

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 15250 by Albin Steffan to Appropriate
Water from Mokelumne River Tributary to San Joaquin River in San
Joaquin County for Irrigation and Stockwatering Purposes.

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Decision A 15250 D 805

Decided September 22, 1954

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Appearances at Hearing Held at Stockton on February 10, 1954:

For the Applicant

Albin Steffan

L. B. Raab, Civil Engineer

For the Protestant

R. N. Blossom

No appearance

EXAMINER - LESLIE C. JOPSON, Principal Hydraulic Engineer,
Division of Water Resources, Department of Public Works, for
A. D. EDMONSTON, State Engineer.

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OPINION

General Description of the Project

The applicant seeks to appropriate 22.7 cubic feet per
second from Mokelumne River for irrigation and stockwatering purposes.

The water is to be diverted by pumping from the unobstructed channel at three points, located respectively within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 2, T4N R5E, within the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 12, T4N R5E and within the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 7, T4N R6E, MDB&M. A pumping plant is to be installed at each point of diversion. These pumping plants are to have an aggregate capacity of 14,000 gallons per minute, equivalent to about 31 cubic feet per second; they are to deliver into concrete pipelines which are to be respectively 16, 24 and 30 inches in diameter and 200, 1,000 and 2,260 feet in length. The water is to be used for the irrigation from about February 1 to about December 30 of 200 acres of alfalfa and 1,617.9 acres of pasture, located within Sections 1, 2, 11 and 12 of T4N R5E and within Sections 6 and 7 of T4N R6E, MDB&M. It is also to be used for the watering of 3,000 head of cattle, year-round. The applicant intimates that he holds a riparian right. He asserts ownership of the land at the proposed points of diversion and the land where the water is to be used.

Protest

The application is protested by one R. N. Blossom who states, in part:

"During the summer months of heaviest irrigation there is hardly enough water in the river to supply present needs. So far as I know there has never been any provision made to see that the water applied for by filing is allowed to come down the channel. If it were not for tidal action there would not be water for irrigation at my pump at the present time."

The protestant claims a right to the use of water from the source from which the applicant proposes to divert, based upon Application 3990 Permit 1819. He states that his use began in 1925, that he irrigates approximately 800 acres, that his irrigation extends from April to November inclusive, that his diversion heads at a point within the SW $\frac{1}{4}$ of Section 34, T5N R5E, MDB&M. He mentions no condition under which his protest may be disregarded.

Answer

The protest was answered by letter dated August 24, 1953 from L. B. Raab, Civil Engineer, the body of said letter being in part as follows:

"Using the forms and practices that have been in use for many years an applicant must state the name of the stream from which he proposes to divert water. This does not necessarily mean that the origin or source of the water is in this particular stream. The lower part of the Mokelumne River is one of hundreds of streams, sloughs and rivers that make up the so called delta of the central valley of California. This delta is supplied by water from practically every creek and river that drains the central valley of California. It is from this delta area with its vast store of commingled waters that are subject to the action of the tides that it is proposed to divert the water applied for. We are not necessarily applying for water that has its origin in the upper sources of the Mokelumne River. We feel certain that there is unappropriated public water still available and subject to appropriation in the delta. Here in the delta collects all of the natural flow, the return flow, both surface and subterranean, from this vast drainage area.

"If there is no unappropriated public waters available in the delta area then no other filings would be possible anywhere in the central valley of California."

Hearing Held in Accordance with the Water Code

Application 15250 was completed in accordance with the Water Code and the Rules and Regulations of the Division of Water Resources and being protested was set for public hearing under the provisions of the California Administrative Code, Title 23, Waters, on Wednesday, February 10, 1954 at 10 o'clock a.m., in the City Council Chamber, City Hall, Stockton, California. Of the hearing the applicant and the protestant were duly notified.

