

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
BEFORE THE STATE ENGINEER AND
CHIEF OF THE DIVISION OF WATER RESOURCES

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In the Matter of Application 12927 by William R. Madsen to Appropriate Water from Feather River, Tributary to Sacramento River, in Sutter County, for Irrigation Purposes.

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Decision A. 12927 D. 690

Decided February 5, 1951

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IN ATTENDANCE AT FIELD INVESTIGATION CONDUCTED BY THE DIVISION OF WATER RESOURCES ON OCTOBER 25, 1949.

William R. Madsen	Applicant
Seth Millington	Protestant's Attorney
E. A. Julian	Protestant's Managing Director
A. S. Wheeler	Senior Hydraulic Engineer, Division of Water Resources, Department of Public Works, Representing the State Engineer.

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OPINION

General Description of the Project

The applicant proposes to appropriate 1 cubic foot per second from May 1 to November 1 of each season, from Feather River at a point within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 22, T 17 N, R 3 E, M.D.B. & M., for irrigation. The project includes a 1500 gallons-per-minute pumping plant and a 14 inch cement pipe line 260 feet long. The place of use is to be an 81 acre tract in Sections 21 and 22 of the same township, the tract including a 40 acre orchard and 41 acres of general crops.

Protests

The Sutter Butte Canal Company protests the application apprehending injury if the appropriation is consummated. It asserts that it diverts water from Feather River for the irrigation of a large acreage in Butte and Sutter counties from about April 1 to about October 15 of each year. It claims appropriative rights on Feather River as follows: A right initiated July 28, 1902 to divert 100,000 miners' inches at a point on the right bank within the SE $\frac{1}{4}$ of Section 33, T 19 N, R 3 E, M.D.B.&M.; a right initiated May 10, 1903 to divert 100,000 miners' inches within the quarter section just named; a right initiated March 29, 1904, also for 100,000 miners' inches and within the same quarter section; a right initiated July 30, 1904 in the same amount and at the same place; a right initiated March 8, 1909 at the same place, to divert 500 cubic feet per second; and a right initiated August 22, 1942 (Application 10529, Permit 6242) to divert 234 cubic feet per second at a point within Section 9, T 16 N, R 3 E, M.D.B.&M. The protestant states that water was first used for irrigation in 1905, by the Butte County Canal Company, the protestant's predecessor in interest and that since that time the works have been extended and additional quantities diverted, year by year. It states that as many as 2000 cubic feet per second have been diverted at times and that use is still increasing.

The protestant states that the applicant's proposed point of diversion under Application 12927 will head upstream from its own diversion under Application 10529; and that while the applicant's proposed point of diversion is downstream from its own upper intake, injury may

nevertheless result unless its rights are sufficiently safeguarded and the applicant notified officially that at times during the irrigation season there is no unappropriated water.

The applicant answers the protest by stating in effect that he is a riparian owner and expects to irrigate only a small tract of river bottom land under his application and that his proposed diversion for that purpose would not interfere with diversions under rights held by the protestant.

Field Investigation

The parties having stipulated to an informal hearing as provided under Section 733(b) of the California Administrative Code, a field investigation was conducted by an engineer of the Division. The applicant was present and the protestant was represented, during the investigation.

Discussion

Of the protestant's two diversions the uppermost which heads within Section 33, T 19 N, R 3 E and is based upon claim of ancient appropriative rights, cannot be adversely affected by the diversion proposed under Application 12927, because of the latter's relative position on the stream. Interference may however exist, at times of short supply between the protestant's lower diversion, heading within Section 9, T 16 N, R 3 E and the applicant's proposed diversion within Section 22, T 17 N, R 3 E, the latter scaling some 6.2 miles upstream from the former.

Application 10529 upon which the protestant's lower appropriation is based initiated an appropriation of 500 cubic feet per second

from Feather River at a point within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 9, T 16 N, R 3 E, M.D.B.&M. from April 1 to October 31 for the irrigation of 23,240 acres situated within Townships 13, 14, 15 and 16 North, Ranges 2 and 3 East. That application was protested, heard formally and approved (D 511) in the reduced amount of 234 cubic feet per second, action upon the remaining 266 cubic feet per second being withheld, pending later showing of necessity. The time within which to complete construction and application to beneficial use under Permit 6242 (Application 10529) has been extended to December 1, 1952.

