STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS

REPORTS OF THE

DIVISION OF WATER RESOURCES

Edward Hyatt, State Engineer

REPORT ON WATER MASTER SERVICE ON OAK RUN CREEK DURING SEASON OF 1930

oOo

By. T. Russel Simpson, Supervising Water Master

oOo

Sacramento, California

December, 1930

TABLE OF CONTENTS

	Page
LETTER OF TRANSMITTAL	
ORGANIZATION	
GENERAL DESCRIPTION OF WORK	1
DISCUSSION OF RESULTS FOR SEASON	1
RECOMMENDATIONS	3
FINANCIAL STATEMENT	4

TABLES:

1. Precipitation data. Average at Redding and McCloud
2. Continuous Records of Daily Discharge in Cubic feet per Second at Oak Run Creek at the Division Box For the Period June 1st to August 20, 1930.
3. Water Deliveries on Oak Run Creek - 1930 Season
4. Crop Production - 1930 Season

PLATES:

1. Hydrographs of Oak Run Creek Showing Water Supply at Division Box - 1927 and 1930

STATE OF CALIFORNIA

Department of Public Works

SACRAMENTO

DIVISION OF WATER RESOURCES
401 PUBLIC WORKS BUILDING

EDWARD HYATT, STATE ENGINEER
CHIEF OF DIVISION

December 27, 1930

Mr. Harold Conkling,
Deputy State Engineer
Sacramento, California

Dear Sir: Attention: MR. GORDON ZANDER, HYDRAULIC ENGINEER

A report covering the water master service on Oak Run Creek, in Shasta County, California, during the season of 1930, is submitted herewith.

This report includes a brief description of the regulation and distribution of the waters of Oak Run in accordance with the provisions of the stipulation for consent judgment in the case of F. A. Colby, et al., vs. L. O. Strayer, et al., and a discussion of the results that were accomplished thereby.

Run-off records and other pertinent hydraulic data are included, together with a financial statement, showing the cost of the water master service, and the sources from which such cost was met.

Respectfully submitted

T. Russel Simpson

Supervising Water Master

ORGANIZATION

B. B. Meek - - - - - - - - - - - - - - - Director of Public Works

Edward Hyatt - State Engineer

Harold Conkling - - - - - - - - - - - - - - Deputy State Engineer

GORDON ZANDER

In Supervising Charge

T. Russel Simpson - - - - - - - - - - Supervising Water Master

G. M. Vickroy - Water Master

REPORT ON

WATER MASTER SERVICE

ON OAK RUN CREEK, SHASTA COUNTY, CALIFORNIA

DURING SEASON OF 1930

General Description of Work

Water Master service was continued on Oak Run Creek during the 1930 season, in accordance with the provisions of the stipulation for consent judgment in the case of F. A. Murphey, et al., vs. L. O. Strayer, et al. The stipulation for consent judgment has been signed by all of the water users on Oak Run Creek.

Water Master service was commenced on June 1, 1930, by the supervising water master and was terminated on September 30th. During the period between June 15th and September 20th, G. M. Vickroy was employed on a daily basis for seventy-four and one-half days as water master on North Cow, Oak Run, and Clover Creeks.

All diversions were opened on Oak Run Creek during the 1930 season except the Walter Melton Lower Ditch. At no time during the period from June 1st to September 30th was the available water supply adequate to supply full allotments. There was an appreciable increase in water supply after September 9th due to the precipitation that occurred at that time.

Discussion of Results for Season

The precipitation at Redding and at McCloud for the seasonal year, commencing October 1, 1929, and terminating September 30, 1930, has been compared with the precipitation during the preceding seven seasonal years in Table 1 of this report. Table 1 also shows the average mean precipitation

at these two stations for the period of record. The seasonal precipitation in 1929-30 was about 83 per cent of the average mean precipitation. It will be noted that there was a marked deficiency in precipitation during May and June, 1930, but that the precipitation was heavy in September.

Table 2 is a tabulation of the daily discharge of Oak Run Creek at the division box at the head of the Welch and Strayer Re-Diversion Ditch. An automatic water stage recorder was installed at this station on June 1, 1930 but was removed on August 20th, due to the installation at that time of a concrete channel control. The flow of the creek at this point is approximately equal to the net available water supply of Oak Run Creek. Plate 1 submitted at the end of this report graphically shows the water supply of Table 2. The water supply of the nearly normal year of 1927 is also depicted on Plate 1. The 1930 rating curve for this station is not included with this report, since weir tables rather than rating curves will be used in the future due to the artificial channel control that has been installed.

Table 3 is a tabulation in weekly periods of the average combined diversions from Oak Run Creek expressed in cubic feet per second and in per cent of full allotments. It will be observed from Table 3 that there was a shortage of water throughout the period of water master service in 1930.

Table 4 has been prepared showing yields of various crops on most of the ranches on Oak Run Creek for the year 1930. The crop returns for the 1930 season were, for the most part, subnormal.

The following Parshall Measuring Flumes were installed in ditches on Oak Run Creek during the 1930 season:

Ditch	Flume Size
Predmore	9 inch
Kirkendahl	6 inch

A concrete channel control equipped with division weirs was instal-

led in Oak Run Creek at the head of the Welch and Strayer Re-Diversion Ditch. The channel control was placed on bedrock and there is no leakage under the structure. The weirs are so constructed that 45 per cent of the total flow of Oak Run Creek at that point will automatically spill into the Welch and Strayer Re-Diversion Ditch and the remainder of the water will flow on down the channel to the lower users.