Substance of Hearing Proceedings

Testimony was introduced as follows:

Witness George Raab testified (Pages 5 to 9 of transcript) to the effect that he is a registered civil engineer, that he is familiar with the Albin Steffan ranch and that he has investigated and made a report (Applicant's Hearing Exhibit No. 1) upon the availability of a water supply for the project under Application 15250, that the lowermost point at which Applicant Steffan seeks to appropriate is on tidewater and therefore has available all the water which reaches

the Sacramento-San Joaquin delta, that the two upper points of diversion proposed by Applicant Steffan will require about 19.4 cubic feet per second which will be secured from Mokelumne River, that water to supply these two upper points will come from the overflow from the Woodbridge Irrigation District dam, from waste water from irrigated lands alongside the river and from infiltration into the river from the water table, that during the period of lowest flow over the Woodbridge dam the waste water from the Woodbridge Irrigation District operations seems to be the greatest, that an investigation by the United States Geological Survey in 1926, 1927 and 1928 indicates that an average of 10 cubic feet per second comes into Mokelumne River between Woodbridge and Thornton, that infiltration and waste water combined with the flow over the dam are sufficient to cover the needs outlined in the application, that the 10 cubic feet per second mentioned includes waste water and infiltration, that it is not known how much of that total is waste water and how much infiltration, that he (the witness) has seen an 18-inch pipe leading to the river from one of the Woodbridge Irrigation District's main canals and acting as an overflow and wasteway, that that pipe enters the river above the uppermost Steffan point of diversion and below the Woodbridge dam, that

the points of diversion of Woodbridge Irrigation District and East Bay Municipal Utility District are above Applicant Steffan's proposed points of diversion, that the area below the Woodbridge dam on the left bank is irrigated mainly by Woodbridge Irrigation District, that the corresponding area on the right bank appears dependent upon wells.

Albin Steffan, the applicant, testified (pages 10-11 of transcript) to the effect that he is a cattle raiser, that he has begun the development of the property described in Application 15250, that he has about 800 acres of it in permanent pasture, that without water the land is unsuitable for agricultural purposes except for winter grazing, that he feels himself able financially and otherwise to proceed with the use of water on the entire acreage, that he has been on the property in question for 13 years and has owned it since 1950, that in his opinion the available water supply is sufficient to justify the money he is putting into it "because always in the driest years I have been there there has been sufficient water there, that I could have irrigated the whole property".

L. B. Raab testified (pages 11-15 of transcript) to the effect that he is a registered civil engineer, that in the past 20 or 30 years he has done considerable work in preparing land for irrigation on

both banks of Mokelumne River below the Woodbridge dam, that on all these irrigation projects drainage was provided into Mokelumne River, that of Applicant Steffan's three points of diversion the middle point is affected by tidal action at times, that it will be possible with a small amount of work to bring tidewater to that middle point, that the applicant owns equipment with which to do that work, that the water supply in the delta comes from practically every river in the Sacramento-San Joaquin Valley, that any water that reaches the delta is commingled by action of the tides, that protestant's point of diversion is several miles below the applicant's lowermost point of diversion, that the return flow and seepage available at the applicant's uppermost proposed point of diversion would normally flow past the protestant's point of diversion if unused, except when the tide causes reversal of flow, that so far as he knows there are no diversions between the Woodbridge dam and the protestant's point of diversion but that possibly there are a few pumps, probably small, that the applicant's land may have a riparian right, it once having been part of a Spanish grant, that the applicant uses one well, that the applicant is presently irrigating from Mokelumne River by means of his lowermost points of diversion.

George Raab testified further (pages 16-17 of transcript) to the effect that when minimum flow occurs over the Woodbridge dam there

are approximately 10 cubic feet per second of "pick-up" in the channel which would be available to Applicant Steffan, that that figure is a minimum and there is more than that, most of the time, that that figure is in addition to the flow that passes the gaging station 0.4 mile below the Woodbridge dam.

Exhibits were introduced at the hearing as follows:

Applicant's Exhibit No. 1:

Report on Availability of Water to Supply Application No. 15250, by George B. Raab, Registered Civil Engineer.

