

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RIGHTS

Harold Conkling, Chief of Division

REPORT
ON
WATER MASTER SERVICE
ON
CEDAR CREEK
MODOC COUNTY, CALIFORNIA
DURING SEASON OF 1928

By T. Russel Simpson, Assistant Hydraulic Engineer

Sacramento, California
April, 1929

TABLE OF CONTENTS

	<u>Page</u>
<u>LETTER OF TRANSMITTAL</u>	
Water Master to Chief of Division of Water Rights.	
<u>INTRODUCTION</u>	1
History since report for previous season	
<u>DISTRIBUTION OF WATER</u>	2
1. Functions of Water Master	2
2. Allotments Compared with Water Supply	2
3. Efficiency of Distribution	3
<u>RUN-OFF RECORDS</u>	4
<u>PRECIPITATION</u>	5
<u>USE OF WATER</u>	6
<u>CROPS</u>	8
<u>DISCUSSION OF RESULTS IN 1928</u>	9
<u>FINANCIAL STATEMENT</u>	10

TABLES:

1. Precipitation at Cedarville for Seasonal Year 1927-28 Compared with Mean Precipitation.
2. Character of Precipitation at Cedarville for Seasonal Year 1927-28 Compared with Mean.
3. Estimated Daily Discharge in Cubic Feet per Second, of Cedar Creek, Including Thoms Creek Water, above all Diversions - 1928.
4. Estimated Daily Discharge in Cubic Feet per Second of Thoms Creek Ditch on Thoms Creek at Head - 1928.
5. Estimated Daily Discharge in Cubic Feet per Second of McCulley Ditch on Cedar Creek at Head - 1928.

TABLE OF CONTENTS (Continued)

TABLES: (Continued)

6. Estimated Daily Discharge in Cubic Feet per Second of Sizer Ditch on Cedar Creek at Head - 1928.
7. Estimated Daily Discharge in Cubic Feet per Second of Fink Ditch on Cedar Creek at Head - 1928.
8. Estimated Daily Discharge in Cubic Feet per Second of Wallace Ditch on Cedar Creek at Head - 1928.
9. Estimated Daily Discharge in Cubic Feet per Second of Combined Toney Diversions from Cedar Creek - 1928.
10. Estimated Daily Discharge in Cubic Feet per Second of Street Ditch on Cedar Creek at Head - 1928.
11. Estimated Daily Discharge in Cubic Feet per Second of Acty Ditch on Cedar Creek at Head - 1928.
12. Estimated Daily Discharge in Cubic Feet per Second of Beebe Ditch on Cedar Creek at Head - 1928.
13. Estimated Daily Discharge in Cubic Feet per Second of Lower Channel of Cedar Creek below Beebe Ditch - 1928.
14. Use of Water in 1928 for Acreage Irrigated from Cedar Creek.

PLATES:

1. Hydrographs of Cedar Creek Above All Diversions 1926, 1927 and 1928.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
SACRAMENTO

Division of Water Rights
401 Public Works Building

April 1, 1929

Mr. Harold Conkling,
Chief of Division of Water Rights,
Sacramento, California

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

A report covering the water master service on Cedar Creek, in Modoc County, California, during the season of 1928, is submitted herewith.

This report includes a description of the regulation and distribution of the waters of Cedar Creek in accordance with the provisions of the decree entered, under date of February 15, 1923, by the Superior Court of the State of California, in and for the County of Modoc, in the case of W. E. Hill, et al., vs. Herman Acty, et al.; and the decree entered by the same court on March 22, 1901, in the case of D. H. Lighty vs. John R. Cook, et al.

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

Respectfully submitted,

T. Russel Simpson
Assistant Hydraulic Engineer.

REPORT ON
WATER MASTER SERVICE
ON CEDAR CREEK,
MODOC COUNTY, CALIFORNIA
DURING SEASON OF 1928

INTRODUCTION

The relative rights of the water users of Cedar Creek were established by a decree entered, under date of February 15, 1923, in the Superior Court of California, in and for the County of Modoc, in the case of W. E. Hill, et al., vs. Herman Acty, et al. The relative rights to the use of the water conveyed from Thoms Creek into the Cedar Creek water shed were determined by a decree of the same court under date of March 22, 1901, in the case of D. H. Lighty, vs. John R. Cook, et al. Copies of these decrees are on file in the office of the Division of Water Rights.

On July 16, 1927, an agreement was entered into by the Cedar Creek water users whereby the Division of Water Rights was authorized to appoint a water master to administer the waters of Cedar Creek during the 1928 irrigation season in accordance with the decrees above mentioned.

Mr. Paul V. Wheatley was appointed by the Division of Water Rights to act as water master on Soldier, Cedar, Owl and Emerson Creeks, all in Surprise Valley, during the 1928 season. Mr. Wheatley acted as water master from March 21st to June 7, 1928, after which he was relieved by Mr. L. C. Jopson, who served until July 25, 1928. The necessity for water master service on Cedar Creek had ceased by June 7, 1928, as the Mc Culley Ditch under first priority was taking the entire flow of Cedar Creek at that time.

DISTRIBUTION OF WATER

1. Functions of Water Master

The functions of the water master included supervision of the distribution of the natural flow of Cedar Creek and of the foreign water brought into the Cedar Creek watershed from Thoms Creek in accordance with the allotments and priorities provided in the two decrees described hereinabove in the "Introduction" to this report. The water master also collected hydrographic and other pertinent data incidental to the water master service. The authority of the water master was provided in the agreement dated July 16, 1927, described in the preceding chapter.