A 1-inch by 12½ inch orifice was installed in the Walter Melton Upper Ditch. The Walter Melton Lower Ditch was not opened in 1930.

The intake flume of the Welch and Strayer Re-Diversion Ditch was abandoned and replaced with about 50 yards of earth ditch in a re-location.

No violation of the schedule of distribution was noted on Oak Run Creek during the 1930 season. It was very difficult to maintain an accurate division of the water at the head of the Welch and Strayer Re-Diversion prior to the installation of the division weirs.

The owners of the Welch and Strayer Ditch allowed a portion of their water diverted from Mill Creek to be run through the Miller Sawmill for conveying sawdust. This was observed very closely for several days, but no appreciable increase in conveyance losses was noted. The Rose interest in the Excelsior Ditch was also used at the Miller Sawmill for conveying sawdust and was returned to Oak Run Creek throughout the 1930 season.

Recommendations

A Parshall Measuring Flume should be installed in the Alpaugh Ditch to complete the program of measuring devices on Oak Run Creek. At the close of the previous season, a 6 inch flume was saved up for this ditch, but it could not be found during the current season. I was unable to communicate with Carrol Melton who was on the ranch in 1929.

FINANCIAL STATEMENT

The finances for conducting investigations and water master service on all streams in Northern California, except in water districts operating under the procedure of Sections 37 to 37f of the Water Commission Act, during the 1930 season were combined into one fund. This was done because a portion of the work on the various streams was related and because of convenience in bookkeeping. The streams included under the fund were Emerson, Davis and Mill Creeks in Modoc County, Clover, North Cow, and Oak Run Creeks in Shasta County, Little Shasta and Lower Shasta Rivers in Siskiyou County, and Pit River in Big Valley.

The work was financed partly by subscription from the water users and partly by contribution by the Division of Water Resources. No segregation was made in the expense of conducting the work on the nine stream systems during the 1930 season. The total unit cost of the work was about twenty-four cents per acre of irrigated land, of which about half was borne by the state.

A financial statement in which receipts and disbursements are itemized follows.

TABLES

TABLE 1.

PRECIPITATION DATA
AVERAGE AT REDDING AND McCLOUD

Season	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total Seasonal
1922 - 23	4.50	3.42	9.62	4.54	1.41	0.49	6.45	0.75	2.53	0.00	0.24	2.89	36.84
1923 - 24	1.89	0.87	2.05	2.01	4.61	1.06	0.13	0.10	0.12	0.00	0.28	0.15	13.27
1924 - 25	7.06	6.55	6.24	4.53	18.35	4.24	5.58	3.11	0.93	0.00	0.81	3.28	60.68
1925 - 26	0.55	3.74	2.60	6.25	9.80	0.38	5.34	1.02	0.00	0.00	0.29	0.00	29.97
1926 - 27	3.34	18.18	4.65	10.23	14.01	5.26	4.16	2.18	1.02	0.16	0.07	0.09	63.35
1927 - 28	2.01	10.87	5.70	3.70	4.69	9.20	2.93	0.35	0.30	0.00	0.20	0.22	40.17
1928 - 29	0.64	7.41	5.75	1.59	5.32	2.91	3.54	0.11	2.32	0.00	0.00	0.00	29.59
1929 - 30	1.26	0.00	11.23	5.55	4.68	4.60	3.12	0.88	0.12	0.04	0.00	2.84	34.32
Average Mean (Period of record)	2.21	4.63	6.41	8.67	6.25	5.25	3.06	2.26	1.00	0.23	0.17	1.12	41.26

TABLE 2

CONTINUOUS RECORDS OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF OAK RUN CREEK AT THE DIVISION BOXX FOR THE PERIOD JUNE 1st TO AUGUST 20, 1930

Day	June	July	August	Sept.	
1	5.2	4.7	4.0	3.2	
2	5.2	4.5	4.0		
3	5.0	4.7	3.8		
4	5.0	4.3	3.8		
5	4.8	4.2	4.0		
6	4.8	4.3	4.0		
7	4.7	4.8	3.7		
8	4.7	4.8	3.5		
9	4.5	4.5	3.5		
10	4.2	4.7	3.4	3.7	
11	4.5	4.8	3.4		
12	4.5	4.8	3.5		
13	4.7	4.5	3.5		
14	4.8	4.7	3.7		
15	4.8	4.7	3.7		
16	4.7	4.3	3.7		
17	4.8	4.2	3.7		
18	5.0	4.2	3.7		
19	5.0	4.0	3.8	3.7	
20	5.2	4.0	3.8		
21	5.2	3.8			
22	5.0	3.8			
23	4.8	3.7			
24	4.8	3.8			
25	4.7	3.8	3.3		
26	4.7	4.2			
27	4.7	4.0		3.7	
28	4.8	4.0			
29	5.0	4.2	3.3		
30	4.8	4.2			
31		4.0			
Total Sec. Feet Days	144.6	133.2	112.5 *	106.8 *	4 Months Period
Mean Sec. Feet	4.82	4.30	3.63 *	3.56 *	4.07 *
Maximum Sec. Feet	5.2	4.8	4.0 *	3.7 *	5.2 *
Minimum Sec. Feet	4.2	3.7	3.4 *	3.2 *	3.2 *
Total Acre Feet	287	264	223 *	212 *	986 *

