STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

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REPORTS OF THE
DIVISION OF WATER RESOURCES

Edward Hyatt, State Engineer

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REPORT ON

WATER MASTER SERVICE

ON

NORTH COW CREEK AND TRIBUTARIES

SHASTA COUNTY, CALIFORNIA

DURING SEASON OF 1952

oOo

By T. R. Simpson, Senior Hydraulic Engineer

oOo

Sacramento, California
February, 1953

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STATE OF CALIFORNIA

Department of Public Works

SACRAMENTO

DIVISION OF WATER RESOURCES
401 PUBLIC WORKS BUILDING

EDWARD HYATT, STATE ENGINEER
CHIEF OF DIVISION

February 18, 1933

Mr. Harold Conkling
Deputy State Engineer
Sacramento, California

Attention: Gordon Zander, Supervising Hydraulic Engr.

Dear Sir:

Herewith is submitted a report covering the water master service on North Cow Creek, and its tributaries, in Shasta County, California, during the season of 1932.

This report includes a brief description of the regulation and distribution of the waters of North Cow Creek, and its tributaries, pursuant to the decree entered April 29, 1932, by the Superior Court of Shasta County, California, in the case of Charles L. Lamm, et al, vs. John Rutherford, et al.

Run-off records and other pertinent data are included.

Respectfully submitted,

T. R. Simpson
Senior Hydraulic Engineer

TRS:CM

ORGANIZATION

Earl Lee Kelly, Director of Public Works

Edward Hyatt, State Engineer

Harold Conkling, Deputy State Engineer

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Gordon Zander, Supervising Hydraulic Engineer

oOo

T. Russel Simpson, Senior Hydraulic Engineer

J. W. McPartland, Water Master

REPORT ON
WATER MASTER SERVICE
ON
NORTH COW CREEK AND TRIBUTARIES,
SHASTA COUNTY, CALIFORNIA
DURING SEASON OF 1932.

GENERAL DESCRIPTION OF WORK

Water master service was continued on North Cow Creek and its tributaries, during the 1932 season pursuant to the decree entered on April 29, 1932 by the Superior Court of Shasta County, California, and a subsequent petition, signed by certain of the water users, filed with the Division of Water Resources requesting that water master service be supplied.

Water master service was commenced on June 1, 1932 by the supervising water master and was terminated on September 30, 1932. During the period from July 1, 1932 to September 20, 1932, J. W. McPartland acted in the capacity of water master.

All diversions on North Cow Creek, and its tributaries, were opened at times during the 1932 season, except the John Rutherford diversion. The Ellerkamp Ditch was not opened until July.

A surplus of water existed during the month of June and the total water supply did not diminish to the point where it was necessary to commence rotation until July 9th. In the last month of the season the water supply remained nearly constant with little water available over and above that necessary for domestic and gardening purposes.

DISCUSSION OF RESULTS FOR 1932 SEASON

The precipitation at Redding and McCloud for the seasonal year October 1, 1931 to September 30, 1932 has been compared with the precipitation during the preceeding nine 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. It will be noted that the seasonal precipitation in 1931-1932 was about 87 per cent of the average mean precipitation.

Tables 2, 3 and 4 are tabulations of the net available water supplies of Cedar Creek, Mill Creek and North Cow Creek, respectively, during the 1932 season. Plates 1, 2 and 3, at the end of this report, graphically show the water supplies of Tables 2, 3 and 4, respectively, and compares them with the like supplies for 1927.

Table 5 is a tabulation of the daily discharge of North Cow Creek at Phillips Bridge for 1932.

Table 6 is a tabulation of the daily discharge of North Cow Creek at Ingot for 1932.

Table 7 is a tabulation in rotation periods of the average combined diversions from North Cow Creek, Cedar Creek and Mill Creek in cubic feet per second. This table also shows the percent of the full allotments delivered.

Table 8 is a tabulation of the acres irrigated, nature of the crops thereon and the yield thereof as reported by certain of the water users.

During the 1932 season the following measuring devices were installed.

DITCH	DEVICE	SIZE
Frisbie-Dozier	Rectangular Weir	18 inch
Eldridge Upper	Rectangular Weir	18 inch
Eldridge Lower	Rectangular Weir	18 inch
Welsh and Strayer	2 Parshall Flumes	12 inch each.

The double installation of Parshall Flumes in the Welsh and Strayer Ditch served the additional purpose of dividing the water in the ditch between users on that ditch and users on the Excelsior Ditch who now

divert from Mill Creek through the Welsh and Strayer Ditch.

Owing to the Bishop Dam washing out the Bishop Ditch from Cedar Creek diverted little water during June until the dam was rebuilt.

The flow of North Cow Creek diminished to a point during August where domestic and garden water was available and little or no water was available for general irrigation for the balance of the 1932 season.

The loss in the enlarged Excelsior Ditch gradually decreased during the season, so that with spring flow collected through its course, the flow delivered at the Rose Ranch in September was slightly more than 5.00 cubic feet per second.

