

STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

In the Matter of Application 13423)
of Stockton and East San Joaquin)
Water Conservation District to)
Appropriate from Calaveras River in)
San Joaquin County)

Decision D 1071

DECISION APPROVING APPLICATION IN PART

Application 13423 was filed October 27, 1949, by Stockton and East San Joaquin Water Conservation District (hereinafter referred to as the District) for a permit to appropriate by direct diversion 175 cubic feet per second (cfs), but not to exceed 54,600 acre-feet per year, between April 15 and November 1 of each year from the Calaveras River in San Joaquin County for irrigation and domestic uses. The point of diversion is to be within the SW $\frac{1}{4}$ of NE $\frac{1}{4}$ of projected Section 26, T2N, R6E*. The place of use consists of 23,750 acres within the boundaries of the District. Of this, a maximum of 14,000 acres may be irrigated in any one year.

Companion Application 13424 was filed by the District at the same time and sought approval of the appropriation of the same water by the same project for municipal purposes, including incidental industrial, recreational, and domestic use. Each application

*All references to township and range are from Mount Diablo Base and Meridian (MDB&M).

explained that "the primary objective of the project is the elimination of the present overdraft ... to be accomplished by the direct percolation from canal and stream beds into the underground aquifers, and by applying the water direct to the land from the proposed canals and ponding basins, and thereby diminish the amount of water pumped from underground sources". It was subsequently decided that the objectives of this second application would be accomplished incidental to the operation of the District's project under Application 13423. Application 13423 was amended prior to publication to clarify this point, and Application 13424 was subsequently canceled by the applicant.

A protest having been filed, a public hearing before the State Water Rights Board was held in Stockton, California, on March 7, 1961, before Ralph J. McGill, Member. At said hearing a consolidated record was made with Applications 16175, 16448, and 18208, each of which requested a permit to appropriate from upstream points of diversion. Application 13423 is the subject of a separate decision since, although its proposed point of diversion is located in the bed of the Calaveras River, most of its water supply would be from the waters of the Delta forced upstream to the point of diversion by tidal influence. To determine whether unappropriated water is available during the critical summer months, it is necessary to examine the supply of both the Calaveras River and the Sacramento-San Joaquin Delta (hereinafter referred to as the Delta).

Description of Watershed

The Calaveras River is formed by the junction of the north and south forks within Section 13, T4N, R11E, approximately 2 miles west of San Andreas. From the junction of these two forks the Calaveras River courses southwest about 7 miles to Hogan Dam which creates a reservoir having a capacity of 76,000 acre-feet. Immediately below the existing Hogan Dam the United States Corps of Engineers is presently constructing New Hogan Dam which will create a reservoir having a capacity of 325,000 acre-feet. Below Hogan Dam the Calaveras River continues in a southwesterly direction another 7 miles through a narrow canyon where it debouches from the mountains near Jenny Lind. Here the river turns and flows in a westerly direction about 10.5 miles to a point near Bellota where Mormon Slough diverges. Control gates permit the regulation and apportionment of the flows of the Calaveras River between these two channels.

Mormon Slough flows southwest from Bellota about 13 miles where it enters the Stockton Diverting Canal. From this point the Stockton Diverting Canal flows in a northwesterly direction about 5 miles and discharges into the Calaveras River at a point north of the City of Stockton and about 19.5 miles downstream from Bellota.

The site of the proposed point of diversion under Application 13423 is immediately below the point where the Stockton Diverting Canal enters the Calaveras River. Below this point the Calaveras River continues its westerly course another 6 miles where it discharges into the San Joaquin River in the Delta.

Water Supply

The drainage area of the Calaveras River above the gage "Jenny Lind" is 395 square miles (Staff 5). This area lies between elevations of about 325 and 4000 feet above sea level (Staff 6). Because of the relatively low elevation of the watershed, the moisture that falls during the winter and early spring months is generally in the form of rain. Consequently, the flow of the Calaveras River is the greatest during the months of December, January, February, and March. After these wet months, the flow reduces rapidly and practically ceases during September and October (Staff 4 and 5). The comparative uniformity of flow for the period April through August is unquestionably the result of regulation at Hogan Dam.

The flows of the Calaveras River at a point below the mouth of the Stockton Diverting Canal for the eight-year period 1949 through 1956 are presented in Table 1. This table clearly indicates the variable flows of the river and confirms the fact that the river is practically dry during September and October.

