

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 14189 by the City of Nevada City to  
Appropriate Water from Little Deer Creek Tributary via Deer Creek  
to Yuba River in Nevada County for Municipal Purposes.

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Decision A. 14189 D. 767

Decided December 22, 1952

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In Attendance at Investigation Conducted by the Division of Water  
Resources at Nevada City on June 12, 1952.

H. J. Ray	Mayor of Applicant City
E. C. Uren	City Engineer
A. Davies ) W. E. Mullis ) Thomas H. Taylor ) M. E. Haddy )	City Councilmen
Percy J. Bosanko	Protestant's Chief Hydrographer
J. P. Minasian	Protestant's Attorney
A. S. Wheeler	Senior Hydraulic Engineer, Division of Water Resources, Department of Public Works, Representing the State Engineer.

Also present: 6 spectators, names unknown.

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OPINION

General Description of the Project

The applicant seeks to appropriate 2.5 cubic feet per second from Little Deer Creek from March 31 to October 1 of each year, for municipal purposes. The proposed point of diversion is described as

being located within the SW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 7, T16N R9E, MDB&M. The project includes a pumping plant, size unstated but which is to operate against a 120 foot static head, and an 8 inch riveted steel pipeline, 1900 feet long. According to the application the appropriation is wanted for the purpose of serving Nevada City, present population 2450. The application sets forth in this connection:

"Average monthly use of water is 183 miner's inches. Our average daily use of water is about 77 miner's inches. In August we use as much as 660 inches. A minimum of 36 inches is returned to Deer Creek through the sewage plant."

\* \* \* \*

"The point of diversion is within the east boundary of the townsite, where it is proposed to pump the water into the mains."

#### Protest

The Nevada Irrigation District protests that it would be injured by the proposed appropriation. It states in that connection that it is entitled to divert any flow that might occur in Little Deer Creek below the point where the applicant proposes to divert, that water at such proposed point of diversion is mainly return flow from irrigation and seepage from its own canals, that it is entitled under Section 22430 of the Water Code to any natural flow occurring at that point and that it has been diverting and selling such flow since 1927. It intimates that it diverts into the "Newtown", "Pleasant Valley", "Tunnel" and "China" ditches at points described as being located within the NW $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 12, T16N R8E, the SW $\frac{1}{4}$  of Section 18, T16N R8E, and the NW $\frac{1}{4}$  of Section 20, T16N R7E, MDB&M. It omits mention of terms under which its protest may be disregarded and dismissed.

#### Answer

The applicant's answer contains statements as follows:

"On October 2, 1951 Mayor Thomas H. Taylor, Councilman Frank Wright and myself drove to the China Ditch, situated about one-half mile below the Anthony House on Deer Creek, and measured the water flowing in the China Ditch at approximately 1700 miner's inches. There were approximately 1000 miner's inches bypassing the intake of the China Ditch, which is the last diversion of water by the Nevada Irrigation District from Deer Creek. - - - -

"We challenge the contention of the District's engineer that 'any water at our point of diversion is return irrigation water and seepage from District canals'. Both the DS Canal and the Cascade Ditch of the District are well above our present right to the waters of Little Deer Creek. A right dating back to 1873 and purchased by the City of Nevada in 1911 from the Maryland Mining Company - - - -

"Our 1951 diversion point is  $1\frac{1}{2}$  miles downstream from the early water right and is far removed from either of the District owned canals. The drainage area covering the water supply of Little Deer Creek covers more than four square miles, within which are numerous springs and other sources of water emanating from the hydraulic cuts at Canada Hill and from underground drain tunnels of the Canada Hill Mine, the Greenman, the North Banner and others whose source cannot in any way be linked with the District canals.

"The attempt of the District to blanket the whole area's source of water is rather absurd because of the well known fact that water percolates through the ground very slowly. At the Empire Mine in Grass Valley the main pumping station at the 3400 level has its peak loads during the months of July and August. As the most rain falls generally during January and February the water absorbed by the soil takes from 4 to 6 months to reach a vertical depth of 1300 feet.

"The hills on either side of Little Deer Creek are from 100 to 1000 feet above the intake of our proposed diversion and our 54 inch average annual rainfall must certainly contribute more toward the flow of this stream than the wetted perimeter of the two canals that cross it.