A shortage in the water supply of Cedar Creek during August and September left the Hadley Ranch with no water available for irrigation due to the heavy channel loss.

CONTROVERSIES

No controversies worthy of special mention occurred during the 1932 season.

RECOMMENDATIONS

Temporary measuring devices which have been installed in some of the ditches should be replaced by Parshall Measuring flumes at the earliest convenient date.

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
1930 - 31	0.58	2.65	1.87	7.79	3.52	2.58	0.75	0.60	3.25	0.00	0.00	0.40	23.99
1931 - 32	3.16	2.41	12.74	2.65	1.47	2.12	2.75	3.80	0.22	0.17	0.00	0.00	31.49
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 DIVERSIONS IN CUBIC FEET
PER SECOND FROM CEDAR CREEK FOR THE PERIOD
JUNE 1st TO SEPTEMBER 30, 1932.

Day	June	July	August	September	
1	10.0	7.00	1.70	0.80	
2	9.80	7.00	1.70	.80	
3	9.80	7.00	1.60	.80	
4	9.60	6.90	1.50	.80	
5	9.60	6.70	1.50	.80	
6	9.40	6.40	1.40	.80	
7	9.40	6.00	1.40	.80	
8	9.30	5.70	1.40	.80	
9	9.10	5.40	1.40	.80	
10	9.00	5.20	1.30	.80	
11	8.90	5.00	1.30	.80	
12	8.80	4.60	1.30	.80	
13	8.70	4.20	1.20	.80	
14	8.60	4.00	1.20	.80	
15	8.50	3.80	1.20	.80	
16	8.40	3.50	1.00	.80	
17	8.30	3.50	1.00	.80	
18	8.20	3.50	1.00	.80	
19	8.10	3.50	1.00	.80	
20	8.00	3.50	.80	.80	
21	7.90	3.50	.80	.80	
22	7.70	3.50	.80	.80	
23	7.60	3.50	.80	.80	
24	7.60	3.00	.80	.80	
25	7.60	2.80	.80	.80	
26	7.50	2.50	.80	.80	
27	7.50	2.20	.80	.80	
28	7.30	2.00	.80	.80	
29	7.30	1.90	.80	.80	
30	7.20	1.70	.80	.80	
31	—	1.70	.80	—	
Total Sec. Ft. Days	254.7	103.7	34.7	24.	4 month Period
Mean Sec. Ft.	8.49	3.34	1.12	0.80	3.42
Max. Sec. Ft.	10.0	7.00	1.70	0.80	10.0
Min. Sec. Ft.	7.20	1.70	0.80	0.80	.80
Total Ac. Ft.	505.	206.	69.	47.	827.

TABLE 5

ESTIMATED COMBINED DAILY DIVERSIONS IN CUBIC FEET
PER SECOND FROM MILL CREEK FOR THE PERIOD
JUNE 1st TO SEPTEMBER 30, 1952

Day	June	July	August	September	
1	8.00	6.00	5.50	5.00	
2	8.00	6.00	5.50	5.00	
3	8.00	6.00	5.50	5.00	
4	8.00	6.00	5.50	5.00	
5	7.70	6.00	5.50	5.00	
6	7.70	6.00	5.50	5.00	
7	7.70	6.00	5.30	5.00	
8	7.50	6.00	5.30	5.00	
9	7.50	6.00	5.30	5.00	
10	7.50	6.00	5.30	5.00	
11	7.30	5.30	5.30	5.00	
12	7.30	5.80	5.30	5.00	
13	7.30	5.70	5.20	5.00	
14	7.00	5.70	5.20	5.00	
15	7.00	5.50	5.20	5.00	
16	7.00	5.50	5.20	5.00	
17	7.00	5.50	5.20	5.00	
18	6.80	5.50	5.20	5.00	
19	6.80	5.50	5.00	5.00	
20	6.50	5.50	5.00	5.00	
21	6.50	5.50	5.00	5.00	
22	6.50	5.50	5.00	5.00	
23	6.20	5.50	5.00	5.00	
24	6.20	5.50	5.00	5.00	
25	6.00	5.50	5.00	5.00	
26	6.00	5.50	5.00	5.00	
27	6.00	5.50	5.00	5.00	
28	6.00	5.50	5.00	5.00	
29	6.00	5.50	5.00	5.00	
30	6.00	5.50	5.00	5.00	
31		5.50	5.00		
Total Sec. Ft. Days	209.	176.5	161.	150.	4 month period
Mean Sec. Ft.	6.63	5.70	5.20	5.00	5.70
Max. Sec. Ft.	8.00	6.00	5.50	5.00	8.00
Min. Sec. Ft.	6.00	5.50	5.00	5.00	5.00
Total Ac. Ft.	414.	350.	319.	297.	1380.