Plan for Use of Water

According to the evidence, the District proposes to divert, in addition to the natural flow from upstream sources, backwater from the Delta which is forced upstream in the channel of the Calaveras River by tidal influence. At the present time the backwater, due to the tidal influence, advances upstream only

TABLE 1

FLOW OF CALAVERAS RIVER
BELOW STOCKTON DIVERTING CANAL
In thousands of acre-feet

Month	1949	1950	1951	1952	1953	1954	1955	1956	Median	Avg.
January	1.7	NR	68.9	123.5	34.9	5.5	47.2	134.5	47.2	59.4
February	5.5	48.5	30.5	42.2	1.9	5.1	4.1	17.8	11.6	19.4
March	46.5	NR	43.9	95.4	0	1.0	0.2	9.3	9.3	28.0
April	4.2	NR	0.2	11.5	0.4	5.7	0.2	0	0.4	3.2
May	0.6	NR	0.9	3.7	0.8	2.0	1.0	0.5	0.9	1.4
June	5.4	0.3	0.6	2.6	1.3	1.5	1.0	0.9	1.2	1.7
July	0	0.3	0.6	2.1	0.8	1.7	0.8	2.2	0.8	1.1
August	0	NR	NR	2.8	0.2	1.2	0.1	1.7	0.7	1.0
September	0	NR	NR	2.1	0	0	0	1.0	0	0.5
October	0	0	NR	0	0	0	0	0	0	0
November	0	NR	1.4	3.2	0	0	0	0.1	0	0.7
December	0	102.6	40.8	8.5	0.4	0.3	120.8	0.7	4.6	34.3

NOTE: All quantities were computed as the flows of "Stockton Diverting Canal at Stockton" plus the flows of "Calaveras River near Stockton" minus diversions from the Calaveras River between the gage, "Calaveras River near Stockton" and the mouth of the Stockton Diverting Canal (Staff 4).

The median and average figures do not reflect any month for which there is no record (NR).

as far as Weber Pump which is located about 0.85 mile downstream from the proposed point of diversion described in Application 13423. The plan is to excavate the channel in the lower reach of the Calaveras River to induce the backwater to flow to the first pump lift.

The first pumping plant will have a capacity of 175 cfs and will lift water into a 800-foot canal which will parallel the Calaveras River on the right or north bank. This canal will discharge the water back into the Calaveras River at a point upstream from a dam which is to be constructed across the channel of the Calaveras River immediately upstream from the mouth of the Stockton Diverting Canal. Then the water will be conveyed up the channel of the Calaveras River for rediversion and use within the service area. This will be accomplished by a series of six additional pump lifts and dams across the river channel. The last of these, Pump and Dam No. 7 is to be located about 10.8 miles upstream from the mouth of the Stockton Diverting Canal. To successfully carry out this plan, it will be necessary to clean the channel and improve the channel levees to provide the required channel capacity above each pump. The following tabulation gives the distance above the mouth of the Stockton Diverting Canal and the capacity of each of these pumping plants:

<u>Pump No.</u>	<u>Distance (miles)</u>	<u>Capacity (cfs)</u>
2	2.0	175
3	3.4	165
4	6.4	150
5	6.9	150
6	9.2	125
7	10.8	100

Water will be diverted for irrigation purposes at numerous points along the 10.8 mile reach upstream from the mouth of the Stockton Diverting Canal (RT 59). Some of the water that is being transported for use within the service area will percolate into the underlying ground water basin. This water, together with influent seepage from overirrigation, will be extracted from the ground water basin for local use. As the years pass, this water will be used less for irrigation and more for domestic, municipal, industrial, and recreational purposes (Staff 1).

Supplemental Water Requirements

In 1955, there were 48,650 acres being irrigated within the District, and it is anticipated that between 1970 and 1975 about 59,500 acres will be under irrigation. When ultimate development of the District is reached, the irrigated area will include approximately 61,700 acres. In addition to the supplemental water requirements to supply the increase in agricultural development within the District, municipal and industrial developments in the Stockton Metropolitan Area and other urban areas will double by 1975 and are expected to more than triple when the ultimate development is reached (District 2).

Table 2 presents the requirements, supply from sources presently available, supply from new sources, and the additional supplemental requirement to satisfy all of the demands within the District and the Stockton Metropolitan Area. The years shown are those during which new sources of supply will become available to the District. The District proposes to meet this additional supplemental requirement (Line 12, Table 2) by appropriations pursuant to Application 13423.

Season and Quantity to be Granted

District Exhibit 7, "Central Valley Project Operation Study, Shasta Reservoir Operation," indicates water conditions in the Delta after full development of the Central Valley Project with a repetition of the hydrologic conditions for the period 1921-22 through 1953-54. Column 36 of District Exhibit 7 indicates the quantities of water available in the Delta after the satisfaction of existing rights and development of the Central Valley Project (District 7A). Mr. Henning, engineer and witness for the District, pointed to said remaining water as being a good measure of the extent of unappropriated water in the Delta available for Application 13423 (RT 21). A study of Column 36 of District Exhibit 7 discloses that there will be no unappropriated water in the Delta during August and September of any year, and unappropriated water will be available during July in only six out of thirty-three years, or about 18 per cent of the time.