* Estimated

TABLE 3

WATER DELIVERIES ON OAK RUN CREEK
1930 SEASON

Period 1930	Average Combined Diversions Cubic Feet Per Second	Per Cent of Full Allotments Delivered
6/1 to 6/8	5.0	93
6/8 to 6/15	4.6	85
6/15 to 6/22	5.0	93
6/22 to 6/29	4.8	89
6/29 to 7/6	4.6	85
7/6 to 7/13	4.7	87
7/13 to 7/20	4.4	81
7/20 to 7/27	3.9	72
7/27 to 8/3	4.1	76
8/3 to 8/10	3.8	70
8/10 to 8/17	3.6	67
8/17 to 8/24	3.8	70
8/24 to 8/31	3.3	61
8/31 to 9/7	3.2	59
9/7 to 9/14	3.5	65
9/14 to 9/21	3.7	68
9/21 to 9/28	3.7	68
Average 6/1 to 9/28	4.1	82

NOTE: Average combined allotment from Oak Run Creek is 5.40 cubic feet per second.

TABLE 4

CROP PRODUCTION ON LANDS IRRIGATED FROM OAK RUN CREEK
1930 SEASON

Owner	Crop	Acres	Total Yield		Yield per Acre	
			Sacks	Tons	Sacks	Tons
E. C. English	Meadow Hay	40		40		1.0
	Pasture	72	700 Sheep - 8 months			
Edward Rice	Orchard	15		20		1.3
	Garden	0.5	Good			
J. Q. Cox	Grain Hay	4		1.5		0.4
	Pasture	5	1 cow - 12 months			
J. L. McCarty	Garden	1.3	Fair			
John Passons	Orchard	5	Poor			
	Garden	1	Fair			
	Pasture	5	Good			
F. A. Colby	Meadow Hay	23		46		2.0
	Alfalfa	2		4		2.0
	Garden	0.5	Good			
	Pasture	6.5	1 cow, 4 horses & 25 sheep -12 mo.			
Walter Melton	Pasture	5	Fair			
Nellie Melton	Pasture	22	Fair			

