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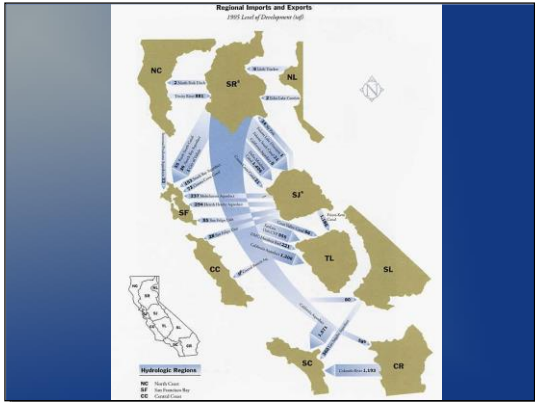
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Eastern Sierra Water: Historic Choices that Shaped California¹

David Carle

Most of California's precipitation falls in the northern half of the state, while most of the human thirst by cities and farms developed in the southern half of the state. Water has been redirected from northern watersheds to the south and to the coast.



The size of arrows on this diagram reflects relative volumes of water. How and why such dramatic choices were made is the California water history that begins with the Los Angeles Aqueduct. Note that the Sierra Nevada snowpack is a key provider of run-off water.

After the Gold Rush, with land ownership concentrated in a few hands, real estate promotion drove California's development. In the last two decades of the 19th century, Los Angeles County became the leading agricultural producer in the nation, due to citrus industry and local groundwater.

By the end of the 19th century, to keep the land boom going, Los Angeles boosters needed to look elsewhere for water. In 1905, headlines in the *Los Angeles Daily Times* told of a "Titanic Project to Give City a River" and claimed everybody in the Owens Valley was happy about the scheme. The river being "given" to the city was the Owens, carrying melted snow the length of Owens Valley.

Early in the 20th century, as Los Angeles Aqueduct construction was underway, farms and farming communities were thriving in the Owens Valley. In 1910, 51,000 bushels of wheat, 58,000 bushels of corn and 53,000 bushels of potatoes were harvested. About 8,000 residents farmed 75,000 acres of pastureland or lived in the neighboring towns. In 1910, there were 5,000 horses, 20,000 cattle, 43,000 sheep, 5,800 bee colonies, and 40,000 grapevines.

As the first water bond was considered, author Mary Austin wrote, in 1905, "Is all this worthwhile in order that Los Angeles should be just so big?" She met with William Mulholland, Chief engineer for the city, who later exclaimed, "By God, that woman is the only one who has brains enough to see where this is going."

In 1913 the Los Angeles Aqueduct began delivering water to the city. At the aqueduct completion celebration, on November 5 that year, the first speaker said, "We are gathered here today to celebrate the coming of a king, for water in Southern California is king in fact, if not in name." Engineer William Mulholland's short speech became famous: "There it is. Take it."

By 1924, Owens Lake was dry, and dust storms began afflicting the region. Beginning in the south, the first Owens Valley land was acquired near the apple growing region of Manzanar. The goal was to secure the water rights that came with the land.

Not everyone was happy, after all. There was violent resistance, including dynamite attacks on the aqueduct, especially in the 1920s. In 1924, to draw the world's attention to their David versus Goliath fight, Owens Valley farmers and townspeople took over the Alabama Gates north of Lone Pine, and diverted aqueduct water back toward the river. The take-over came to be

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known as the “Picnic at the Alabama Gates.” After several days, when they were assured that their concerns were heard, people went home. Yet, Los Angeles proceeded to acquire almost all the private land in the Owens Valley.

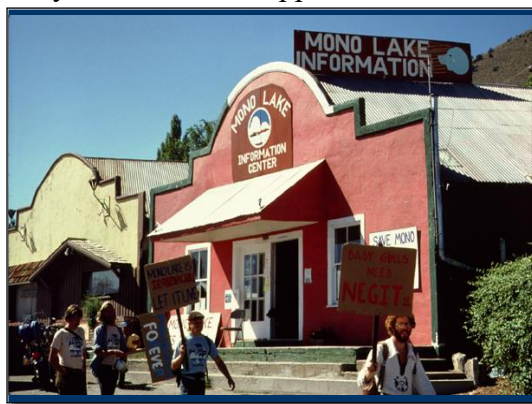
Marie Louise Parcher’s wrote, as the process moved relentlessly north up the valley: “The last apple crop went to relieve distress in the homes of the unemployed in the Great City. Today the trees that bore that crop are again white with blossoms, but the petals of these blossoms will fall on parched ground. The water is gone. It flows southward to the Great City. Be it so. The sin is not ours.”

This history has been told in many books and one very successful Hollywood movie, *Chinatown*, which fictionalized many details, but aptly demonstrated how driven the powerful city growth interests were to acquire water by any means. What happened to the farmers and residents of the Owens Valley was a compelling melodrama, while the consequences at the south end of the aqueduct were also enormous. The cover image on a pamphlet promoting Owensmouth (an insensitive subdivision name that changed quickly to Canoga Park) depicts a promise of aqueduct water being used to create an early 20th century idyllic image of town and country. *Los Angeles Times* publisher Harrison Gray Otis wrote that the water would keep coming “until the whole of southern California, from the Sierra to the sea, is one vast garden, dotted over with lovely homes.” That prediction is quite a contrast from the 21st century city. Of course, even more water would be brought in the following decades to keep that growth process going.

