

L. A. AQUEDUCT HISTORY IS TOLD

Here is the eighth of a series of dramatic fact stories of the tragedy that has overtaken the Owens River Valley in Inyo County, where almost the entire population is facing an enforced migration due to the loss of its irrigating water, without which the valley must again become a desert:

By C. E. Kunze
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The first public announcement of the proposal of the city of Los Angeles to go to the Owens Valley for an additional water supply appeared in the Los Angeles Times, The Express, owned by E. T. Earl, and other papers immediately charged bad faith, declaring there had been an agreement that the news was to have been released to all the city papers at the same time.

Despite this bad beginning all of the newspapers, with the exception of the News, now defunct, supported the bond issue, though the project came under a withering fire of criticism. It was discovered, for instance, that General Otis of the Times, Earl, and a few other wealthy men had availed themselves of the inside information shared by them during the incubating period of the Eaton plan and had acquired rather extensive land holding in the upper San Fernando Valley, which later were bound to be enhanced in value by the arrival of Owens River water. The chief opposition in Los Angeles to the whole project finally centered on this phase, but the voters took a broad view, and decided to vote themselves the handsome community dividend that the water project would unquestionably bring, regardless of the private profit which would come to the land speculators.

BONDS ARE VOTED

The bonds issue was for \$23,000,000, and it carried by a big majority. Construction work on the aqueduct began almost immediately. This was in the year 1908. In four years the job was finished. One of the greatest municipal enterprises ever undertaken had been achieved, and the credit for the achievement now fell almost altogether to William Mulholland, the engineer in charge.

Mulholland, a native of Ireland, had come up through the ranks, first as a laborer, then as contract boss and finally as engineer. He had been in the employ of Los Angeles as superintendent of the water system since 1888. His capacity for driving a job through, and his organizing genius stood the city in good service now, for the whole work was efficiently done and in record time.

DAMS ARE BUILT

The project begins at what is known as Charleys Butte, about twelve miles north of the town of Independence, in the Owens Valley, where the depression between the mountains is narrowest. Here the city constructed a low diversion dam in the Owens River, forcing the water into an open canal, wherein it is carried to the extreme southern end of the valley depression. Here, in a shallow gorge, named by the Indians Haiwee, another dam has been built and the water impounds in a reservoir of some 63,000 acre-feet capacity.

This reservoir is the only storage provided by the Mulholland project within Owens Valley. Haiwee serves the double purpose of providing an emergency supply in case a break occurred in the aqueduct above, as one did occur only last year, and of permitting the water to clear itself of soil and humus which it carries with it from the river.

164 MILE AQUEDUCT

from Haiwee the water is drawn into a cement lined canal or aqueduct which crosses the Mojave desert, a distance of 164 miles. At the southern end of the desert it is carried by steel pipe siphons and tunnels through a low range of mountains and let down over declivitous slopes into the northern end of the San Fernando Valley. From here, a distance of twenty five miles, the water is carried to Los Angeles in conduits.

From Charleys Butte to Los Angeles is a distance of 250 miles.

There are, I am told, 22 miles of open canal, 164 miles of cement-lined canals, 28 miles of tunnels, 9 miles of steel pipe siphons and 25 miles of valley conduits within the project.

FOUR RESERVOIRS

In San Fernando Valley, and the low hills about Chatsworth, are four small reservoirs. One of these is the Fairmont, with a capacity of 7620 acre feet, which serves as a regulator for water used in the city's power plants. The others are the upper San Fernando, the lower San Fernando and the Chatsworth reservoirs. The combined capacity of all these basins in the San Fernando Valley is between 35,000 and 37,000 acre feet.

The present domestic consumption of water in Los Angeles from the Owens Valley supply is in the neighborhood of 400 acre feet per day, hence the storage provided would, if the reservoirs are filled, guarantee a domestic supply for 250 days, even if the river above were to run entirely dry. The city, however, sells about half the water the aqueduct carries to farmers in the San Fernando Valley for irrigating use, and, since this duty must be assured in the summer months, one can say that the city's whole storage is ample only for 125 days, or about four months.

OTHER WATER USES

Furthermore, the emergency supply held in these reservoirs is considerably reduced by the other uses the reservoirs give. For instance, Haiwee is a settling reservoir even more than a storage pond, and the water in it cannot with safety be drawn too low. If it is, then the incoming river water carries right through it into the aqueduct below, in a condition not intended by the builders. Last year, when a pinch for water came, the San Fernando farmers were cut off, some losing valuable crops, and Haiwee was drawn down to about 8000 acre feet, passing below the danger line.

It was this condition which brought the city's land buyers into the upper end of the Owens Valley, forced the purchase by the city of the McNally ditch, with such disastrous results to the people of Laws and vicinity, and later the purchase of the Big Pine ditch, with its ruinous results for the town of Big Pine

PEOPLE ARE FOOLED

When the construction of the aqueduct began the valley residents assumed, of course, that Mulholland would forthwith provide a real storage reservoir in Long Valley.

Eaton had purchased thousands of acres of land in the valley from T. B. Rickey, a Nevada cattleman, and had secured all the storage rights in Long Valley from the government. A dam site had been selected at the head of the Owens River gorge, and a dam 150 feet high would give, the government engineers had calculated, 200,000 acre-feet of storage. This reservoir could be filled every winter and late autumn after the irrigating season is ended, and would when full alone provide the aqueduct to its full capacity of 400 second feet with a flow of water for 500 days.

SURPLUS AVAILABLE

In other words, the city would not have to depend on any of the normal stream flow of the river, once the Long Valley reservoir were filled, and could take a chance on weather conditions in the mountains, which would fill the reservoir only every other year. Already owning the site and storage rights there, having an easement on 2000 acres of land and the opportunity of buying the rest from Eaton, who still holds it, this entire development, dam and all, would have cost the city less money than did the purchase of two canals, the McNally and the Big Pine ditches.

POTENTIAL POWER WASTE

Here, say the valley people, lies the key to the whole water conflict in their valley. The key is in the city's hands, and has been since it persuaded the reclamation service to "shoo" the farmers away back in 1905. The people themselves are helpless, but the city of Los Angeles could, if it would, solve the whole problem in a very short time. It would pay the city handsomely to do so. For in the gorge of the river below the Long Valley dam site for a distance of eight miles are 100,000 horsepower of potential hydro-electric energy now running to waste year after year because no one has taken the trouble to build power plants there to capture this energy.