PLATES

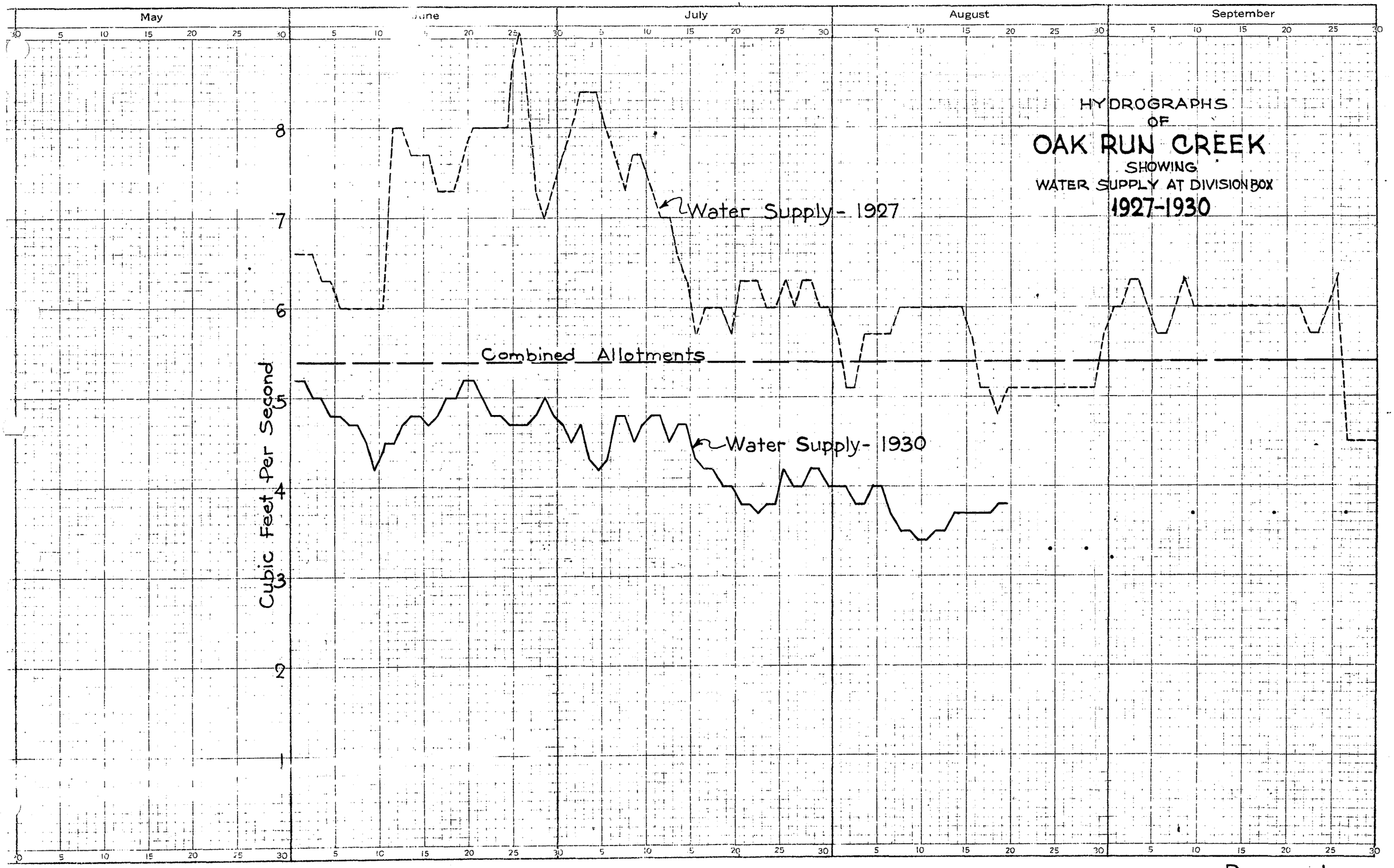

HYDROGRAPHS
OF
OAK RUN CREEK
SHOWING
WATER SUPPLY AT DIVISION BOX
1927-1930
May
June
July
August
September
Water Supply - 1927
Combined Allotments
Water Supply - 1930
Cubic Feet Per Second
1
2
3
4
5
6
7
8

PLATE 1

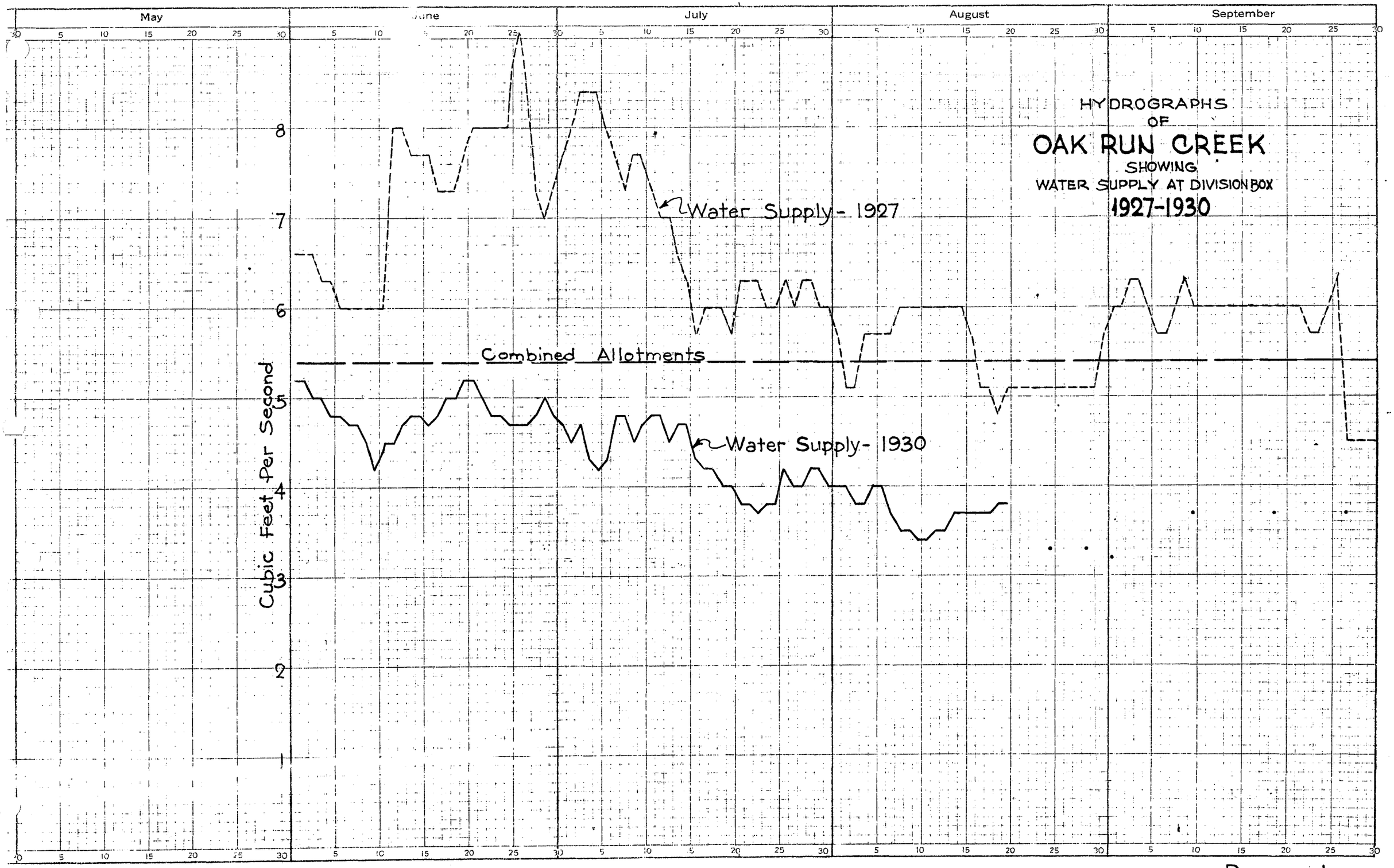
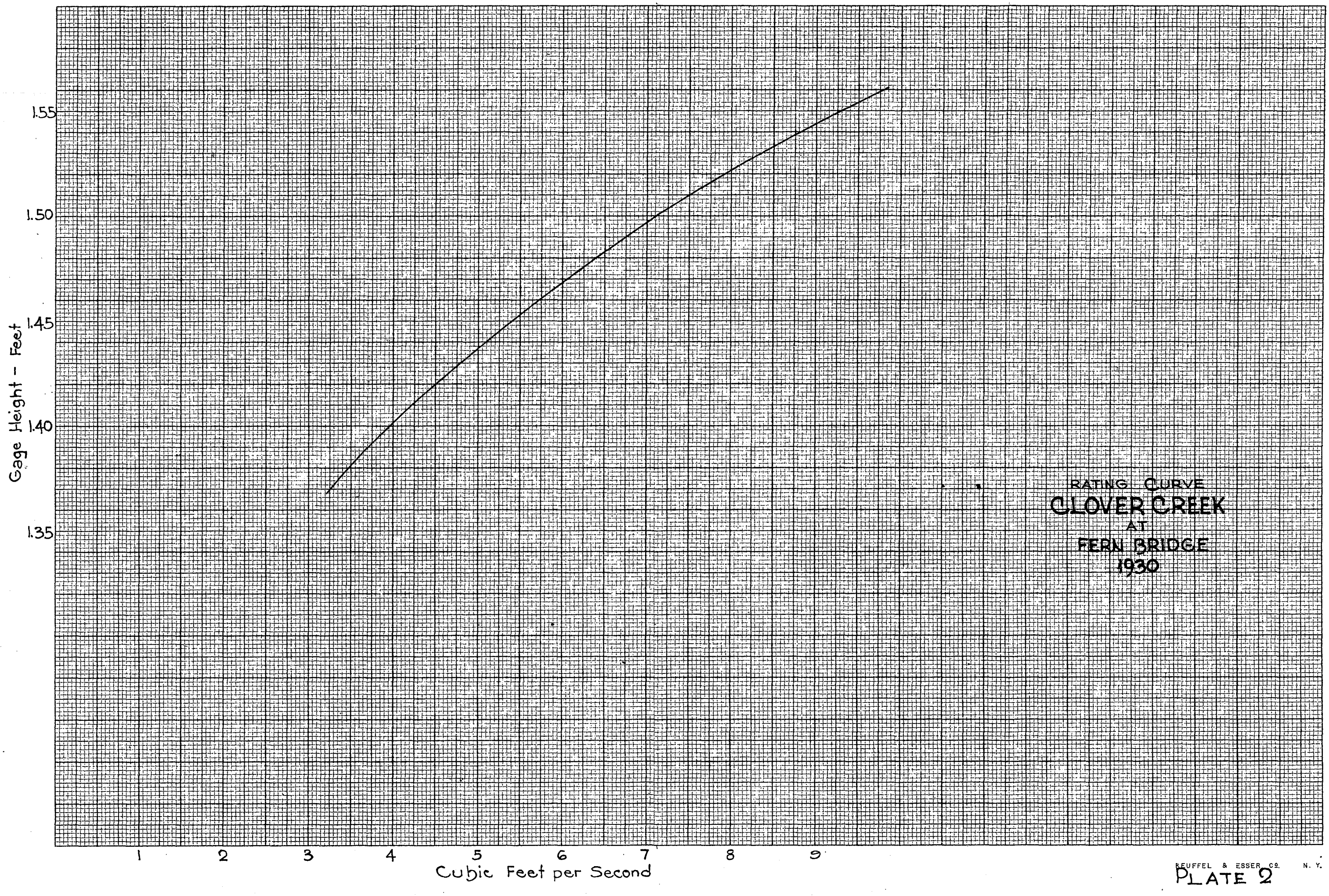