"It is our suggestion that an engineer from the State Department of Public Works be sent to view the premises and present findings to the department before any further action be taken on this matter."

#### Field Investigation

The applicant and the protestant having stipulated to an informal hearing as provided for in Section 733(b) of the California Administrative Code, Title 23, Waters, an investigation was conducted at Nevada City on June 12, 1952 by an engineer of the Division. The applicant and the protestant were both represented at the investigation.

#### Records Relied Upon

Application 14189 and all data and information on file therewith.

#### Discussion

The report of the investigation of June 12, 1952 states in effect that Little Deer Creek, the source filed upon, heads in the Banner Hill area in the Sierra Nevada and flows northwesterly to Deer Creek; and that the contributory watershed above the applicant's proposed point of diversion comprises about 4 square miles, of which some 60% are above the applicant's present intake. The report further states in effect that while little exact information could be secured as to the flow/<sup>of</sup> Little Deer Creek there apparently is some natural flow at all times and there are augmentations by seepage from the protestant's Cascade and "D.S." canals and from deliveries within the watershed; also the USGS records of the flow of Deer Creek may afford a basis for an indirect estimate of the flow of Little Deer Creek. Information as to streamflow based upon statements by the parties' representatives is quoted from the report as follows:

"Mr. Uren - - - stated that flow at the existing diversion (A) sometimes was as low as about 0.4 cfs while at the same time there would be a flow of around 2.25 cfs at the diversion point (B) proposed under Application 14189. He further stated that he checked the flow at (B) on August 18, 1951 and October 1, 1951 and on both occasions found it to be 90 miner's inches (2.25 cfs).

"Mr. Ray stated that from the sewage system applicant was returning to the stream at the time of the conference about 400,000 gpd (0.62 cfs) as well as undetermined amounts in other ways and water from the city's swimming pool when it is in operation. He further stated that what applicant was really attempting - - - was to divert water which for the most part would subsequently return to the stream system above protestant's first downstream diversion point.

"Mr. Taylor stated that protestant had not diverted from Little Deer Creek in its Cascade Canal for 2 years and that, at 1.30 p.m. on August 18, 1951, he had found the short ditch from Little Deer Creek to the Cascade Canal blocked and not in use. He further stated that protestant wasted at its lowest diversion, China Ditch, on Deer Creek most of the time and that he had found 1100 miner's inches wasting on August 25, 1951 and 1700 miner's inches wasting on October 1, 1951. In connection with the 1700 miner's inches Mr. Bosanko stated that the waste was due to a heavy storm. He cited October 1 to 3, inclusive, 1951 rainfall records at Nevada City, Bowman Dam, Deer Creek Powerhouse and Grass Valley in support thereof."

As to the applicant's water rights and use of water the report

reads:

"Applicant is a municipality and as such is supplying water to about 2500 people and certain businesses and industries.

"Applicant claims rights, dating back to 1873, to 175 miner's inches (4.38 cfs) of the waters of Little Deer Creek and, in addition to this, purchases varying amounts of water from protestant.

"Applicant seeks, through Application 14189, to eliminate purchasing from protestant.

"In addition applicant claims a riparian right on Little Deer Creek under which around 15 miner's inches (0.375 cfs) is claimed to be used in Pioneer Park in a swimming pool and for irrigation of about 3.5 acres of combined lawns and athletic fields."

As to the protestant's water rights and use of water the report reads:

"The protestant claims rights to Deer Creek waters dating back to 1860 through purchase of the rights of the Excelsior Water and Power Company and other rights since acquired and initiated. In this connection Mr. Minasian referred - - - to the Elwood Mead report of 1901 which, he said, states that all summer flow in Deer Creek is composed of waste waters and that all rights are owned by the Excelsior Water and Power Company.

"Mr. Minasian further stated that the protestant is making use of all waters in Deer Creek during the irrigation season and in addition has to secure water a portion of the season from the Yuba River and Scott's Flat Reservoir and also purchase as much as 107 cfs from the Pacific Gas and Electric Company.

"Mr. Bosanko stated that protestant's irrigation deliveries extended from April 15 to October 15 and that during that period the average diversions in its ditches below applicant's project were as follows: Newton Ditch 6.5 cfs, Pleasant Valley Ditch 5.0 cfs, Riffle Box Ditch 4.5 cfs and China Ditch about 19.0 cfs.