Applicant's Exhibit No. 2:

A photograph described in Witness L. B. Raab's testimony (page 17 of transcript) as a photograph of the middle (proposed) point of diversion showing the stream and the pumping plant, the photograph having been taken February 8, 1954 at which time flow over the Woodbridge dam was a minimum.

Other Available Information

By letter dated November 17, 1953 Protestant Blossom advised the Division as follows:

"My purpose in protesting this application is to point out that there is not any surplus water flowing down the Mokelumne River. During the irrigation season there is nothing but tidewater available. I would appreciate a hearing, but not formal, and will not enter into the cost of same, unless the cost is predetermined."

Protestant Blossom holds Application 3990 Permit 1819, authorizing the diversion of 12 cubic feet per second from March 1 to November 15 from Mokelumne River at a point within the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 34, T5N R5E, MDB&M, for the irrigation of some 978 acres, chiefly in alfalfa and general crops and located within Sections 4, 5 and 6 of T4N R5E and in Sections 29, 30, 31, 32 and 33 of T5N R5E, MDB&M. According to the report covering an inspection of Protestant Blossom's project by an engineer of the Division on July 26, 1951, the diversion works are complete, their capacity is estimated to be 8,000 gallons per minute (17.8 cubic feet per second), the use of water is incomplete, the season of use has extended from February 1 to December 31, the permittee claims an appropriative right dating from 1911, tidal action causes a rise and fall of 4 feet at the Blossom intake.

The discharge of Mokelumne River at a point about 0.4 mile below the Woodbridge Irrigation District dam and canal intake has been measured and recorded by the United States Geological Survey since 1924. Flow over the period of published record has ranged from 0.9 cubic foot per second to 27,000 cubic feet per second; in the 21 most recent water-years of record it has averaged 668 cubic feet per second, equivalent to about 485,000 acre-feet per annum. Monthly mean discharges, according to the Water Supply Papers, have been as follows:

Mokelumne River at Woodbridge

Mean Discharges in Cubic Feet per Second

Water year:	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year
1930-31	334	323	268	98.6	106	50.9	7.02	11.3	11.3	73.9	309	10	134
31-32	3.76	13.6	73.9	278	574	555	427	1190	2220	432	274	304	526
32-33	336	404	506	616	536	460	300	271	177	231	257	342	369
33-34	370	542	588	595	672	407	189	177	12.8	98	125	259	334
34-35	291	488	193	349	549	514	519	1553	1913	227	226	307	592
35-36	432	562	521	787	2103	1431	2360	1891	1623	267	242	342	1039
36-37	399	518	567	619	784	1331	1377	1846	1318	174	193	305	785
37-38	403	539	832	669	2341	3032	3278	3599	2381	560	234	318	1507
38-39	571	776	643	558	629	540	253	170	128	206	131	300	407
39-40	229	362	199	419	722	1213	2840	2460	1122	161	175	295	847
1940-41	350	563	587	794	1353	1487	836	2597	1757	316	210	254	923
41-42	347	538	584	1697	2236	1089	1680	2761	1941	531	201	287	1149
42-43	440	566	804	1726	1322	2981	2454	2010	1448	294	253	267	1213
43-44	374	505	608	501	550	481	349	227	197	76.8	53.6	146	338
44-45	165	531	570	533	1932	604	695	1774	1589	176	133	114	725
45-46	272	462	1671	1545	646	536	901	1435	651	27.6	31.5	123	694
46-47	213	355	531	535	491	109	149	24.3	13.1	21.4	56.3	138	218
47-48	120	176	266	183	45	85	689	1308	2190	99	28.3	82.3	438
48-49	204	322	386	172	158	599	833	473	649	66	39.8	114	335
49-50	214	357	440	197	639	474	1172	1738	1582	99.3	27.5	108	585
1950-51	208	2529	4283	1672	1964	1577	790	1347	388	22.5	23.7	190	1247

Prior filings within Mokelumne River watershed to appropriate at points above Applicant Steffan's lands include among others the following:

By East Bay Municipal Utility District -- Application 4228 Permit 2459, 310 cubic feet per second and 217,000 acre-feet per annum, for municipal purposes, total diversion from natural flow and storage not however to exceed 310 cubic feet per second; and Application 13156, 194 cubic feet per second, year-round, plus an aggregate of 353,000 acre-feet per annum collected at 4 reservoir sites, for municipal purposes.