HYDROGRAPHS
OF
OAK RUN CREEK
SHOWING
WATER SUPPLY AT DIVISION BOX
1927-1930
May
June
July
August
September
Water Supply - 1927
Combined Allotments
Water Supply - 1930
Cubic Feet Per Second
1
2
3
4
5
6
7
8

PLATE 1



ENGRAVING 354-3 WHEN ORDERING STATE COLOR
1" X 10 TO THE HALF INCH. WHITE OR TRACING PAPER OR CLOTH IN U.S.A.
KEUFFEL & ESSER CO. N.Y.

PLATE 2

STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS

REPORTS OF THE

DIVISION OF WATER RESOURCES

Edward Hyatt, State Engineer

REPORT ON WATER MASTER SERVICE ON CLOVER CREEK AND TRIBUTARIES SHASTA COUNTY, CALIFORNIA DURING SEASON OF 1930

oOo

By. T. R. Simpson, Supervising Water Master

oOo

Sacramento, California
December 1930

TABLE OF CONTENTS

Page

LETTER OF TRANSMITTAL

ORGANIZATION

GENERAL DESCRIPTION OF WORK - 1

DISCUSSION OF RESULTS FOR SEASON- - - - - - - - - - - - - - - - - 2

CONTROVERSIES - 4

RECOMMENDATIONS - 5

FINANCIAL STATEMENT - 6

TABLES:

1. Precipitation Data. Average at Redding and McCloud.

2. Estimated Combined Daily Discharge in Cubic Feet per Second of All Diversions from Clover Creek and Tributaries During the Period June 1st to September 30th, 1930.

3. Continuous Records of Daily Discharge in Cubic Feet per Second of Clover Creek at Fern Bridge During the Period June 1st to September 30th, 1930.

