

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 13954 by James W. Johnson to Appropriate Water from Crane Creek tributary to Merced River in Mariposa County for Domestic Purposes and Fire Protection.

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Decision A. 13954 D. 737

Decided March 31, 1952

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In Attendance at Investigation Conducted by the Division of Water Resources at the Site of the Proposed Appropriation on June 21 and September 14, 1951:

J. W. Johnson	Applicant
Mrs. Johnson	Applicant's wife
Horace Meyer	Protestant
W. E. Craven	Protestants' Attorney
Frank Ewing	Protestant's Associate
S. S. Skeehan	Associate Hydraulic Engineer, Division of Water Resources
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 application contemplates the appropriation, from March 1 to December 1, of 200 gallons per day for domestic purposes and fire protection, from Crane Creek, a tributary of Merced River, in Mariposa County.

The proposed point of diversion and place of use are both within the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 3, T3S R20E, MEB&M. The water is to be used at two homes at which from 4 to 8 people are to be served. Diversion is to be effected by means of a pump, 4 gallons per minute in capacity. Two 500 gallon tanks are to be provided, for storage. The conduit is a 2 inch pipe, 400 feet long.

Protest

Elizabeth and Horace Meyer protest the application. They claim to own 2 tracts of land, one upstream from the applicant's proposed point of diversion and one downstream, and to divert water from Crane Creek for irrigation, stockwatering, domestic and fire protection purposes on each tract. They assert an appropriative right based on the filing of a notice on March 10, 1887 and continuous use since prior to that date. They also claim a riparian right and a right by prescription. They state that their use and that by their predecessors has extended to the whole flow of Crane Creek during the irrigating season, and they contend that the diversion proposed by the applicant would reduce the flow of that stream to amounts insufficient to satisfy their rights and requirements.

Answer

In answer to the protest the applicant states that he made an investigation of flow conditions during the driest part of the summer of 1950, and that during that investigation he estimated the flow below the protestants' upper property to be 2000 gallons per hour, the flow at his (the applicant's) property 700 gallons per hour, and the flow passing the protestants' lower diversion 200 gallons per day. He states that the loss between the protestants' upper and his own proposed intake was due to seepage, as no one was diverting on the intervening reach at the time. He states that he observed 2 leaks in

the protestants' pipe line, water escaping at rates of roughly 1 gallon per minute from each. He states that the amount he is seeking to appropriate constitutes less than 5% of the flow past his property during dry periods.

Field Investigation

The applicant and the protestants having stipulated to an informal hearing as provided for in Section 733(b) of the California Administrative Code, Title 23, Waters, a field investigation was conducted at the site of the proposed appropriation on June 21 and September 14, 1951 by an engineer of the Division. The applicant and the protestants were present or represented during that investigation.

Records Relied Upon

Application 13954 and all data and information on file therewith.

Discussion

According to the report of field investigation the estimated flow of Crane Creek on June 21, 1951 was 3.0 cubic feet per second and the measured flow of the same stream on September 14, 1951, at the protestants' lower diversion, was 0.48 cubic foot per second, which flow, the parties present agreed, was above normal.

The report of field investigation also contains information to the effect that on both June 21 and September 14, 1951 the flow passing the protestants' lower diversion was in excess of the amount sought under Application 13954, that the parties agreed that the critical flow period commences about August 15, that the applicant's project is complete, that the applicant diverts by means of a 225 gallons-per-hour pump operating against an 108 foot static head, that the portion of the protestants' property which lies below the applicant's intake is served by two diversion systems, one a 1350 foot pipeline

of a capacity of 0.38 cfs and the other a 1000 foot ditch capable of carrying 0.5 cfs, that when supply permits both of these systems are used for stockwatering and for the irrigation of 40 acres of uncultivated pasture, that during low flow periods the pipe line only is used and use is limited to stockwatering and the irrigation of about 10 acres. The report further states with respect to the protestants' development that as many as 600 hogs and 100 cattle are sometimes watered but that the number at times drops (as in 1951) to 100 of the former and 25 of the latter, that the irrigated areas are on a moderately steep hillside, the soil a decomposed granite and the rate of consumption for irrigation therefore of the order of 1 cubic foot per second to 60 acres, and that the protestants' maximum and minimum rates of utilization are therefore about 0.67 cubic foot per second for irrigation plus 3000 gallons per day for stockwatering and 0.17 cubic foot per second for irrigation plus 825 gallons per minute for stockwatering.