TABLE 4

ESTIMATED COMBINED DAILY DIVERSIONS IN CUBIC FEET
PER SECOND FROM NORTH COW CREEK AND TRIBUTARIES
(EXCLUDING MILL CREEK AND CEDAR CREEK)
FOR THE PERIOD JUNE 1st TO SEPTEMBER 30, 1932.

Day	June	July	August	September	
1	50.0	26.0	13.5	8.50	
2	49.5	25.0	13.5	8.50	
3	49.0	25.0	11.1	8.60	
4	48.5	24.0	10.4	8.60	
5	48.0	24.0	9.90	8.60	
6	47.5	22.5	9.60	8.60	
7	47.0	21.0	9.60	8.60	
8	46.5	20.0	9.60	8.60	
9	46.0	18.5	9.60	8.60	
10	45.5	18.5	9.60	8.50	
11	45.0	18.5	9.60	8.50	
12	44.5	18.0	9.60	8.50	
13	44.0	16.0	9.10	8.50	
14	43.5	15.0	9.10	8.50	
15	43.0	14.0	9.10	8.50	
16	42.5	13.5	9.10	8.50	
17	42.0	13.5	9.10	8.60	
18	41.0	13.5	9.00	8.60	
19	41.0	13.5	9.00	8.60	
20	40.0	13.5	8.60	8.60	
21	36.0	13.5	8.60	8.60	
22	33.0	13.5	8.60	8.60	
23	31.0	13.7	8.60	8.60	
24	30.0	13.7	8.60	8.50	
25	29.0	13.7	8.60	8.50	
26	28.0	13.7	8.60	8.50	
27	27.0	13.7	8.50	8.50	
28	27.0	13.7	8.50	8.50	
29	26.0	13.7	8.50	8.50	
30	26.0	13.5	8.50	8.50	
31	— —	13.5	8.50	— —	
Total Sec. Ft. Days	1197.	523.	291.8	256.4	4 months Period
Mean Sec. Ft.	39.9	16.9	9.41	8.55	18.7
Max. Sec. Ft.	50.0	26.0	13.5	8.60	50.
Min. Sec. Ft.	26.0	13.5	8.50	8.50	8.5
Total Ac. Ft.	2370.	1040.	579.	508.	4500.

TABLE 5

CONTINUOUS RECORDS OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF NORTH COW CREEK AT PHILLIPS BRIDGE FOR THE PERIOD JUNE 1st TO SEPTEMBER 30, 1932.

Day	June	July	August	September	
1	35.0	10.6	7.00	5.80	
2	34.5	10.3	7.20	6.00	
3	34.0	9.90	7.20	6.00	
4	33.5	8.60	7.20	6.10	
5	33.0	7.90	6.80	6.10	
6	32.5	8.60	7.00	6.20	
7	32.0	8.20	7.20	6.30	
8	31.5	7.90	6.80	6.30	
9	31.0	7.50	6.80	6.30	
10	30.5	7.50	7.00	6.30	
11	30.0	7.50	7.20	6.40	
12	29.5	7.10	7.20	6.40	
13	29.0	8.20	7.20	6.30	
14	28.5	8.20	6.80	6.30	
15	28.0	7.90	7.00	6.20	
16	27.5	7.90	7.20	6.20	
17	27.0	7.90	7.20	6.30	
18	26.5	8.00	7.00	6.50	
19	26.0	8.00	7.20	6.50	
20	25.0	7.90	7.30	6.50	
21	23.0	7.20	7.20	6.50	
22	20.0	7.00	7.20	6.50	
23	17.5	7.20	7.00	6.30	
24	15.0	7.30	6.70	6.30	
25	13.0	7.50	6.50	6.50	
26	12.0	7.50	6.20	6.50	
27	11.2	7.20	6.30	6.40	
28	11.6	6.80	6.20	6.40	
29	11.4	6.80	6.00	6.50	
30	11.0	7.00	6.00	6.50	
31	-- -	7.00	6.00	- --	
Total Sec. Ft. Days	750.	244.1	212.8	189.4	4 month period
Mean Sec. Ft.	25.0	7.88	6.86	6.31	11.5
Max. Sec. Ft.	35.0	10.6	7.30	6.50	35.0
Min. Sec. Ft.	11.0	6.80	6.00	5.80	5.80
Total Ac. Ft.	1490.	484.	422.	376.	2770.

NOTE: Discharge prior to June 27 and after September 20 estimated.