In 1930, another bond was brought before L.A. voters, this time to complete acquisition of nearly all Owens Valley land, and to extend the aqueduct north into the Mono Lake Basin. As in all water campaigns, there were hyperbolic warnings of disaster if voters did not choose “correctly.” A water shortage by 1932 was predicted (yet Mono Basin water was actually not brought south until 1941 with no dire shortages in the interim).

Taking freshwater streams away from Mono Lake threatened the strange, inland sea, with its super-abundant alkali fly pupae, food for birds (and local Kutzadikaa Indians), trillions of brine shrimp, and over a million migratory and nesting birds.

Aqueduct construction years changed the small communities of Lee Vining and June Lake. During six years of construction, thousands of workers and their families would move into the area. The biggest construction challenge was boring an 11-mile tunnel under the Mono Craters, so water could be moved to the Owens River headwaters without pumps. After completion in 1941, the impacts of the diversions away from Mono Lake gradually became apparent. Half the lake’s water was lost, and it doubled in salinity, threatening the living ecosystem. As had happened at Owens Lake, exposing the salty lakebed led to toxic dust storms.



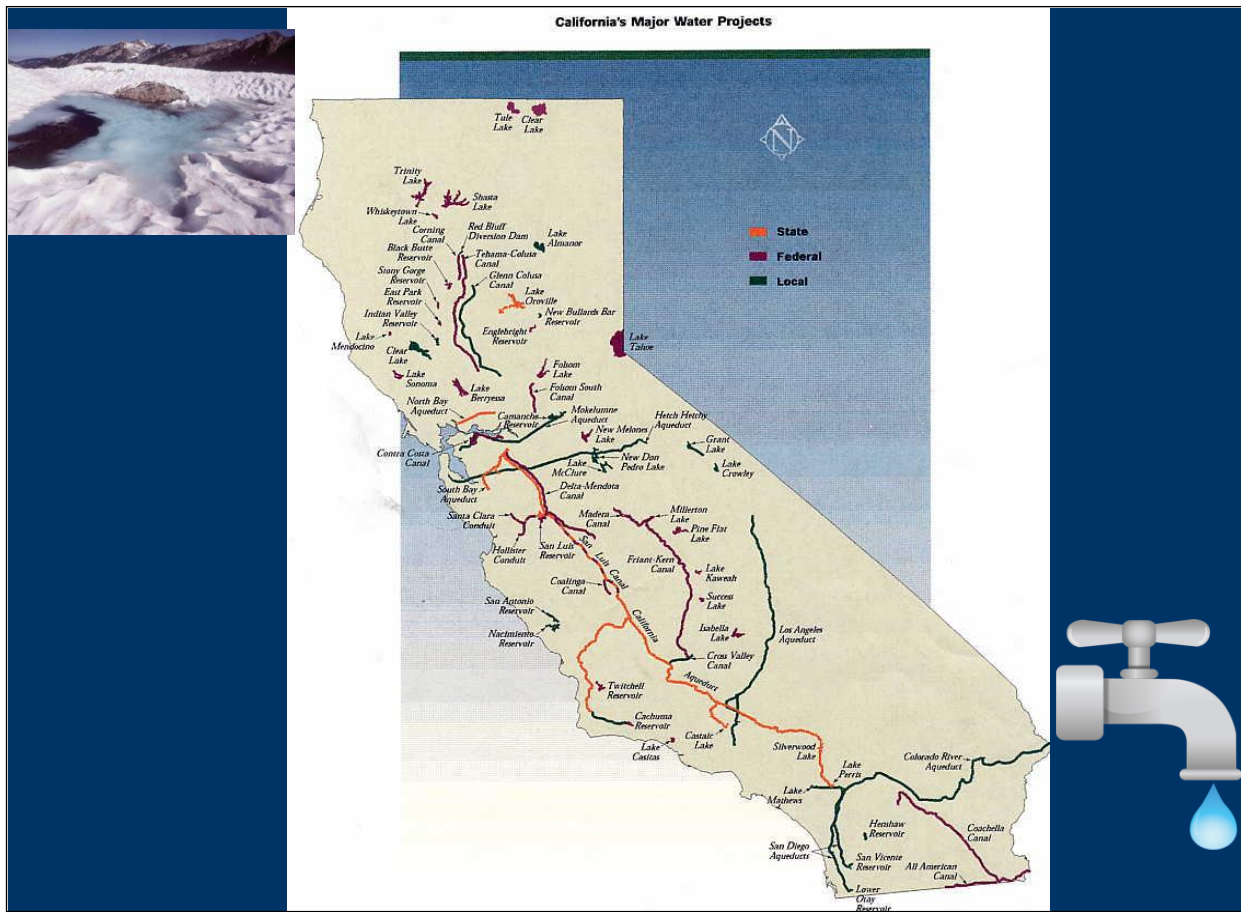
In 1978, the Mono Lake Committee formed to “Save Mono Lake!” It took 16 years in court to finally protect the lake, when the State Water Resources Board amended the City’s licenses to take stream water to protect public trust values of the lake and its tributary streams.