"He further stated that the Cascade Canal, above applicant's proposed diversion point, carried 58 second feet and that by the end of May this dropped to 33 cfs, when the use of water from the Pacific Gas and Electric Company and Scott's Flat Reservoir commenced.

"Mr. Bosanko also stated that there was normally no overflow at the China Ditch dam after May 1 and that flow recorded at the U.S. Geological Survey station below that point was mainly seepage and return flow. This was disputed by applicant's representative.

"He stated that Yuba River deliveries, through the Excelsior Ditch to the China Ditch, ranged from 14 to 33 cfs and submitted tabulations of the flow in both ditches for the years 1940 to 1951 inclusive. - - - -."

The discharge of Deer Creek, to which Little Deer Creek is tributary, has been observed and recorded by the U. S. Geological Survey since June, 1935, at a station designated "Deer Creek near Smartsville" and located approximately 1 mile upstream from the junction of Deer Creek with Yuba River. Monthly mean discharges in second-feet at that station during the months covered by the proposed appropriation are reported as follows:

<u>Year</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>September</u>
1936	95.5	45.7	36.4	9.5	8.7	9.8
37	314.	67.4	20.2	1.2	0.4	0.3
38	350.	109.	17.3	3.9	0.7	1.0
39	18.1	18.8	3.2	.4	.4	.5
40	202.	27.2	4.7	.4	.3	.6
41	295.	95.4	31.	8.1	4.2	2.2
42	430.	287.	107.	18.1	5.2	2.5
43	220.	101.	53.7	8.5	3.4	2.2
44	182.	89.3	34.4	2.2	1.9	2.6
45	227.	113.	50.8	4.1	2.5	2.4
46	127.	45.8	28.4	6.4	4.3	4.7
47	112.	15.9	17.8	5.5	4.5	2.0
48	240.	140.	47.	14.0	5.0	5.8
49	138.	12.8	6.4	1.9	1.9	1.6
50	224.	57.3	4.4	3.1	2.8	3.2
1951	123.	83.5	9.9	8.5	5.1	3.8

The following remark as to "Deer Creek near Smartsville" appears in Water Supply Paper 1151:

"Flow partly regulated by Deer Creek Reservoir (capacity 1400 acre-feet). Diversions above station for power and irrigation. At times water from South Fork Yuba River is diverted into Deer Creek above station."

According to the same Water Supply Paper the flow of Deer Creek near Smartsville over the 14 year period ending September 30, 1949 averaged 146 second-feet, which is equivalent roughly to 106,600 acre-feet per annum.

Active applications in the name of the protestant Nevada Irrigation District to appropriate waters of Deer Creek or tributaries are as follows:

Application 1614 Permit 1481 for 60,000 acre-feet per annum to be diverted from January 1 to December 31 for irrigation purposes at a point within the  $SE\frac{1}{4}SE\frac{1}{4}$  of Section 2, T16N R9E, MDB&M (roughly 5 miles upstream from the mouth of Little Deer Creek).

Application 1615 Permit 5801 for 100 cubic feet per second from Deer Creek and South Fork Deer Creek from April 1 to October 1 for irrigation purposes, by diversions as follows (all references to MDB&M):

On Deer Creek:

China Ditch Diversion, heading at a point within the NW $\frac{1}{4}$ NW $\frac{1}{4}$  Section 20, T16N R7E (some 12 miles below mouth of Little Deer Creek),

Ripple Box Ditch Diversion, heading at a point within the SW $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 18, T16N R8E (some 7 miles below mouth of Little Deer Creek),

Pleasant Valley Diversion, heading at a point within the SE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 18, T16N R8E (some 7 miles below mouth of Little Deer Creek),

Newtown Diversion, heading at a point within the NW $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 12, T16N R8E (approximately 1 mile below mouth of Little Deer Creek),

Rough and Ready Diversion, heading at a point within the SE $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 7, T16N R9E (approximately 3/4 mile above mouth of Little Deer Creek),

Deer Creek Diversion Dam, within the NW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 10, T16N R9E (some 3.5 miles above mouth of Little Deer Creek).

On South Fork Deer Creek:

Snow Mountain Ditch Diversion, heading at a point within the NE $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 32, T17N R10E (some 8 miles above mouth of Little Deer Creek),

Cascade Diversion, heading at a point within the SW $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 34, T17N R10E (some 10 miles above mouth of Little Deer Creek).