A record of the flow of Feather River at Gridley Bridge has been included in the reports (by the Division) of Sacramento-San Joaquin Water Supervision since 1943. The Gridley Bridge gaging station is at Mile 49.7 which point scales roughly 4 miles above the applicant's proposed intake and 10.2 miles above the protestant's intake as described in Application 10529.

The Sutter Butte Canal Company (the only protestant against Application 12927) while holding a permit to divert 234 cubic feet per second under Application 10529 has not thus far diverted at that rate for any sustained period, nor has the aggregate of all diversions from the reach of Feather River from the Gridley Bridge gage to the protestant's intake (inclusive) closely approached that amount. Diversions during months of maximum use, from the reach mentioned, according to the Sacramento-San Joaquin Water Supervision reports for recent years have been as follows:

Year	Diversions by Protestant (ac.ft.)	Diversions by all other users (ac.ft.)	Total (ac.ft.)	Equivalent Steady Flow (c.f.s.)
1944	3,753	482	4,235	68.4
1945	4,761	406	5,167	83.4
1946	3,675	334	4,009	64.5
1947	2,976	560	3,536	57.1
1948	2,198	2,303	4,501	72.5
1949	2,056	2,526	4,582	73.8
Average	3,236	1,102	4,338	70.0

Year	Diversions by Protestant (ac.ft.)	Diversions by all other users (ac.ft.)	Total (ac.ft.)	Equivalent Steady Flow (ac.ft.)
1944	3,000	292	3,292	53.0
1945	5,915	364	6,279	100.5
1946	5,206	353	5,559	89.7
1947	2,857	662	3,519	56.8
1948	1,740	1,433	3,173	51.1
1949	2,205	1,208	3,413	55.3
Average	3,487	719	4,206	67.7

Tables I and II indicate that diversions are usually but not invariably greater in July than in August, that in the 6 years of record

total diversions during the months considered have ranged from 51.1 to 100.5 cubic feet per second, and that the rate of increase in quantities diverted is not pronounced.

Monthly mean discharges of Feather River at Gridley Bridge during the months from June to October inclusive, for the years 1944 to 1949 inclusive, have been as follows:

Table III - Monthly Mean Discharges - Feather River at Gridley Bridge, in cubic feet per second						
Year	June	July	August	September	October	
1944	917	102	56	351	740	
1945	1,235	126	81	450	1,091	
1946	762	129	237	593	1,055	
1947	465	175	278	510	1,550	
1948	4,575	437	61.7	455	1,707	
1949	352	38.4	61.2	281	346	
Avg.	1,384	167.9	129.2	440	1,082	

From the viewpoint of monthly averages Table III indicates that during July and August of each year therein considered except July, 1949 and August, 1945 supply would have covered the appropriation sought under Application 12927 in addition to the amounts actually diverted by the protestant and other diverters. However the records of daily discharge, contained in the Sacramento-San Joaquin Water Supervision Reports show that in every year of record there were periods of considerable length when supply fell short of average demand. The following table shows the greatest number of consecutive days in each of

the years of record when various totals of demand would not have been met.

Table IV - Greatest number of Consecutive Days During Which Supply Averaged Less Than 50 cubic feet per second (or other designated amount) within the reach considered.				
Year	50 c.f.s.	75 c.f.s.	100 c.f.s.	235 c.f.s.
1944	1 (8/17-8/18)	50 (7/26-9/13)	56 (7/20-9/13)	87 (6/20-9/14)
1945	0	7 (8/25-8/31)	52 (7/12-9/1)	69 (7/2 -9/8)
1946	0	9 (7/6 -7/14)	34 (7/5 -8/7)	42 (7/3 -8/13)
1947	0	7 (7/11-7/17)	22 (6/26-7/17)	37 (6/15-7/21)
1948	1 (8/22-8/23)	28 (8/2 -8/29)	57 (7/21-9/15)	61 (7/18-9/16)
1949	37 (6/26-8/1)	65 (6/25-8/28)	78 (6/19-9/4)	88 (6/13-9/8)
Avg.	6 (7/2 -7/8)	28 (7/21-8/17)	50 (7/7 -8/25)	64 (6/27-8/29)

According to Tables I and II diversions during the months of least supply have averaged not less than 51.1 nor more than 100.5 cubic feet per second. From this fact, in conjunction with Table IV, it appears that any appropriation under Application 12927 may be inoperative because of its low relative priority for recurrent periods which in the 6 years of record have ranged in duration up to approximately 78 consecutive days in one season. Such periods of short supply may of course

be sometimes less than 78 consecutive days; during 4 of the 6 seasons of record aggregate diversions averaged less (during the low water months) than 75 cubic feet per second, under which conditions periods of short supply have been as brief as 7 days. Shortages when they occur are limited almost entirely to the months of July and August. Supply according to the records is usually ample through June and after August.