4. Water Deliveries on Clover Creek and Tributaries - 1930 season.

5. Crop Production on Lands Irrigated from Clover Creek and Tributaries - 1930 Season.

PLATES:

1. Hydrographs of Clover Creek Showing Water Supply - 1927 and 1930.

2. Rating Curve - Clover Creek at Fern Bridge - 1930.

STATE OF CALIFORNIA

Department of Public Works

SACRAMENTO

DIVISION OF WATER RESOURCES
401 PUBLIC WORKS BUILDING

EDWARD HYATT, STATE ENGINEER
CHIEF OF DIVISION

December 15, 1930

Mr. Harold Conkling,
Deputy State Engineer,
Sacramento, California.

Dear Sir: Attention: Mr. Gordon Zander, Hydraulic Engineer.

A report covering the water master service on Clover Creek, in Shasta County, California, during the season of 1930, is submitted herewith.

This report includes a description of the regulation and distribution of the waters of Clover Creek and its tributaries in accordance with the provisions of the stipulation for consent judgment entered into by all except two of the parties in the case of Millville Ditch Company, vs. Jesse Hufford, et al., on February 18, 1929.

Run-off records and other pertinent hydraulic data are included, together with a financial statement showing the cost of the water master service, and the sources from which such cost was met.

Very truly yours,

T. Russel Simpson

Supervising Water Master

ORGANIZATION

B. B. Meek -Director of Public Works

Edward Hyatt -State Engineer

Harold Conkling - - - - - - - - - - - - - - - - - - - Deputy State Engineer

Gordon Zander
In Supervising Charge

T. Russel Simpson - - - - - - - - - - - - - - - - - - Supervising Water Master

G. M. Vickroy - - - - - - - - - - - - - - - - - - - Water Master

REPORT ON
WATER MASTER SERVICE
ON CLOVER CREEK AND TRIBUTARIES
SHASTA COUNTY, CALIFORNIA
DURING SEASON OF 1930

GENERAL DESCRIPTION OF WORK

Water Master service was continued on Clover Creek and its tributaries during the 1930 season, pursuant to the provisions of the stipulation for consent judgment in the case of Millville Ditch Company, vs. Jesse Hufford, et al., authorizing the Division of Water Rights (now Division of Water Resources) to furnish water master service pending entry of decree in the case.

Water master service was commenced on June 1, 1930, by the supervising water master and was terminated on September 30th. During the period between June 15th and September 20th, G. M. Vickroy was employed on a daily basis for seventy-four and one-half days as water master on Clover, Oak Run, and North Cow Creeks.

All diversions were opened on Clover Creek and its tributaries during the 1930 season except those of Leslie A. Yordy. A slight shortage of water occurred on Clover Creek during the third week - June, 1930. The deficiency in water supply gradually increased until the middle of August when two-thirds of full allotments were being delivered. There was a slight increase in water supply after the first week in September due to the precipitation that occurred.

DISCUSSION OF RESULTS FOR SEASON

The precipitation at Redding and at McCloud for the seasonal year, commencing October 1, 1929, and terminating September 30, 1930, has been compared with the precipitation during the preceding seven seasonal years in Table 1 of this report. Table 1 also shows the average mean precipitation at these two stations for the total period of record. The seasonal precipitation in 1929-30 was about 85 per cent of the average mean precipitation. It will be noted that there was a marked deficiency in precipitation during May and June, 1930, but that the precipitation was heavy in September.

Table 2 is a tabulation of the net available water supply of Clover Creek and its tributaries during the 1930 season. Plate 1 submitted at the end of this report graphically shows the water supply of Table 2. The water supply for the 1927 season is also shown on Plate 1.

Table 3 is a tabulation of the daily discharge of Clover Creek at the Fern Bridge register station for the 1930 season. Plate 2 is the rating curve for this station for the 1930 season.

Table 4 is a tabulation in weekly periods of the average combined diversions from Clover Creek and its tributaries expressed in cubic feet per second and in per cent of full allotments delivered.

Table 5 has been prepared showing yields of various crops on most of the ranches on Clover Creek and its tributaries for the year 1930. The crop returns for the 1930 season were, for the most part, subnormal. In addition to the deficient water supply, the short growing season was a deterrent to plant growth in this locality.

The following Parshall Measuring Flumes were installed in ditches on Clover Creek and its tributaries during the 1930 season:

Ditch	Flume Size
Maxwell	6 inch
Hufford Upper	6 inch
Hufford Lower	6 inch
Reineke Clover	6 inch
Reineke South Clover	6 inch
Millville	24 inch

Temporary rectangular weirs were installed upon the following ditches:

Ditch	Weir Crest
Guttman	18 inch
Bonde	24 inch
Mill	36 inch
Worley	18 inch
Welch and Nailor	18 inch

Temporary triangular-notch weirs were installed upon the following ditches:

Harper

Hunt

The authority for distribution of water during the 1930 season was contained in the stipulation for consent judgment in the Clover Creek litigation. This stipulation was not signed by R. M. Cunningham and Leslie A. Yordy, administrator of the Estate of Jay

Yordy, deceased. Leslie A. Yordy paid his water master assessment for the 1930 season although no water was used on the Yordy Ranch. R. M. Cunningham refused to pay his water master assessment and refused to submit to regulation by the water master.