TABLE 6

CONTINUOUS RECORDS OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF NORTH COW CREEK AT INGOT FOR THE PERIOD JUNE 1st TO SEPTEMBER 30th, 1952

Day	June	July	August	September	
1	30.0	9.90	5.70	5.00	
2	29.0	9.50	5.50	4.00	
3	29.0	7.50	7.30	4.30	
4	28.5	6.50	4.30	4.10	
5	28.0	5.70	4.00	4.10	
6	27.5	9.20	4.60	5.00	
7	27.0	7.50	4.30	5.00	
8	26.5	6.60	3.60	4.50	
9	26.5	7.50	3.40	4.30	
10	26.0	8.10	4.30	4.00	
11	25.5	6.60	5.10	4.30	
12	25.0	5.40	5.10	4.10	
13	24.5	5.00	5.70	3.90	
14	24.0	6.10	5.70	3.90	
15	24.0	7.50	5.00	3.60	
16	23.5	8.10	4.60	3.90	
17	23.0	6.20	5.70	4.30	
18	22.5	6.60	6.60	4.10	
19	22.0	6.20	5.70	4.50	
20	21.0	6.60	6.30	4.50	
21	19.5	6.20	6.60	4.50	
22	17.0	6.20	5.90	4.30	
23	14.7	6.60	5.40	4.30	
24	12.8	5.00	5.40	4.10	
25	11.0	4.30	5.10	4.10	
26	10.2	7.50	5.10	4.30	
27	10.0	6.60	4.70	4.30	
28	9.90	7.30	5.60	4.50	
29	9.60	6.50	4.50	4.50	
30	9.90	5.40	4.30	4.50	
31	- --	5.40	4.50	- --	
Total Sec. Ft. Days	637.6	209.5	158.	128.8	4 months Period
Mean Sec. Ft.	21.3	6.8	5.1	4.3	9.4
Max. Sec. Ft.	30.0	9.90	7.30	5.00	30.0
Min. Sec. Ft.	9.60	4.30	3.40	3.60	3.40
Total Ac. Ft.	1260.	415.	313.	255.	2240.

NOTE: Discharge prior to June 27 and after September 20 estimated.

TABLE 7

WATER DELIVERIES ON NORTH COW CREEK AND TRIBUTARIES
1932 SEASON

Period 1932	Average Combined Diversions Cubic Feet per Second			Per cent of Full Irrigation Allotments Delivered		
	North Cow Creek	Mill Creek	Cedar Creek	North Cow Creek	Mill Creek	Cedar Creek
6/1 to 6/10	38.0	7.10	9.50	100	100	100
6/10 to 6/20	33.0	7.10	8.50	100	100	100
6/20 to 6/25	31.0	6.50	7.60	100	100	100
6/25 to 7/1	28.0	6.00	7.30	100	100	100
7/1 to 7/9	25.5	6.00	6.50	100	100	95
7/9 to 7/16	18.7	5.80	4.50	75	100	65
7/16 to 7/23	13.3	5.50	3.50	50	100	51
7/23 to 7/30	13.6	5.50	3.00	50	100	43
7/30 to 8/6	9.90	5.50	1.50	32	100	25
8/6 to 8/13	9.60	5.30	1.30	30	100	19
8/13 to 8/20	9.30	5.20	1.00	28	100	14
8/20 to 8/27	8.60	5.00	0.70	25	100	10
8/27 to 9/3	8.50	5.00	0.50	25	100	7
9/3 to 9/10	8.60	5.00	0.50	25	100	7
9/10 to 9/17	8.50	5.00	0.50	25	100	7
9/17 to 9/24	8.60	5.00	0.50	25	100	7
9/24 to 9/30	8.50	5.00	0.50	25	100	7
Average 6/1 to 9/30	16.5	5.60	3.40	54	100	44

NOTE: Average combined allotment on North Cow Creek, including average minimum flow of 1.77 c.f.s. is 21.27 c.f.s.

Average combined allotment on Mill Creek is 5.00 c.f.s.

Average combined allotment on Cedar Creek is 6.90 c.f.s.

