STATE OF CALIFORNIA
STATE WATER RIGHTS BOARD

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In the Matter of Application 17814)	Source:	Mammoth Creek
)		
by U.S.-Inyo National Forest)	County:	Mono
)		

Decision No. D 917

Decided: January 9, 1959

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In attendance at investigation conducted by the staff of the State Water Rights Board on June 24, 1958:

J. T. Radel	Forest Supervisor - Inyo National Forest
Jess W. Chance) Mildred F. Chance) Jess A. Chance) Gerald N. Chance)	Protestants
Vern Summers	Attorney for Protestant
N. Edward Denton	District Attorney, County of Mono
Hugh J. O'Connell	Director, Mammoth County Water District
Bill Laurence	Interested party
W. M. Bathrick	Interested party
W. A. Cashbaugh	Interested party
K. L. Woodward, Supervising Hydraulic Engineer) R. R. Forsberg, Assistant Hydraulic Engineer)	Representing the State Water Rights Board

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DECISION

Substance of the Application

Application 17814 was filed by U.S.-Inyo National Forest on September 5, 1957, for a permit to appropriate 36,000 gallons per day (approximately 0.056 cubic foot per second) year-round, from Hot Creek* tributary to Owens River in Mono County for domestic and recreational purposes. Water is to be diverted at a point within the NW¼ of SW¼ of Section 33, T3S, R28E, MDB&M** by a pump and conveyed through 3350 feet of 4-inch steel pipe to the place of use within the SE¼ of NW¼ of Section 32, T3S, R28E. The water is to be used to supply a 50-room motor hotel, a restaurant, a bar and a small swimming pool.

Protest and Answer

A written protest against approval of Application 17815 is of record from Jess W. Chance and Mildred F. Chance, doing business as Jess Chance and Sons, based upon riparian rights and continuous and uninterrupted use since prior to 1900. The protestants allege there is insufficient water at present for irrigation, livestock and domestic use on approximately 400 acres owned by them; that they irrigate 360 acres from April to October

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* According to USGS Mt. Morrison quadrangle 15-minute series, dated 1953, and as confirmed by the parties present at the field investigation on June 24, 1958, the source is Mammoth Creek which joins Hot Creek in the N½ of Section 34, T3S, R28E, MDB&M, about 2 miles downstream from U.S. Highway 395. Hereinafter the names of the various streams involved will be referred to as shown on the above named quadrangle.

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

of each year; that all water in Mammoth Creek is necessary for their present requirements, and that during many dry years there is not sufficient water to complete the irrigation season.

In reply to the protest the applicant indicates that it does not believe the relatively small amount requested will have an adverse effect upon the protestants' operations. It claims that records supplied by the Los Angeles Department of Water and Power show the long-term minimum flow of Mammoth Creek to be 1.7 cfs, which, the applicant claims, is over a million gallons per day, and that the proposed appropriation is just 3 percent of this minimum flow. The applicant further claims riparian rights and cites the court case of Pabst vs. Finmand as evidence that priority of use establishes no priority of right under a riparian right.

Proceedings in Lieu of Hearing

The applicant and protestants, with the approval of the State Water Rights Board, stipulated to the proceedings in lieu of hearing as provided for by Section 737 of the Board's rules, and a field investigation was conducted on June 24, 1958, by R. R. Forsberg and K. L. Woodward, engineers of the Board. The applicant and protestants were present or represented at the investigation.

Records Relied Upon

The records relied upon in support of this decision are Application 17770 of Mammoth County Water District and Application 17814 and all relevant information on file therewith, with

particular reference to "Report of Field Investigation on Application 17814", dated June 26, 1958; streamflow records obtained by the City of Los Angeles, Department of Water and Power, of Mammoth Creek immediately below U.S. Highway 395 at Station "Hot Creek-Highway" for the period October, 1946, through September, 1957; a publication of the Division of Water Resources entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937; Division of Water Resources, "Report on Investigation and Water Master Service on Middle Fork of Feather River above Beckwith, Sierra and Plumas Counties, California, During Season of 1937", dated April, 1938; United States Geological Survey, Devils Post, California and Mt. Morrison, California, quadrangles, both 15-minute series, dated 1953; and United States Weather Bureau, Climatological Data, California.