The owners of the Reineke Ranch constructed a new diversion and ditch during the 1930 season from Clover Creek. The new ditch diverts from the south side of Clover Creek about one-half mile above the confluence of South Clover Creek. The new ditch was used during the 1930 season to convey water from Clover Creek into the Reineke South Clover Ditch after the water supply of South Clover Creek failed. The owners of the Reineke Ranch were given this privilege under the stipulation for consent judgment.

CONTROVERSIES

Joseph R. Hunt complained to the water master that his diversion dam on South Clover Creek was torn open several times during the 1930 season. This matter was investigated but no information could be obtained as to the source of the trouble.

Harvey A. Klinger complained of interference of his partners in the Mill Ditch System. The regulation of the taps of the ditch system was not considered a proper function of the water master because the issues between the partners were not covered in the proceedings on Clover Creek. The owners however, were advised that the water master would supervise installation of division boxes if it was so desired by all of the owners.

RECOMMENDATIONS

Parshall Measuring Flumes should be installed on the Webb and Wild Cat Ditches next season. Also the seven weirs that are in use on Clover Creek should be replaced by Parshall Measuring Flumes as rapidly as possible in order to complete the program of installation of measuring devices.

FINANCIAL STATEMENT

The finances for conducting investigations and water master service on all streams in Northern California, except in water districts operating under the procedure of Sections 37 to 37f of the Water Commission Act, during the 1930 season were combined into one fund. This was done because a portion of the work on the various streams was related and because of convenience in bookkeeping. The streams included under the fund were Emerson, Davis and Mill Creeks in Modoc County, Clover, North Cow, and Oak Run Creeks in Shasta County, Little Shasta and Lower Shasta Rivers in Siskiyou County, and Pit River in Big Valley.

The work was financed partly by subscription from the water users and partly by contribution by the Division of Water Resources. No segregation was made in the expense of conducting the work on the nine stream systems during the 1930 season. The total unit cost of the work was about twenty-four cents per acre of irrigated land, of which about half was borne by the state.

A financial statement in which receipts and disbursements are itemized follows.

TABLES

TABLE 1.

PRECIPITATION DATA
AVERAGE AT REDDING AND McCLOUD

Season	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total Seasonal
1922 - 23	4.50	3.42	9.62	4.54	1.41	0.49	6.45	0.75	2.53	0.00	0.24	2.89	36.84
1923 - 24	1.89	0.87	2.05	2.01	4.61	1.06	0.13	0.10	0.12	0.00	0.28	0.15	13.27
1924 - 25	7.06	6.55	6.24	4.53	18.35	4.24	5.58	3.11	0.93	0.00	0.81	3.28	60.68
1925 - 26	0.55	3.74	2.60	6.25	9.80	0.38	5.34	1.02	0.00	0.00	0.29	0.00	29.97
1926 - 27	3.34	18.18	4.65	10.23	14.01	5.26	4.16	2.18	1.02	0.16	0.07	0.09	63.35
1927 - 28	2.01	10.87	5.70	3.70	4.69	9.20	2.93	0.35	0.30	0.00	0.20	0.22	40.17
1928 - 29	0.64	7.41	5.75	1.59	5.32	2.91	3.54	0.11	2.32	0.00	0.00	0.00	29.59
1929 - 30	1.26	0.00	11.23	5.55	4.68	4.60	3.12	0.88	0.12	0.04	0.00	2.84	34.32
Average Mean (Period of record)	2.21	4.63	6.41	8.67	6.25	5.25	3.06	2.26	1.00	0.23	0.17	1.12	41.26

TABLE 2

ESTIMATED COMBINED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF ALL DIVERSIONS FROM CLOVER CREEK AND TRIBUTARIES DURING THE PERIOD JUNE 1st TO SEPTEMBER 30th, 1930

Day	June	July	August	Sept.	
1	26	19.0	17.5	16.0	
2	26	19.0	17.5	16.0	
3	26	19.0	17.5	16.0	
4	26	19.0	17.0	16.0	
5	26	19.0	17.0	16.0	
6	25	19.0	17.0	16.0	
7	25	19.0	17.0	16.0	
8	25	19.0	17.0	17.0	
9	25	19.0	17.0	19.0	
10	24	19.0	17.0	18.0	
11	24	19.0	17.0	17.5	
12	24	18.5	17.0	17.0	
13	23	18.5	17.0	17.0	
14	23	18.5	17.0	17.0	
15	23	18.0	16.5	17.0	
16	24	18.0	16.5	17.0	
17	24	18.0	16.5	17.0	
18	24	18.0	16.0	17.0	
19	24	18.0	16.0	17.0	
20	23	18.0	16.0	17.0	
21	23	18.0	16.0	17.0	
22	23	18.0	16.0	17.0	
23	22	18.0	16.0	16.0	
24	22	18.0	16.0	17.5	
25	22	18.0	16.0	17.0	
26	22	18.0	16.0	17.0	
27	22	18.0	16.0	17.0	
28	22	18.0	16.0	17.0	
29	21	18.0	16.0	17.0	
30	20	18.0	16.0	17.0	
31	--	18.0	16.0	----	
Total Sec. Feet Days	709	571	513	508	4 month Period
Mean Sec.-feet	23.63	18.42	16.55	16.93	18.88
Maximum Sec.-feet	26.	19.0	17.5	19.0	26.0
Minimum Sec.-feet	20.	18.0	16.0	16.0	16.0
Total Acre-feet	1406.	1132.	1018.	1008.	4564.