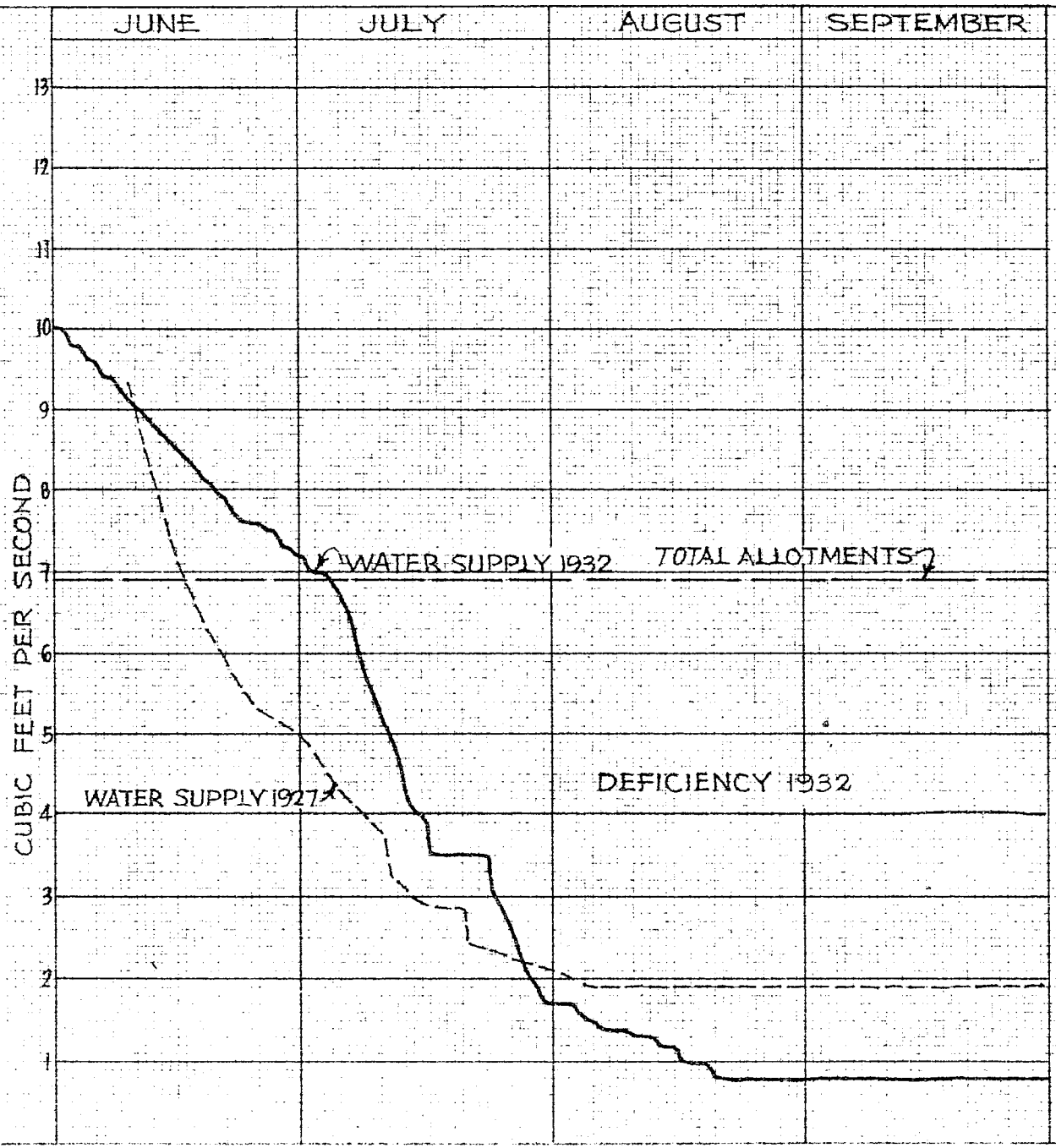
TABLE 8

CROP PRODUCTION ON LANDS IRRIGATED FROM NORTH COW CREEK
AND THREEFARING - 1932 SEASON

Owner	Crop	Acres	Total Yield		Yield per Acre	
			Tons	Sacks	Tons	Sacks
Eldridge, G. R.	Meadow Hay	81	80		1.00	
	Garden	0.5	Fair			
	Stock	Sheep 100				
Hadley, J. G.	Grain Hay	15	20		1.33	
	Garden	0.1	Fair			
	Stock	Cattle 30				
Olson, A., M., O. and C.	Alfalfa Hay	35	40		1.14	
	Garden	0.1		20		200.0
Plaetke, Emil	Meadow Hay	12	15		1.25	
	Mixed Grain Hay	23	25		1.09	
	Garden	2		17		8.5
	Stock	Cattle 4,	Horses 3			
Rozum, V. and B.	Alfalfa Hay	16	22		1.37	
	Grain Hay	12	8		0.67	
	Garden	0.5	Good			
Ward, R. A.	Alfalfa Hay	4	7		1.75	
	Grain Hay	15	15		1.00	
	Meadow Hay	25	13		0.52	
	Garden	0.5	Fair			
	Stock	Cattle 12,	Hogs 75			

