

June 4, 1947

Honorable Julian Beck
Member of the State Assembly
Forty-First District
State Capitol
Sacramento, California

Dear Mr. Beck:

In accordance with your verbal request you are advised that pursuant to House Resolution No. 101 of the Assembly of the California State Legislature, of February 16, 1946, I have forwarded to the Assembly a report on water supply of Antelope Valley in Los Angeles and Kern Counties. Our conclusions and recommendations are:

Conclusions

(1) Antelope Valley is a structural basin. Its present water supply is limited to precipitation on the valley, runoff from immediately adjacent tributary areas, and waste from Los Angeles Aqueduct. Precipitation on the valley is so small that little of it reaches the ground water so its use is limited to consumption by dry farmed crops. Of stream flow from adjacent mountains and hills, an estimated five per cent wastes, leaving 63,000 acre-feet per annum for direct diversion and for percolation to the ground water. The maximum which can be supplied from Los Angeles Aqueduct in a wet year with present spreading facilities is about 10,000 acre-feet and the estimated average with present Los Angeles demand, is from 5,000 to 7,000 acre-feet per year. The demands of the City are increasing rapidly so this is not a dependable or permanent source of supply.

(2) An estimated 52,000 acres of land will be irrigated in 1947, a large part of it devoted to alfalfa which is a high consumer of water. In addition, an estimated 180,000 acres of good land are available for irrigation.

(3) Extractions in 1947 will exceed the mean annual recharge to the ground water by more than 50,000 acre-feet and consumptive use is now increasing at a rate of 8,000 acre-feet or more per year.

(4) No new source of outside water which might become available to Antelope Valley in the foreseeable future has been found.

(5) Salvageable waste is small and justifiable costs for that purpose are therefore limited. If spreading of Big or Little Rock Creek

PWS-0052-0001

As 2 - by June 5th

Honorable Julian Rock - 2

June 4, 1947

water is resorted to it should be at or near the upper margin of Lancaster Basin, in order to assure percolation to the ground water and at the same time avoid possible subsurface waste to the east from Rock Creek and Buttes basins.

(6) The only way to eliminate the overdraft in the foreseeable future is to drastically reduce the amount of water consumed. This can be accomplished (1) by substituting a type of culture which consumes less water and (2) by reducing the area of land using water.

(7) That improved irrigation practice on present crops will greatly affect the overdraft is doubtful. Improved irrigation efficiency will, however, extend the time during which profitable operation can continue because, with less water applied, unit running costs can be greater.

Recommendations

(1) Every effort should be made to reduce consumptive use in the valley through the substitution of higher duty crops. Studies with this end in view now being carried out by the Soil Conservation Service, County Farm Advisors and others and the efforts of influential local organizations should be continued.

(2) Studies by the Soil Conservation Service and the University of California relative to improved irrigation practices and possible salvage of waste should be encouraged. The fact that this waste may be small does not justify neglecting it if it can be salvaged at a cost commensurate with the benefits derived.

(3) Measurements of depth to ground water made by the United States Geological Survey and Los Angeles County Flood Control District, and analyses by the Division of Water Resources based on these measurements should be continued, to augment crop data presented annually by the County Agricultural Commissioner in a periodic appraisal of the situation.

(4) As lands go out of production because of economic pressure or from other causes, they should be acquired and held by a properly constituted public agency. Lands sold to the State for taxes should not again be put on the open market. If publicly owned, these lands could still be used under lease or permit, but with cropping and water use restricted.

Very truly yours,

State Engineer.

OK:JRM

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