By Calaveras County Water District -- Application 11792, 100 cubic feet per second for irrigation, domestic, industrial, mining and recreational purposes; the application also contemplating additional diversions from sources outside of Mokelumne River watershed.

By North San Joaquin County Water Conservation District -- Application 12842 in amounts aggregating 500 cubic feet per second plus 50,000 acre-feet per annum, for irrigation, domestic, municipal, recreational and industrial purposes; and Application 12843, for irrigation and domestic purposes, in amounts up to 1,250 cubic feet per second, year-round, the application also contemplating certain diversion from foreign sources.

By the County of Alpine -- Application 14642, 10 cubic feet per second plus 50,000 acre-feet per annum for domestic, irrigation and recreational purposes.

By the County of Amador -- Application 13034 in amounts aggregating 85 cubic feet per second and 15,500 acre-feet per annum, for irrigation, domestic and stockwatering purposes.

By the Woodbridge Irrigation District -- Application 5807 Permit 3890, 300 cubic feet per second, from February 1 to October 31, for irrigation and domestic purposes.

By the Woodbridge Water Users Association -- Application 10240 Permit 6931, 300 cubic feet per second, year-round, for irrigation, stockwatering and incidental domestic purposes.

By the Department of Finance, State of California -- Application 5647 in amounts aggregating (within the watershed) 1,000 cubic feet per second plus 100,000 acre-feet per annum for irrigation and domestic purposes; and Application 5648 in amounts aggregating (within the watershed) 720 cubic feet per second plus 80,000 acre-feet per annum.

River distances downstream from the United States Geological Survey gage at Woodbridge, the gage itself being located 0.4 mile below the Woodbridge Irrigation District dam, scale approximately as follows:

To applicant's uppermost proposed intake	7.0 miles
To applicant's intermediate proposed intake	8.8 "
To applicant's lowermost proposed intake	10.2 "
To protestant's intake	12.0 "

Discussion

The assertion in the protest to the effect that in months of heaviest irrigation there is hardly enough water in the river to supply present needs is not in accord with information from other sources. The 22.7 cubic feet per second that the applicant seeks to appropriate plus the 12 cubic feet per second appropriated by the protestant under Application 3990 Permit 1819 total 34.7 cubic feet per second. Within the 21-year period considered in the tabulation on page 10 supra, discharge of Mokelumne River at Woodbridge averaged more than 34.7 cubic feet per second through all but 2 of the months of May, through all but 2 of the months of June, through all but 3 of the months of July, through all but 4 of the months of August, through all but 1 of the months of September. In most of the months of record discharges passing the gage mentioned have exceeded 34.7 cubic feet per second many times over. According to the hearing testimony (page 17 of transcript) there is a "pickup" of 10 cubic feet per

second or more in the reach of Mokelumne River below the United States Geological Survey gage. According to testimony also (page 6 of transcript) tidewater extends upstream as far as the applicant's lowermost point of diversion, making available at that point "all the water that reaches the Sacramento-San Joaquin delta". The protestant, who elected not to appear at the hearing, admitted in his protest and in his letter of November 17, 1953 the existence of tidewater at his intake. The rise and fall of the tide at that intake, according to the report of the inspection of the protestant's project on July 26, 1951 is of the order of 4 feet. The protestant does not assert nor does the available information indicate that supply, thus far, has been insufficient for his needs plus the applicant's estimated needs.