If no effort had been made to protect Mono Lake, by now, it would have dropped 18 feet lower than it is today and the concentrated salt-lake ecosystem would have become California’s Dead Sea. A plan is today in place to restore the lake and

raise it partway back, but now climate warming and years of drought are stalling the recovery, despite our best intentions.

To achieve the full redistribution of California's water, the Los Angeles Aqueduct was just a beginning. During the Great Depression, the federal government constructed Boulder Dam on the Colorado River. Citizens of Los Angeles and other cities in Southern California were asked to approve bonds for a Colorado River aqueduct that was completed in 1941.

California's allocation of Colorado River water was 4.4 million acre-feet (AF); far more than the half-million AF provided by the Los Angeles Aqueduct. It was enough water to draw



about 8 million more people into the region. Using the new source of water, orchards and croplands gave way; today Orange County is one of the most densely populated counties in the nation.

Meanwhile, the federal Central Valley Project was underway, ultimately damming 5 of the state's major rivers to form 20 reservoirs to move water from the Sacramento Valley south to farms, primarily, in the drier San Joaquin Valley.

To bring even more water to Southern California cities, in 1960, voters narrowly approved bonds to construct the State Water Project (SWP). Unlike the Colorado Aqueduct and LA Aqueduct, which moved water by gravity, pumps lift SWP water over the Coast Range mountains at a great energy cost. The campaigns to convince voters to fund these projects were contentious and full of overblown rhetoric.

The first major water project to be defeated by California voters was a Peripheral Canal, intended as part of the State Water Project, to move Sacramento River water around the Sacramento-San Joaquin Delta. Predictions that the canal would someday be resurrected came true thirty years later.

In 2016, the state was considering whether to build two massive (40-foot diameter) tunnels underneath the Delta. The ecosystem of this largest estuary on the West Coast was collapsing, with fish species endangered, while thirsts south of the Delta on farms and cities clamored for more reliable water deliveries. In 2015, in a move described as reminiscent of the history in the Owens Valley, the Metropolitan Water District of Southern California purchased four islands in the Delta to facilitate the tunnels project.

The Owens Valley history of land acquisition to “grab” water for large cities to keep cities growing, has been invoked by Snake Valley, Nevada, ranchers who are threatened by the City of Las Vegas’s desire to move groundwater south to that thirsty city. Meanwhile, in the Owens Valley, Los Angeles has been forced by court orders to address the dust problem on the Owens Lake bed. Though a long-term groundwater management plan was hammered out, compliance by the City remains a contentious issue. In 2006, water began flowing down the lower Owens River again, though most was pumped back into the aqueduct when the flows hit the Owens lakebed.

The measures taken to protect Mono Lake, meanwhile, pushed Los Angeles into very successful water conservation programs. Over a million free low-flush toilets were given to Los Angeles utility customers, saving enough water, along with other conservation efforts, to allow the city to hold total water use steady as its population increased by over a million people. This, and water recycling efforts, was a direct result of the need to save Mono Lake.

Today’s context for every water choice is the changing hydrological cycle due to global climate warming. Forecasts are for warmer winters, smaller snowpacks, early spring melts, and new challenges in storage and flood control.

One take-away message from the history of Eastern Sierra water is the connection between human population numbers and water choices. The City of LA could not possibly have 4 million residents, as it does today, if the choices had gone another way, and water had been kept within natural watersheds. The Southern California region could not possibly have more than about 3 million people, yet in that region numbers have pushed past 19 million. Water choices do have consequences.

Motivations for the Owens Valley water history were characterized as “The Greatest Good for the Greatest Number,” yet that dogma was somehow contorted into a similarly sounding, but very different phrase: “The greatest number equals the greatest good.” Eternal population growth is not inevitable. Our future remains, as it has through the last century, a matter of choice.

We sometimes hear that the Owens Valley environment and character were “saved” because of the Los Angeles Aqueduct. That raises a question about the changes that imported water made possible at the other end of the pipe, in Southern California. If the Owens Valley was “saved,” was the southern region’s quality of life, then, destroyed?

The dreams of the region’s pioneers and residents should never be forgotten: “I don’t want to go away. I love the hills and the sky, the sunshine and the desert, the flare of autumn and the promise of spring. I love the mountain lakes and the rushing streams..., the call of the wild things. I love my home and the neglected garden, and I don’t want to go.” (Marie Louise Parcher, 1934)

References:

All illustrations included here are from Carle's two water books: *Water and the California Dream, Historic Choices for Shaping California*, by David Carle, Counterpoint, 2016; and *Introduction to Water in California*, by David Carle, University of California Press, 2015

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