Source and Watershed

Mammoth Creek heads on the eastern slope of the Sierra Nevada at Barney and Woods Lakes near the Mono-Fresno County line. The creek flows in a northwesterly direction for about 3 miles through Skelton and Arrowhead Lakes into Lake Mary, thence in a northerly direction for about 1½ miles through Lake Mamie into Twin Lakes. Overflow from Twin Lakes continues in a northeasterly direction for about one mile thence easterly about 5 miles to U.S. Highway 395 crossing. Below the highway, the water course continues for about 9 miles in a northeasterly direction to the confluence with Owens River. Sherman Creek, the principal

tributary of Mammoth Creek downstream from Twin Lakes, joins the latter stream from the south at a point about two miles above the highway.

The drainage area above the applicant's proposed point of diversion scales about 36.6 square miles ranging from a maximum elevation of 12,052 feet to about 7,200 feet.

Protestants' Project

According to the report of field investigation on Application 17814 dated June 26, 1958, protestants Chance claim to be irrigating each year approximately 360 acres of pasture (seeded clover and natural grasses) within Sections 34 and 35, T3S, R28E, under an appropriative right initiated prior to the effective date of the Water Commission Act and by virtue of riparian ownership. From the legal description given in the protest, this property as plotted on the Mt. Morrison quadrangle is contiguous to the stream channel. The protestants also claim to have under lease from the City of Los Angeles, Department of Water and Power, considerable acreage of pasture land in Sections 4, 5, 6, 7, 8 and 9, T4S, R28E, and Sections 32 and 33, T3S, R28E, which is susceptible of irrigation; that the City owned land is riparian to the stream; that except during extremely dry years (when use of water on the City owned land is allegedly disallowed by order of the City) the protestants irrigate some 300 acres of the leased property; and that more land would be irrigated if the water supply during the critically dry months were adequate.

The protestants divert by gravity at one or more of

four points along the stream beginning with the uppermost point being about 0.5 mile below the highway for flood irrigation; claim that their irrigation season extends from about May 1 to about October 1 of each year; that no shortage is usually experienced prior to July 15; that August and September are usually months of deficient supply; that except for a limited by-pass for the maintenance of fish life the entire flow is diverted during August and September; and that even during years of unusually large runoff the entire flow reaching the protestants' property is put to beneficial use during August and September.

Water Supply

The flow of Mammoth Creek is measured at a point immediately downstream from U.S. Highway 395 by the City of Los Angeles, Department of Water and Power. This gaging station is approximately 300 feet upstream from the proposed point of diversion. As there is no intervening use of water between the gage and protestants Chance upper point of diversion, the flow passing the City's gage, less channel losses, represents the flow reaching the protestants' property. Except during extremely low flows such losses are of no moment and will be disregarded in the following discussion. Table I sets forth in cubic feet per second the monthly mean flow of Mammoth Creek covering the period from October, 1946, through September, 1957, as measured by the City of Los Angeles. As shown in Table I, flow during the months of August and September, the months of primary concern, has varied during the above-mentioned period from a maximum and

TABLE I

Monthly Mean Flow-Mammoth Creek*
at U. S. Highway 395

Quantities expressed in Second-feet

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Mean Sec.-feet	Ac. Ft.
1946-47	8.71	9.49	7.51	4.47	5.12	7.64	13.18	57.8	40.5	20.5	6.26	4.07	15.5	11210
1947-48	5.0	4.8	3.6	5.2	3.6	4.3	11.6	30.4	56.6	28.9	8.6	2.6	13.8	9981
1948-49	4.7	3.1	4.3	3.4	2.9	3.2	12.5	34.7	56.8	20.1	8.3	2.7	13.1	9460
1949-50	4.0	4.9	4.1	5.9	5.4	5.1	12.4	36.4	49.9	22.5	6.4	5.5	13.6	9811
1950-51	4.1	27.9	35.1	12.5	10.4	8.2	12.5	38.3	57.2	30.2	16.2	8.0	21.8	15744
1951-52	7.1	5.7	10.5	9.9	8.4	6.1	11.9	61.6	103.5	93.1	42.0	19.3	31.7	22992
1952-53	12.2	7.1	8.7	10.6	6.4	6.7	13.8	16.6	50.1	44.3	10.0	5.0	16.0	11580
1953-54	5.0	5.0	4.1	3.5	5.0	8.5	18.3	50.8	42.0	19.9	6.4	4.4	14.4	10447
1954-55	2.4	5.6	4.8	5.3	4.0	4.4	8.4	19.8	71.3	22.0	7.5	3.3	13.2	9559
1955-56	4.5	4.6	25.3	13.2	7.7	7.1	15.9	54.1	143.3	95.5	37.1	19.9	35.7	25933
1956-57	16.6	12.8	9.4	9.2	10.3	8.7	11.8	26.7	106.6	40.2	13.1	7.0	22.7	16408

*Station called "Hot Creek-Highway" by City of Los Angeles

minimum, respectively, of 42.0 cfs and 6.26 cfs during August and 19.9 cfs and 2.6 cfs during September. Median monthly flow for the period was 8.6 cfs during August and 5.0 cfs during September.