Seasonal diversions other than by the protestant, in the reach in question, are reported in the 1949 report of Water Supervision to have been as follows:

	<u>Mile</u>	<u>Pump</u>	<u>Total Diversion (Ac.Ft.)</u>	<u>Acreage Irrigated</u>
Matthews, et al.	43.7	18"	987	286
Thomes	43.7	8"	127	63
Washburn	43.7	8"	169	65
Willey	44.5	7"	33	27
Christenson	46.3	24"	4987	1130
Barba	47.4	7"	32	50
Barba	47.9	12"	590	300
Biggs	48.3	10"	239	205
Dunning	49.0	8"	<u>176</u>	<u>76</u>
Total			7,340	2,202

At the investigation of October 25, 1949 the protestant's position is understood to have been that the approval of applications such as the one at issue is creating a serious condition on the river that will eventually lead to the filing of injunctions. The protestant's

representative is reported to have claimed at the investigation that after July 1 the only flow in that reach of Feather River is water purchased from the Pacific Gas and Electric Company and that at times, the flow is only enough to enable the protestant to operate one pump, part time. The applicant is reported to have replied that the little pumping he proposes to do would have no appreciable effect on the protestant's supply and that at times he can operate his small pump when the water supply is too low to permit the protestant to operate its larger pumps at all. The applicant is said to have stated that his main purpose in filing was to cover waste and return flows.

In Decision 511 (relating to Application 10529) it was concluded (on page 11 of that decision) "that during a year of normal runoff under existing conditions (as of 1944) there would not only be sufficient water for the appropriation of 500 c.f.s. by the applicant (Sutter Butte Canal Company) but also sufficient water to take and use water from the Feather River below Nicolaus" The same decision on page 12 contains the following passage:

"The fact that the flow of water in the Feather River at applicant's point of diversion is largely governed by regulation and storage for power purposes above and that the use of water by the claimants varies considerably both as to amount and season of diversion would appear to preclude any attempt on the part of this office to limit applicant's proposed season of diversion. The burden will be upon the applicant to divert only at such times when there will be no interference with prior vested rights."

Conditions along Feather River do not appear to have changed materially since Decision 511 was written and the above quoted conclusions therein arrived at appear still applicable.

Summary and Conclusions

Of the 6 month season during which the applicant proposes to irrigate, a firm supply of unappropriated water appears to exist, ordinarily, during May, June, September and October. Unappropriated water exists also at times during July and August but its existence during those months is unpredictable, being dependent both upon upstream power releases and upon the extent to which downstream prior rights are asserted. An irrigation supply which is apt to fail for an unpredictable period of from a few days to 2 months in midsummer manifestly cannot be fully satisfactory to an irrigator, but may under certain circumstances be of sufficient value to warrant its utilization.

The protestant's objections to the proposed appropriation that are based upon its appropriation at its gravity intake in Section 33, T 19 N, R 3 E are insufficient because that intake is far upstream from the location at which the applicant proposes to divert. The protestant's objections based upon Application 10529 are insufficient to warrant the disapproval of Application 12927 inasmuch as the protestant has not yet applied to beneficial use nearly the amount it is authorized to divert under its own approved application. The protestant's rights are safeguarded by the normal wording of all permits subjecting diversions thereunder to vested rights. The protestant cannot rightfully object to diversions by the applicant of water which it is not yet itself in a position to divert although authorized so to do.

In view of the foregoing it is concluded that surpluses at times exist in the source from which appropriation is sought under Application 12927, which surpluses may be taken and used in the manner therein proposed, without injury to lower users. Application 12927 should therefore be approved, subject to the usual terms and conditions.

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ORDER

Application 12927 for a permit to appropriate water having been filed with the Division of Water Resources as above stated, a protest having been filed, a hearing having been held and the State Engineer now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 12927 be approved and that a permit be issued to the applicant, subject to such of the usual terms and conditions as may be appropriate.

WITNESS my hand and the seal of the Department of Public Works of the State of California this 5th day of February, 1951.



A. D. Edmonston
A. D. Edmonston
State Engineer.