PLATES

CODEX BOOK CO., INC., NEW YORK



HYDROGRAPHS OF CEDAR CREEK SHOWING WATER SUPPLY 1927-1932

PLATE 1

HYDROGRAPHS OF MILL CREEK SHOWING WATER SUPPLY 1927-1932

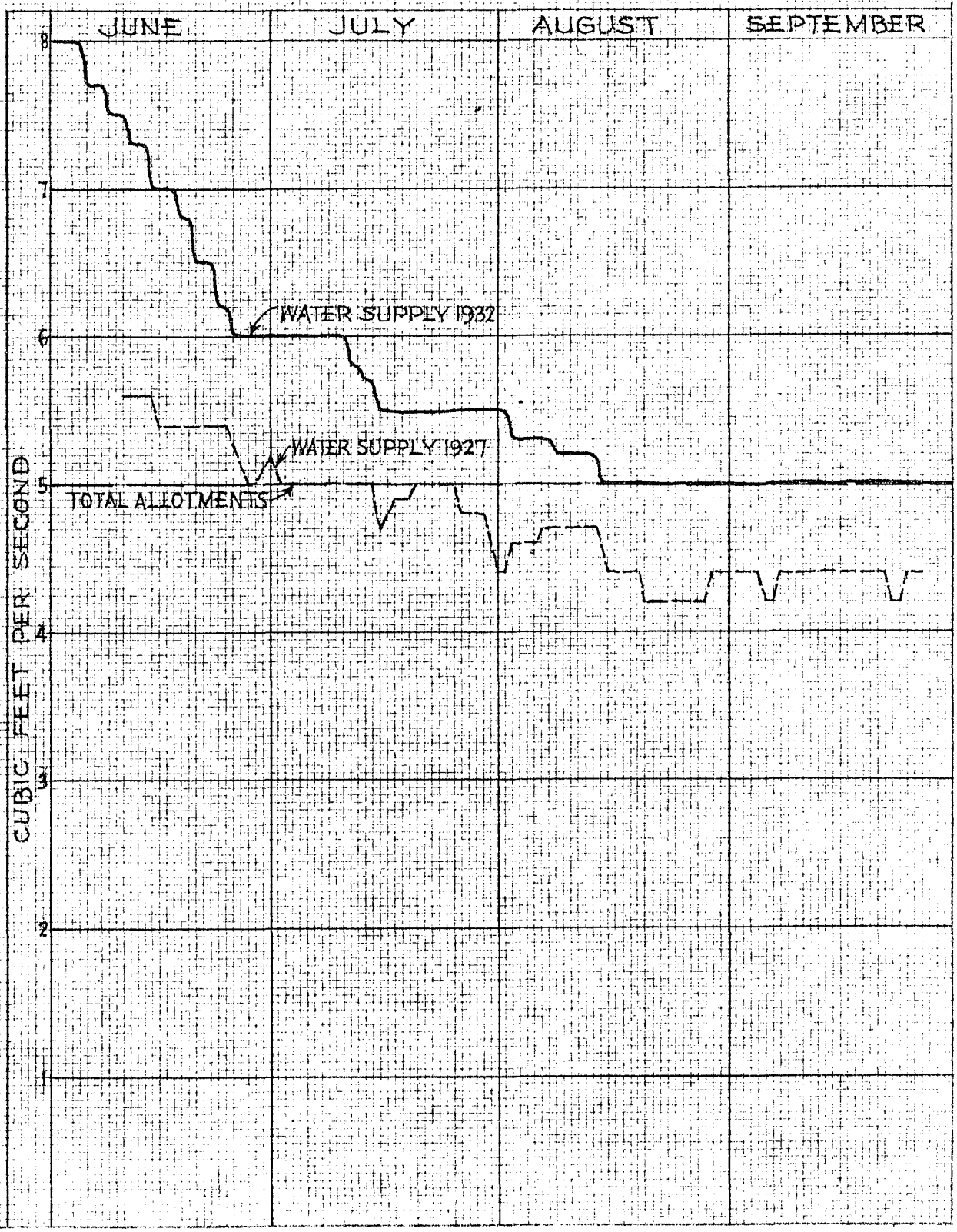


PLATE 2

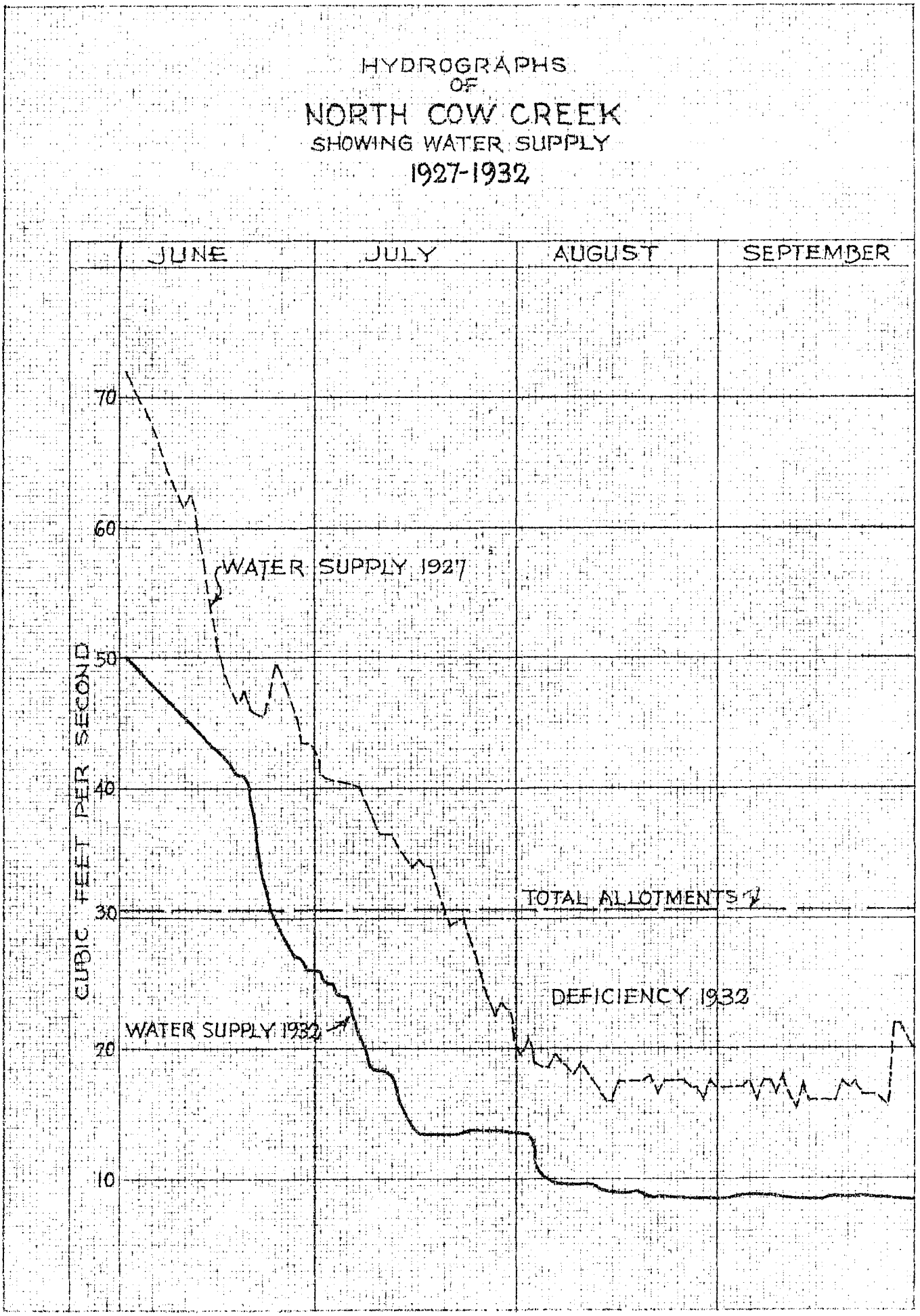

HYDROGRAPHS
OF
NORTH COW CREEK
SHOWING WATER SUPPLY
1927-1932
JUNE
JULY
AUGUST
SEPTEMBER
70
60
50
40
30
20
10
CUBIC FEET PER SECOND
WATER SUPPLY 1927
TOTAL ALLOTMENTS
DEFICIENCY 1932
WATER SUPPLY 1932

PLATE 3

STATE OF CALIFORNIA

DEPARTMENT OF PUBLIC WORKS

oOo

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 1932

oOo

By T. R. Simpson, Senior Hydraulic Engineer

oOo

Sacramento, California
February 1933.

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1. HYDROGRAPHS of Clover Creek showing water supply - 1927 and 1932.

STATE OF CALIFORNIA

Department of Public Works

SACRAMENTO

DIVISION OF WATER RESOURCES
401 PUBLIC WORKS BUILDING

EDWARD HYATT, STATE ENGINEER
CHIEF OF DIVISION

February 16, 1933

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

Attention: Mr. Gordon Zander, Supervising Hydraulic Engineer.

Dear Sir:

Herewith is submitted a report covering the water master service on Clover Creek, in Shasta County, California, during the 1932 season.

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 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 data are included.

Respectfully submitted,

T. Russel Simpson

Senior Hydraulic Engineer.

ORGANIZATION

Earl Lee Kelly	Director of Public Works
Edward Hyatt	State Engineer
Harold Conkling	Deputy State Engineer

Gordon Zander	Supervising Hydraulic Engineer

T. Russel Simpson	Senior Hydraulic Engineer
J. W. McPartland	Water Master

REPORT ON

WATER MASTER SERVICE

ON

CLOVER CREEK AND TRIBUTARIES

SHASTA COUNTY, CALIFORNIA