TABLE 2

SUPPLEMENTAL REQUIREMENT
In thousands of acre-feet

Line :	Item	(1) 1962	1965	1970	1990	Ultimate (2)
<u>Requirements</u> (3)						
1.	Irrigation	113.1	117.3	124.4	133.2	135.6
2.	Municipal and Industrial	43.3	48.1	56.2	93.0	136.0
3.	Subtotal	<u>156.4</u>	<u>165.4</u>	<u>180.6</u>	<u>226.2</u>	<u>271.6</u>
<u>Present Supply Sources</u> (3)						
4.	Stream Channel Percolation	25.0	25.0	25.0	25.0	25.0
5.	Rainfall Penetration	18.7	18.7	18.7	18.7	18.7
6.	Underground Inflow	27.1	25.8	23.5	12.3	0
7.	Surface Supply	23.0	23.0	23.0	23.0	23.0
8.	Subtotal	<u>93.8</u>	<u>92.5</u>	<u>90.2</u>	<u>79.0</u>	<u>66.7</u>
<u>New Supply Sources</u> (4)						
9.	New Hogan Reservoir	0	40.2	40.2	40.2	40.2
10.	Folsom South Canal	0	0	60.0	110.0	110.0
11.	Subtotal	<u>0</u>	<u>40.2</u>	<u>100.2</u>	<u>150.2</u>	<u>150.2</u>
12.	Additional Supplemental Requirement (Line 3 minus Lines 8 and 11)	62.6	32.7	0	0	54.7

- (1) Estimated from District Exhibits 3 and 4
(2) Ultimate assumed occur in the year 2010
(3) District Exhibit 3
(4) District Exhibit 4

The Board's Decision D 990, which approved applications of the United States Bureau of Reclamation to appropriate water from the Sacramento River and the Delta for the Central Valley Project provides in Condition 22:

"22. Direct diversion and storage of water under permits issued pursuant to Applications 5626, 9363, 9364, 9366, 9367 and 9368 for use beyond the Sacramento-San Joaquin Delta or outside the watershed of Sacramento River Basin shall be subject to rights initiated by applications for use within said watershed and Delta regardless of the date of filing said applications."

Condition 22 does not afford the District any basis for obtaining priority over diversion from the Delta for the Central Valley Project, because both the point of diversion and the place of use under Application 13423 are located outside the Delta and the Sacramento River Basin as defined in said Decision D 990.

An examination of Table 1, "Flows of the Calaveras River below Stockton Diverting Canal," discloses that for practical purposes there is no water available at the District's point of diversion from upstream sources during September and October. There are, however, small quantities available in July and August when no unappropriated water would be available in the Delta after full development of the Central Valley Project (District 7). These quantities probably will not be available after the Calaveras River is regulated by New Hogan Dam.

The evidence clearly demonstrates that after full development of the Central Valley Project tidal backwater from the Delta in the bed of the Calaveras River will not be available for

appropriation during July, August, and September. In addition, the small flows from the Calaveras River in July and August, if physically available, are not sufficient to warrant the inclusion of these months in the diversion season. Exclusion of the months of July, August, and September would still leave unappropriated water available to supply the applicant from about April 15 to about June 30 and from about October 1 to about November 1 of each year. It is found that, subject to suitable conditions, such water may be diverted and used in the manner proposed during said periods of time without causing substantial injury to any lawful user of water. The intended uses are beneficial, and the rate of diversion is reasonable.

The denial of a permit to appropriate during the months of July, August, and September will not deprive the District of a full supply because during these months the District can obtain water from an alternate source. Apparently to meet this need, the District entered into an agreement with the United States which provides, "that no water shall be diverted under the permit to be issued pursuant to Application 13423 until an agreement in respect thereto has been consummated between the Stockton and East San Joaquin Water Conservation District and the United States," (RT 22).

From the foregoing findings, the Board concludes that Application 13423 should be approved in part and that a permit should be issued to the applicant subject to the limitations and conditions set forth in the following Order.

IT IS HEREBY ORDERED that Application 13423 be, and the same is, approved in part, and that a permit be issued to the applicant subject to vested rights and to the following limitations and conditions:

1. The amount of water to be appropriated shall be limited to the amount which can be beneficially used and shall not exceed 175 cubic feet per second by direct diversion to be diverted from about April 15 to about June 30 and from about October 1 to about November 1 of each year. The equivalent of such continuous flow allowance for any thirty-day period may be diverted in a shorter time if there be no interference with vested rights.

2. The maximum amount herein stated may be reduced in the license if investigation warrants.

3. Actual construction work shall begin on or before September 1, 1964, and thereafter be prosecuted with reasonable diligence, and if not so commenced and prosecuted, this permit may be revoked.

4. Said construction work shall be completed on or before December 1, 1967.

5. Complete application of the water to the proposed use shall be made on or before December 1, 1968.

6. The permittee shall allow representatives of the State Water Rights Board and other parties, as may be authorized from time to time by said Board, reasonable access to project works to determine compliance with the terms of this permit.

7. Progress reports shall be filed promptly by permittee on forms which will be provided annually by the State Water Rights Board until license is issued.

8. All rights and privileges under this permit, including method of diversion, method of use, and quantity of water diverted are subject to the continuing authority of the State Water Rights Board in accordance with law and in the interest of the public welfare to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of said water.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Sacramento, California, on the _____ day of _____, 1962.

Kent Silverthorne, Chairman

Ralph J. McGill, Member

W. A. Alexander, Member