Estimated Water Requirements of Protestants

Present use of water by the protestants from Mammoth Creek (except during extremely dry years when use on 300 acres of leased property is prohibited) is for the irrigation of 660 acres of pasture, for stockwater and for incidental domestic purposes. As no information is apparently available as to the reasonable water requirements for land being served by the protestants, it is necessary that an estimate be made from the findings of water requirements in other areas of similar physiography.

In 1936 and 1937 the Division of Water Resources made an extensive study of water requirements of Sierra Valley in Plumas and Sierra Counties in connection with the Middle Fork Feather River Adjudication. The results of the investigation are contained in publications by that agency entitled "Report on Water Supply and Use of Water on Middle Fork of Feather River and Tributaries, Plumas and Sierra Counties, California", dated August, 1937, and "Report on Investigation and Water Master Service on Middle Fork of Feather River Above Beckwith, Sierra and Plumas Counties, California, during Season of 1937", dated April, 1938.

Sierra Valley is a mountain valley in the northeastern part of California at an elevation of about 5,000 feet. The

winters are moderately severe with the monthly minimum temperature remaining below freezing during the period from November through March. The summers are warm throughout the day, but are cool during the night. During the period from June through September the monthly mean maximum temperature ranges from about 76 to 85 degrees. The highest recorded temperature at Sierraville in a 27-year record was 104 degrees and the lowest was a minus 30 degrees, a range of 134 degrees.

The protestants' property is located at an elevation of about 7,000 feet and although the mean annual precipitation is undoubtedly somewhat less in that vicinity than in Sierra Valley, the summer precipitation and temperatures are believed reasonably comparable. Table II and Table III set forth the monthly temperatures and total precipitation for May through September, 1957, at the United States Weather Bureau Station, Sierraville in Sierra Valley, elevation 4,975 feet; Mono Lake in Mono Valley, elevation 6,520 feet (about 25 miles north of the protestants' property); and Bishop in Owens Valley, elevation 4,108 (about 30 miles southeast of the protestants' property). Relative to the water requirements in Sierra Valley, the aforementioned 1937 report states as follows:

> "By reference to studies made on other streams of similar characteristics in mountain valleys in Northeastern California it appears that the return flow from meadow grass irrigation is ordinarily approximately one-third of the gross diversions where a proper spread and penetration of irrigation water has been obtained, i.e., it is necessary to divert and apply to meadow grass about 50 percent more water than is actually consumed in order to secure an adequate and proper irrigation. Such additional water is utilized as a vehicle for spreading.

TABLE II

Average Temperature - Long-Term Mean
in ^{o}F

Station	May	June	July	Aug.	Sept.
Sierraville	50.6	56.8	62.9	61.7	55.8
Mono Lake	51.7	59.8	67.7	66.6	61.9
Bishop	62.6	69.4	75.5	72.7	67.3

TABLE III

Total Precipitation - Long-Term Mean
in Inches

Station	May	June	July	Aug.	Sept.
Sierraville	0.92	0.57	0.32	0.15	0.48
Mono Lake	0.83	0.21	0.81	0.14	0.41
Bishop	0.20	0.10	0.10	0.14	0.19

If such an allowance is made for a spreading head over and above the consumptive duty on upper Smithneck Creek, the resultant gross duty of water is calculated to be one cubic foot per second to about 80 acres of irrigated land."

According to Table 84 of the aforementioned report, the gross duty of water for land irrigated from Middle Fork Feather River and its tributaries within Sierra Valley varies from 1 cfs per 47 acres to 1 cfs per 160 acres as computed on a continuous flow basis. Further investigation and study during the 1937 irrigation season, as described in the aforementioned 1938 report, revealed that an allowance of one cubic foot per second for 80 acres for the area was inadequate and that one cubic foot per second for 60 acres appeared to be more realistic. The Board concludes that a gross duty of one cfs for each 60 acres irrigated is a reasonable duty for the area in the vicinity of the protestants' place of use in view of the findings of water requirements in Sierra Valley. On that basis, irrigation of 660 acres of pasture will require a continuous flow of 11.0 cubic feet per second.