Application 8176 Permit 5811 for 225 cubic feet per second, year-round, from Deer Creek at points within the NW $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 10, T16N R9E and the NW $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 20, T16N R7E and for 100 cubic feet per second, year-round, from Squirrel Creek (tributary to Deer Creek), at a point within the NW $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 34, T16N R7E; plus 20,000 acre-feet per annum from Deer Creek and 20,000 acre-feet per annum from Squirrel Creek, these amounts to be collected between November 1 and June 30 of each season, at points on Deer Creek within the SE $\frac{1}{4}$ SE $\frac{1}{4}$  of Section 2, T16N R9E and within the NW $\frac{1}{4}$ NW $\frac{1}{4}$  of Section 20, T16N R7E and at a point on Squirrel Creek within the NW $\frac{1}{4}$ SW $\frac{1}{4}$  of Section 34, T16N



R 7 E. Permit 5811 contains a clause which reads,

"The waters diverted from Deer Creek under this application and permit shall be limited to such waters only as may be diverted under approved Applications 1614 and 1615."

Applications 1614, 1615 and 8176 are in good standing before this office, the applications all having been approved and the time within which to complete construction and application of water to beneficial use having been extended from time to time. According to the permittee's progress reports for the year 1951 it is anticipated that construction under Applications 1614 and 8176 will be completed in 1968 and construction under Application 1615 in 1970.

While the USGS records indicate that an average of 146 second-feet pass "Deer Creek near Smartsville", the topography is such that roughly 12% of the 83.5 square miles tributary to that station drain into Deer Creek at points too far downstream to benefit either of the parties; the amounts sought under approved Applications 1614, 1615 and 8176 aggregate treble or more the average flows passing the USGS gage; while exact data are lacking, development under those three applications may be supposed to be far short of completion, the permittee estimating in that connection that construction will extend over 18 to 20 additional years; and under present conditions and until development under the approved applications is further advanced surpluses probably exist at times in Little Deer Creek. The data do not definitely establish the time of occurrence of these surpluses. Of the 6 month period during which water is sought under Application 14189 the data suggest that surpluses probably extend through April and May but not thereafter. It is not apparent that the utilization of these surpluses in the manner proposed by the applicant will injure the protestant.

### Summary and Conclusions

Little Deer Creek, from which the applicant seeks to appropriate 2.5 cubic feet per second from March 31 to October 1 for municipal purposes, is tributary to Deer Creek which in turn enters Yuba River. A sixteen year record of the flow of Deer Creek one mile above its mouth indicates an average flow at that point of 146 second-feet. The protestant holds approved applications to divert an aggregate of some 325 second-feet plus 100,000 acre-feet per annum from Deer Creek and tributaries. The protestant's project is but fractionally developed now and may require an additional 18 to 20 years to complete. The bulk of the annual runoff from the stream system occurs during the winter and early spring months. A substantial portion of the runoff passing the gage is unrecoverable by either applicant or protestant. The data indicate that currently, pending further expansion under Applications 1614, 1615 and 8176, surpluses probably occur in Little Deer Creek during April and May but that they seldom if ever occur during June, July, August or September.

In view of the probable existence, at times, during April and May of water in excess of the amounts diverted under existing rights, in the source from which appropriation is sought under Application 14189, and of its probable non-existence during June, July, August and September, it is the opinion of this office that Application 14189 should be approved subject to the usual terms and conditions and subject to the limitation of diversions thereunder to periods extending from April 1 to May 31.

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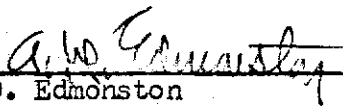
ORDER

Application 14189 for a permit to appropriate water having been filed with the Division of Water Resources as above stated, protest having been filed, a stipulated hearing having been held and the State Engineer now being fully informed in the premises:

IT IS HEREBY ORDERED that Application 14189 insofar as it relates to diversion from about April 1 to about May 31 be approved and that a permit be issued subject to such of the usual terms and conditions as may be appropriate.

IT IS FURTHER ORDERED that authorization to divert under Application 14189 from about June 1 to about September 30 be denied.

WITNESS my hand and the seal of the Department of Public Works of the State of California this 22nd day of December, 1952.

  
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A. D. Edmonston  
State Engineer

