RIVER AQUEDUCT



LAKE HAVASU RESERVOIR

Lake Havasu Reservoir, created by the damming of the Colorado River by Parker Dam, is the source of California's CRA water. Parker Dam has four hydroelectric generating units, each capable of producing 30 megawatts of electricity. 50 percent of energy generated by Parker Dam is used by the Metropolitan Water District of Southern California along the CRA.



5 PUMPING PLANTS

The CRA transports water 242 miles west from Lake Havasu on the California/Arizona border to Lake Mathews in the foothills of the Santa Ana Mountains in Riverside County. Five pumping plants located throughout the CRA are responsible for the challenging task of pushing water through the aqueduct and lifting it up over 1,617 feet of mountainous terrain.

Whitsett Intake Pumping Plant

Nine 9,000-horsepower pumps, 291-foot lift to Gene Wash.

Gene Wash Pumping Plant

Nine 9,000-horsepower pumps, 303-foot lift to Copper Basin.

Iron Mountain Pumping Plant

Nine 4,300-horsepower pumps, 144-foot lift.

Eagle Mountain Pumping Plant

Nine 12,000-horsepower pumps, 435-foot lift.

Hinds Pumping Plant

Nine 12,500-horsepower pumps, 441-foot lift.

LAKE MATHEWS (terminus)

Located in Riverside County, Lake Mathews marks the end of the CRA and the beginning of MWD's distribution system.

Lake Mathews has a 59-billion-gallon capacity of water.

The area around Lake Mathews is an ecological reserve, serving as an important winter nesting and feeding grounds for a variety of birds.



THE GREAT DEPRESSION 30,000 EMPLOYED

The CRA was the largest public works project in Southern California during the Great Depression, taking eight years to finish and providing jobs for 30,000 workers. It was completed in 1939 and began delivering water in 1941. Southern California's growth can be attributed largely to the success of CRA project.



CRA BREAKDOWN

72 HOURS

It takes 72 hours for water to travel the length of the CRA.

63 MILES OF CANALS

Measuring 55 feet wide at the top, 20 feet wide at the bottom, and with a depth of 11 feet, canals are the most prominent component of the CRA. Despite open canals, only 4-5 percent of water is lost to evaporation throughout the entire system.

58 MILES OF CONDUIT

Conduit (buried pipeline) was necessary feature in areas subject to flooding and sand storms along the CRA. Most conduits measure 16 feet in diameter.

92 MILES OF TUNNEL

In lieu of building dozens of pumping stations that would have been required to move CRA water, tunnels were built through the mountain ranges along the CRA..

144 INVERTED SIPHONS

Natural drainage routes and other obstacles in certain areas of the CRA made conduits and canals impossible, so designers built inverted siphons to bypass the obstructions. The downstream side is lower than the upstream, allowing flow.



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