Discussion

The question of availability of unappropriated water in Mammoth Creek was previously considered by the Board in Decision No. D 904 adopted on May 14, 1958. That decision involved Application 17770 of Mammoth County Water District to appropriate 2.0 cubic feet per second, year-round, from Twin Lakes for municipal purposes. Twin Lakes is located on Mammoth Creek about six miles upstream from the aforementioned stream gaging station of the City

of Los Angeles. Jess Chance and Sons were likewise protestants to Application 17770.

In Decision No. D 904 the Board concluded that unappropriated water normally exists in Mammoth Creek only during the ten-month period of October through July. Mammoth County Water District contended that its present well water supply is adequate to meet the District's requirements during the months of August and September. Therefore in order to obviate the necessity of maintaining an alternate water supply during the two-month period of shortage, the application was approved for a year-round diversion season with the condition that at such times during August and September as the flow of Mammoth Creek at the City's gage does not exceed 11.0 cubic feet per second, the deficiency, up to the amount being diverted by the District at its Twin Lake diversion, would be released into Mammoth Creek from a non-tributary source (presumably from its well) upon demand of the protestants.

Inyo National Forest, to our knowledge, does not have a convenient alternate supply available which could be used to offset its diversion under Application 17814 during periods of shortage and accordingly the Board does not believe that circumstances warrant extending to the United States the alternative afforded Mammoth County Water District.

Inspection of Table I shows that for the past eleven years, flow of water in Mammoth Creek on a monthly mean flow basis has been inadequate to meet the protestants' estimated water requirements during August of 7 years and during September of 9 years. Flow during the other months of the years of record has been adequate without exception.

Application 17814 is for a permit to appropriate "unappropriated" water and diversion thereunder can be allowed without restriction as to season provided adequate protection is afforded to the downstream users under prior rights. From the preceding section, "Estimated Water Requirements of Protestants", it is determined that a flow of 11 cfs is a reasonable requirement on a continuous flow basis for the irrigation of 660 acres of pasture in the area under consideration (This is the acreage claimed by the protestants to be under irrigation). Inasmuch as the points of diversion of the applicant and protestants are both located downstream from the gaging station of the City of Los Angeles on Mammoth Creek and the available flow can be readily determined by the parties, a permit conditioned upon the basis of flow at that gage would not be an unreasonable method of determining when water is available for appropriation under the subject application. Therefore, in order to protect downstream prior rights a provision should be inserted in the permit issued to the applicant restricting diversion during the months of August and September to such times as the flow of Mammoth Creek at the aforementioned gage is in excess of 11.0 cubic feet per second.

Conclusion

The information before the Board indicates and the Board finds that there is unappropriated water in Mammoth Creek which water may be appropriated to a substantial extent in the manner proposed under Application 17814 and that the application may be approved and permit issued, if appropriately conditioned, without injury to downstream existing rights.

ORDER

Application 17814 for a permit to appropriate unappropriated water having been filed, a protest having been submitted, the parties having stipulated to proceedings in lieu of hearing, an investigation having been made by the Board, the Board having considered all available relevant information, and said Board now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 17814 be, and the same is hereby approved and that a permit be issued to the applicant subject to vested rights and to the following terms and conditions to wit:

1. The amount of water appropriated shall be limited to the amount which can be beneficially used and shall not exceed 0.056 cubic foot per second to be diverted from January 1 to December 31 of each year.

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

3. Actual construction work shall begin on or before June 1, 1959, and shall 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, 1961.

5. Complete application of the water to the proposed use shall be made on or before December 1, 1962.

6. 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.

7. 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.

8. No water shall be diverted under this permit during the months of August and September when the flow of Mammoth Creek at U.S. Highway 395 Crossing in Section 32, T3S, R28E, MDB&M, is 11.0 cubic feet per second or less.

9. This permit is conditioned upon full compliance with Section 5937 of the Fish and Game Code.

Adopted as the decision and order of the State Water Rights Board at a meeting duly called and held at Sacramento, California, on the 9th day of January, 1959.

/s/ Henry Holsinger
Henry Holsinger, Chairman

/s/ W. P. Rowe
W. P. Rowe, Member

/s/ Ralph J. McGill
Ralph J. McGill, Member