TABLE 3

CONTINUOUS RECORDS OF DAILY DISCHARGE IN CUBIC FEET
PER SECOND OF CLOVER CREEK AT FERN BRIDGE
DURING THE PERIOD JUNE 1st TO SEPTEMBER 30, 1930.

Day	June	July	August	Sept.	
1	7.1	5.4	6.4	4.5	
2	6.7	8.4	6.0	4.5	
3	6.4	8.8	5.7	4.5	
4	6.0	8.4	5.4	4.5	
5	5.4	8.4	5.4	4.5	
6	4.8	8.4	5.4	4.0	
7	5.1	8.4	5.7	4.5	
8	5.1	8.4	6.0	5.7	
9	4.8	8.4	6.0	8.4	
10	4.8	7.9	6.0	7.1	
11	4.8	7.9	6.0	5.1	
12	4.5	7.1	6.0	4.5	
13	4.5	7.1	6.4	4.2	
14	4.8	6.7	6.4	4.5	
15	4.8	6.7	6.4	4.5	
16	4.5	6.4	7.1	4.5	
17	4.5	6.7	7.1	4.5	
18	4.5	6.7	6.7	4.5	
19	4.8	6.7	6.4	4.5	
20	4.8	6.7	7.1	4.5	
21	4.8	6.7	6.7	4.5	
22	4.5	6.7	6.0	4.5	
23	4.2	6.7	5.4	6.4	
24	4.0	7.1	5.1	6.0	
25	4.2	6.7	4.8	5.7	
26	4.5	6.7	5.7	5.1	
27	4.5	6.7	5.7	5.1	
28	4.2	6.7	5.1	5.1	
29	4.2	6.7	4.8	5.1	
30	4.2	6.0	4.8	5.1	
31		6.4	4.5		
Total Sec. Feet Days	146.0	222.7	182.5	150.1	4 Month Period
Mean Sec. Feet	4.87	7.18	5.89	5.00	5.74
Maximum Sec. Feet	7.1	8.8	7.1	8.4	8.8
Minimum Sec. Feet	4.0	5.4	4.5	4.0	4.0
Total Acre Feet	289.	442.	362.	298.	1391.

TABLE 4

WATER DELIVERIES ON CLOVER CREEK
AND TRIBUTARIES - 1930 SEASON

Period 1930	Average Combined Diversions Cubic Feet Per Sec.	Per Cent of Full Allotments Delivered
6/1 to 6/8	25.7	100
6/8 to 6/15	24.0	100
6/15 to 6/22	23.6	98
6/22 to 6/29	22.1	90
6/29 to 7/6	19.4	80
7/6 to 7/13	18.9	80
7/13 to 7/20	18.1	75
7/20 to 7/27	18.0	75
7/27 to 8/3	17.9	75
8/3 to 8/10	17.1	70
8/10 to 8/17	16.9	70
8/17 to 8/24	16.1	67
8/24 to 8/31	16.0	67
8/31 to 9/7	16.0	67
9/7 to 9/14	17.4	70
9/14 to 9/21	17.0	70
9/21 to 9/28	17.2	70
Average 6/1 to 9/28	19.9	79

NOTES: Average combined allotment from Clover Creek is 24.40 cubic feet per second.
Yordy allotment of 0.40 cubic feet per second not used in 1930.
Average allotment in 1930, thus was 24.0 cubic feet per second.

TABLE 5

CROP PRODUCTION ON LANDS IRRIGATED FROM
CLOVER CREEK AND TRIBUTARIES - 1930 SEASON

Owner	Crop	Acres	Total Yield		Yield per Acre	
			Sacks	Tons	Sacks	Tons
J. R. Hunt, Jr.	Pasture	5	(10 cattle - - - 5 months)			
John Krehbiel	Alfalfa	11	Pastured			
	Meadow	7	Pastured			
	Garden	1.5	Fair			
John W. Maxwell	Pasture	17	(10 cattle - - 12 months)			
Joe Rice	Pasture	26	(10 sheep - - - 5 months)			
J. S. Sheridan	Meadow-Hay	12		10		0.8
	Pasture	20	(2 horses and 12 goats -12 months)			
E. G. Weigart	Alfalfa & clover	7		15		2.1
	Garden	1	Good			
L. Wright & E. I. Rock	Orchard	0.5	Fair			
	Pasture	6	Fair			
R. G. Wright	Meadow-Hay	6		6		1.0
	Garden	2.5	Good			
	Orchard	0.5	Good			
Edward Rice	Pasture	20	(4 cattle and 5 horses - 12 months)			
Oscar Axner	Orchard	11	(Young trees - not bearing)			
	Garden	0.5	Good			
	Pasture	5	(1 horse - 12 months)			
E. C. English	Meadow-Hay	40		40		1.0
	Pasture	32	(700 sheep - 8 months)			
John Passons	Pasture	12	(4 cattle - 12 months)			
	Garden	2	Good			
F. J. Wheelock	Meadow-Hay	35		30		0.9
	Orchard	2	Good			
	Garden	2.5	Good			
	Pasture	5	(12 cattle & 5 Horses - 5 months)			
Mrs. M. J. Reineke, et al.						
	Alfalfa	12		30		2.5
	Suden	1.5		1.5		1.0
	Meadow-Hay	25		37		1.5
	Orchard	3.5		10		3.0
	Garden	1		10		10.0
	Pasture	41	(58 cattle - 12 months)			

PLATES