Urban Water Transfer

Californians everywhere rely on water to drink, bathe, grow lawns, and produce food. Throughout the state, rivers and streams are diverted to thirsty cities and farmland, often to be used far away from where the water is found. This means that most of California’s precipitation does not reach the Pacific Ocean or interior basin lakes.

The map on the left shows aqueducts bringing water to major California cities. Water is moved westward from the mountains to the coast and southward from wetter northern California to the large urban centers of the south. These are only the largest of the artificial “rivers,” and many others not shown on this map connect nearly all Californians to distant water sources.

In Northern California, water from the western Sierra Nevada is transported via the Hetch Hetchy Aqueduct to sustain 2.6 million people in San Francisco and its suburbs. Just to the north of that, the Mokelumne Aqueduct also brings water from the Sierra to other Bay Area cities.

In Southern California, three large aqueducts support the large population of numerous cities. Water from the eastern Sierra Nevada transported in the Los Angeles Aqueduct (there are actually two aqueducts as part of this system) supplies over 4 million people in the city of Los Angeles. Melting snow from the Rocky Mountains flows across six other states before entering the Colorado River Aqueduct in southeastern California. From there it supplies water for San Diego and other cities as well as Imperial Valley farms. The California Aqueduct also transports water over 600 miles to the Los Angeles region. Along the way, many farms and two out of every three Californians receive water from this aqueduct.

Image above left: The California Aqueduct, which sometimes divides into branches, brings water from the northern part of the state to the farming regions in the Central Valley and large cities like Los Angeles, far to the south.

Irrigated Lands

Cities and industries consume 20% of California’s water supply. The other 80% is used for crops and livestock. These maps show the rapid increase in water used to irrigate agricultural fields during the last century. They also confirm the competing demands for our limited water resources.

Farms in 1912 dominated the eastern Sierra Nevada and Los Angeles area. A century later, water diversion into the Los Angeles Aqueduct propelled the growth of that city. The farms disappeared at both ends of the water transfer: those in Los Angeles gave way to urbanization while crops at the foot of the eastern Sierra could no longer be grown without adequate water. Farms south of San Francisco also disappeared as water was used for cities. In contrast, irrigation led to expansion of farming in the Central and Imperial Valleys. More recent irrigation also supports the world famous Napa-Sonoma wine region north of the Bay Area.