Rainfall at Yosemite National Park for the year ending June 30, 1951, according to U. S. Weather Bureau records, was 46.60 inches, and the 61 year mean at the same station is 36.23 inches. Rainfall within the nearby Crane Creek watershed therefore may be presumed, during the 1950-51 season, to have been substantially above normal.

The flow of Crane Creek is not of record. A rough idea as to the behavior of that stream however may be had from a consideration of the record of flow of Merced River at Pohono Bridge, the watershed tributary to that station, while larger, being adjacent and topographically comparable to the Crane Creek watershed. According to the USGS Water Supply Papers the discharges of Merced River at Pohono Bridge on August 15 of each year of record, and the number of days on which the mean of those discharges has been exceeded, in every month of record, have been as follows:

Year	Mean flow in cfs on August 15	Number of days during which daily mean flow exceeded the long-term August 15 average				
		July	August	September	October	November
1918	76	31	*	7	27	27
19	49	27	0	0	0	0
1920	72	31	14	1	21	30
21	80	31	12	0	0	0
22	159	31	29	3	0	1
23	171	31	26	12	23	3
24	21	0	0	0	3	30
25	209	31	22	0	14	2
26	33	22	0	0	0	7
27	101	31	19	0	0	30
28	44	29	0	0	0	0
29	44	27	2	0	0	0
1930	66	25	0	0	0	0
31	19	0	0	0	0	0
32	105	31	16	0	0	0
33	63	31	1	0	0	0
34	22	10	0	0	0	18
35	113	31	21	1	0	0
36	90	31	14	0	0	0
37	76	31	8	0	0	0
38	285	31	30	25	29	30
39	44	21	0	4	23	0
1940	82	31	5	0	0	0
41	235	31	31	0	0	13
42	268	31	29	0	0	14
43	144	31	22	0	0	0
44	114	31	15	0	0	25
45	126	31	23	0	11	30
46	111	31	16	4	10	12
47	45	24	0	0	15	9
48	62	31	8	0	0	0
49	49	31	3	0	0	0
1950	52	31	4	*	*	*
Average	97.9	27.2	11.6	1.8	5.5	8.8

*No record

From the tabulation it is apparent that had aggregate vested rights on Merced River equaled the average August 15 flow of that stream, unappropriated water would have existed, an average, during nearly but not all of July, during a little more than a third of August and during but 1.8, 5.5 and 8.8 days respectively in September, October and November. August 15 is taken as a criterion, that being the date upon which the parties agree that the "critical period" begins, i.e., the time at which unappropriated water ceases to exist. In the absence of better information it is assumed that flow conditions on Crane Creek parallel those on Merced River and that the July, August, September, October and November flows of Crane Creek in terms of normal August 15 flow vary among themselves much as do the corresponding flows on Merced River.

It is to be noted that the amount sought by the applicant (200 gallons per day) is very small in comparison with the amounts diverted by the protestants. Even when the protestants are operating at their so-called minimum rate of utilization (0.17 cubic foot per second plus 825 gallons per day) the amount sought by the applicant is but about 0.002 of that minimum rate. Obviously the protestants cannot be injured materially by the appropriation which the applicant seeks.

Summary and Conclusions

From the information above outlined it appears that unappropriated water exists in the source filed upon until about August 15 of an average season and as late as September 14 or later in a season such as 1951 when rainfall was above normal. It appears further that such unappropriated water may be taken and used in the manner proposed in Application 13954 without injury to downstream users. It is the opinion of this office therefore that Application 13954 should be approved, subject to the usual terms and conditions.

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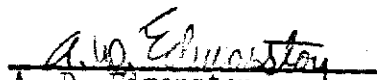
ORDER

Application 13954 having been filed with the Division of Water

Resources as above stated, a protest having been filed, a public hearing having been held and the State Engineer now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 13954 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 31st day of March 1952.


A. D. Edmonston
State Engineer