While the flow of Mokelumne River below Woodbridge appears to have been greatly in excess, ordinarily, of demands by water users, insofar as such demands are known to this office, that state of affairs is unlikely to continue indefinitely. The applications listed on pages 11 and 12 supra aggregate more than the total flow of the river and they are all prior to Application 15250. As projects under those applications that have been approved expand further and as projects under those applications which are now pending are approved and come into operation, less and less water will pass

Woodbridge. At some time which cannot be predicted in the light of the information at hand and may be several years in future, substantially the entire flow of Mokelumne River will probably be diverted above or at Woodbridge and no presently unappropriated water originating in that stream except return flow and the so-called infiltration, as well as whatever flow may be deemed necessary for the support of fish life, will ordinarily reach the applicant's lands. The applicant asserts (through his engineer) that return flow and infiltration are substantial. He asserts further that waters of Sacramento-San Joaquin delta extend far enough upstream to be available at his lowermost point of diversion and that they may be made available at his intermediate point of diversion.

Summary and Conclusions

The applicant seeks to appropriate 22.7 cubic feet per second, year-round, from Mokelumne River, at three points located some 7.0, 8.5 and 10.2 miles below Woodbridge, for irrigation and stockwatering purposes.

The application is protested by one R. N. Blossom who pumps from the same source at a point some 1.8 miles below the

applicant's lowermost point of diversion and contends that at the height of the irrigation season the flow of the river is scarcely enough to supply present needs.

The application was the subject of a hearing at Stockton on February 10, 1954. The protestant elected not to attend the hearing. Testimony at the hearing was to the effect that the applicant's lowermost proposed point of diversion is on tidewater and has available to it all water that reaches Sacramento-San Joaquin delta, that his other two proposed points of diversion may receive water overflowing the Woodbridge Irrigation District dam but may also receive waste water from irrigated lands along the river and water resulting from infiltration into the river from the water table, that it is possible with a small amount of work to bring tidewater to the applicant's intermediate point of diversion, that the water supply in the delta comes from practically every river in the Sacramento-San Joaquin Valley, that water reaching the delta is commingled by tidal action, that when minimum flow occurs over the Woodbridge dam there are approximately 10 cubic feet per second or more of "pickup" in the channel.

Information from other sources is to the effect that Protestant Blossom holds Application 3990 Permit 1819 authorizing the diversion of 12 cubic feet per second, that he has completed

some construction and has irrigated some land, that his project is incomplete, that rise and fall at his intake due to tidal action is approximately 4 feet, that flow of Mokelumne River at a United States Geological Survey gage 0.4 mile below the Woodbridge Irrigation District dam has ranged from 0.9 to 27,000 cubic feet per second, that except for 2 of the months of May, 2 of the months of June, 3 of the months of July, 4 of the months of August and 1 of the months of September of the last 21 years of published record flow at the gage mentioned has exceeded the 12 cubic feet per second which the protestant is entitled to divert plus the 22.7 cubic feet per second that the applicant seeks to appropriate, that amounts sought from Mokelumne River at points upstream from Applicant Steffan's project, under applications prior to his, aggregate more than the average flow of that stream, that river distances downstream from the United States Geological Survey gage (0.4 mile below the Woodbridge Irrigation District dam) to the applicant's three proposed points of diversion and to the protestant's point of diversion are about 7.0, 8.5, 10.2 and 12.0 miles, respectively.

The information points to the conclusion that unappropriated water usually exists in the source filed upon by the applicant and that such water may be taken and used beneficially in the manner proposed

without injury to the protestant. It indicates that the flow of Mokelumne River that passes the Woodbridge Irrigation District dam will diminish and may entirely fail due to increased upstream diversions under applications that are prior to Application 15250 but it also indicates that seepage and return flow entering the river between the dam and the applicant's lowermost point of diversion are substantial and that Sacramento-San Joaquin delta waters back up the Mokelumne River channel as far as the applicant's lowermost and possibly his intermediate point of proposed diversion. In view of the circumstances it is the opinion of this office that Application 15250 should be approved and permit issued subject to the usual terms and conditions.

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ORDER

Application 15250 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 15250 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 22nd day of September, 1954.



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