DURING SEASON OF 1932

GENERAL DESCRIPTION OF WORK

Water master service was continued on Clover Creek during the 1932 season, pursuant to the provisions of the stipulation for 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, 1932, by the supervising water master and was terminated on September 30, 1932. During the period between July 1 and September 20, 1932, J. W. McPartland acted in the capacity of water master.

All diversions on Clover Creek were opened during the 1932 season, however, in the early portion of the season those of Leslie A. Yordy were not used.

During the 1932 period of water master service the water supply was marked by a surplus throughout the month of June and a deficiency, commencing the first week in July, for the balance of the period. The deficiency in water supply gradually increased until the end of August when the supply became practically constant for the remainder of the season with 40% of full allotments being delivered.

DISCUSSION OF RESULTS FOR SEASON

The precipitation at Redding and at McCloud for the seasonal year, October 1, 1931 to September 30, 1932, has been compared with the precipitation during the preceding nine 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 1931-32 was about 77% of the average mean precipitation.

Table 2 is a tabulation of the net available water supply of Clover Creek and its tributaries during the 1932 season. Plate 1 submitted at the end of this report graphically shows the water supply of Table 2 and compares it with the like supply for the 1927 season.

Table 3 is a tabulation of the daily discharge of Clover Creek at the Fern Bridge register station for the 1932 season.

Table 4 is a tabulation in 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.

Measuring devices installed in ditches on Clover Creek and its tributaries remain as reported in the 1930 water master report on that stream.

The authority for distribution of water during the 1932 season was contained in the stipulation for judgment in the Clover Creek litigation previously referred to.

R. M. Murphy, lessee of the Yordy Ranch, commenced the diversion of water through the Lower Yordy Ditch during the latter part of August thereby inaugurating resumption of use of the ditch after a non-use period extending more than five years. An amount in excess of the proportionate share of the available water supply was taken by Mr. Murphy on two occasions.

CONTROVERSIES

No controversies over diversions occurred during the 1932 water master period.

RECOMMENDATIONS

All temporary measuring devices installed in ditches from Clover Creek, and its tributaries, should be replaced as soon as convenient with permanent Parshall Measuring Flumes.

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
1930 - 31	0.58	2.65	1.87	7.79	3.52	2.58	0.75	0.60	3.25	0.00	0.00	0.40	23.99
1931 - 32	3.16	2.41	12.74	2.65	1.47	2.12	2.75	3.80	0.22	0.17	0.00	0.00	31.49
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, 1932.

Day	June	July	August	September	
1	33.0	24.0	12.0	9.80	
2	33.0	24.0	12.0	9.80	
3	33.0	24.0	12.0	9.80	
4	32.0	24.0	12.0	9.80	
5	32.0	20.0	12.0	9.80	
6	32.0	20.0	11.7	9.80	
7	31.0	20.0	11.7	9.80	
8	31.0	20.0	11.7	9.80	
9	31.0	20.0	11.7	9.80	
10	30.0	18.0	11.7	9.80	
11	30.0	18.0	11.5	9.80	
12	30.0	18.0	11.5	9.80	
13	30.0	18.0	11.5	9.80	
14	29.0	18.0	11.5	9.80	
15	29.0	18.0	11.5	9.80	
16	29.0	18.0	11.5	9.80	
17	28.0	16.5	11.5	9.80	
18	28.0	16.5	11.0	9.80	
19	28.0	16.5	11.0	9.80	
20	28.0	16.5	11.0	9.80	
21	28.0	16.5	11.0	9.80	
22	27.0	16.5	11.0	9.80	
23	27.0	16.5	11.0	9.80	
24	27.0	12.0	11.0	9.80	
25	27.0	12.0	10.3	9.80	
26	27.0	12.0	10.3	9.80	
27	26.0	12.0	10.3	9.80	
28	26.0	12.0	10.3	9.80	
29	26.0	12.0	10.3	9.80	
30	26.0	12.0	10.3	9.80	
31		12.0	9.80		
Total Sec. Feet Days	974.	533.5	348.6	294.	4 month Period
Mean Sec. Feet	32.5	17.2	11.2	9.80	17.7
Maximum Sec. Feet	33.0	24.0	12.0	9.80	33.0
Minimum Sec. Feet	26.0	12.0	9.80	9.80	9.80
Total Acre Feet	1930.	1060.	691.	583.	4260.

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 30th, 1932.

Day	June	July	August	September	
1	21.0	12.0	9.80	9.60	
2	21.0	12.0	9.80	9.40	
3	20.0	12.0	9.80	9.50	
4	20.0	12.0	9.80	9.50	
5	20.0	12.0	9.70	9.40	
6	19.0	12.0	9.80	9.40	
7	19.0	12.0	9.80	9.60	
8	19.0	11.5	9.70	9.40	
9	18.0	11.5	9.60	9.30	
10	18.0	11.5	9.80	9.40	
11	17.5	11.5	9.70	9.40	
12	17.5	11.5	10.0	9.40	
13	17.0	11.0	9.80	9.30	
14	17.0	11.0	9.60	9.40	
15	16.5	11.3	9.60	9.20	
16	16.5	11.3	9.60	8.80	
17	16.0	11.0	10.0	9.00	
18	16.0	10.7	10.2	9.00	
19	16.0	10.7	10.2	9.20	
20	15.5	10.7	10.0	9.20	
21	15.5	10.5	9.60	9.20	
22	15.5	10.3	9.60	9.10	
23	15.0	10.0	9.50	9.10	
24	15.0	10.0	9.80	9.00	
25	14.5	10.0	9.80	9.00	
26	14.0	10.3	9.60	9.00	
27	14.0	10.3	9.60	9.00	
28	13.5	10.2	9.40	9.00	
29	13.0	10.1	9.20	9.00	
30	13.0	9.80	9.40	9.00	
31	———	10.0	9.60	———	
Total Sec. Feet Days	503.5	340.7	299.4	276.8	4 month Period
Mean Sec. Feet	16.8	11.0	9.7	9.23	11.7
Maximum Sec. Feet	21.0	12.0	10.2	9.60	21.0
Minimum Sec. Feet	13.0	9.80	9.20	8.80	8.80
Total Acre Feet	998.	676.	594.	549.	2820.

Note: Discharge June 1 to July 11, inclusive, and September 24 to 30, inclusive, estimated.