In order to obtain information as to the net water supply available for delivery, an automatic water stage recorder was installed on March 25, 1928, at the concrete weir in Cedar Creek located at the mouth of the canyon above all diversions.

Records were kept of the water supply of Cedar Creek, of the inflow of foreign water from Thoms Creek, and of the distribution of the water among the various diversions from March 26th to June 1, 1928. Observations were made at frequent intervals of the results of irrigation. The measuring devices on the diversions consisted of either rectangular or Cipolletti fully contracted weirs.

2. Allotments Compared with Water Supply

The Thoms Ditch utilized for conveyance of foreign water from Thoms Creek into the Cedar Creek watershed was not opened until April 28, 1928. The capacity of this ditch during the current season was 2.7 cubic feet per second. Water was available in Thoms Creek to fill this ditch to capacity until May 16th. During the following two weeks the flow diminished very rapidly and entirely failed during the first week in June.

There was sufficient water in Cedar Creek to fully satisfy the McCulley Ditch with first priority of 5.0 cubic feet per second until June 1st. After June 1st, the McCulley Ditch diverted the entire flow of Cedar Creek, excluding the foreign water brought in from Thoms Creek.

The McCulley Ditch under first priority did not open up to a full head until April 15th, consequently prior to April 15th, there was ample water available for all diversions of second priority. There was some surplus water over and above first and second priorities for only four days after April 15th, during which time the third priorities received water. There was water available for the rights under the third priority prior to April 15th.

3. Efficiency of Distribution

A fair degree of efficiency of distribution in accordance with the two decrees mentioned hereinbefore was obtained during the 1928 season. The flashy character of the flow of Cedar Creek during the irrigation season makes it difficult to secure a high degree of efficiency of distribution. The measuring devices on the diversions from Cedar Creek consist of weirs which are not adaptable to a stream of this character that carries considerable silt and debris. As the weirs wear out, they should be replaced with Improved Venturi Flumes.

RUN-OFF RECORDS

The standard method of collecting run-off records, as is briefly described in previous water master reports on Cedar Creek , was used in the water master service during the 1928 season.

The control at the measuring station on Cedar Creek at the mouth of the canyon above all diversions consists of a five foot Cipolletti weir which has been silted up on the front face to the level of the weir crest. The device therefore does not function as a true weir but makes a good artificial control for a register station. An automatic water stage recorder was installed above the weir on March 25, 1928. Continuous records were kept of the water supply at this point from March 26th to June 1, 1928. These records have been tabulated in Table 3 of this report. These records include the foreign water brought in from Thoms Creek.

Records were kept of the foreign water brought into the Cedar Creek watershed from Thoms Creek. These records have been tabulated in Table 4. The difference between the records in Table 3 and Table 4 shows the natural flow of Cedar Creek.

The hydrographs on Plate 1 of this report graphically show the relation between the water supplies of Cedar Creek in 1926, 1927, and 1928. The water supply in 1927, was nearly normal, whereas in 1926, the run-off conditions were extremely sub-normal. The water supply in 1928, was between that in 1926 and 1927.

PRECIPITATION

The precipitation at Cedarville, records of which are kept by the United States Weather Bureau, for the seasonal year commencing October 1, 1927, and terminating on September 30, 1928, has been compared with the average mean precipitation in Table 1 of this report.

It will be noted from Table 1 that the total precipitation for the seasonal year 1927-28 was 85.2 per cent of the mean annual precipitation. It will be further noted that more than one-half of the total precipitation for the seasonal year 1927-28, occurred in November and March, rather than being uniformly distributed.

Most of the season of snowfall on the Warner Range of Mountains is normally included in the period from December first to April first. The most desirable snow pack, that is, snow which will usually pack hard and melt late in the spring occurs during this period. In average years, approximately 50 per cent of the total annual precipitation at Cedarville occurs during this four month period and more than three-quarters of this is in the form of snow. During this four month period in 1927-28, the precipitation was about 85 per cent of normal for the period, and less than one-quarter of this amount occurred in the form of snow. This largely accounts for the marked deficiency in the run-off of Cedar Creek after the latter part of May, 1928.

The distribution and character of the precipitation lead to the conclusion that the run-off of Cedar Creek during the general irrigation season in 1928, was probably farther below normal than the total seasonal precipitation would indicate.

USE OF WATER

Continuous records were kept of the disposition made of the flow of Cedar Creek during the period between March 26th and June 1, 1928. Brief descriptions of the manner of collecting the records of use of water have been given in previous water master reports on Cedar Creek. The mean daily diversions of the various ditches have been tabulated in Tables 5 to 13, inclusive, submitted at the end of this report.

The areas irrigated under the various diversion systems, during the period of water master service in 1928, were estimated by the water master and have been tabulated in Table 14. The gross use of water under each diversion system, during the irrigation season in 1928, has been calculated in acre feet per acre and in acres irrigated per cubic foot per second, and has also been tabulated in Table 14. Table 14 also shows the length of the irrigation season for each diversion system.

It will be noted from Table 14 that the combined average rate of gross use during the 1928 season, for the acreage irrigated in 1928, was approximately one cubic foot per second to 49 acres.

A comparison of the use of water in 1928 with that in 1927, which year is thought to be near to normal, follows:

Description	1928	1927	Use in 1928 expressed in per cent of 1927
Average number of days in irrigation season	60	73	82%
Total acre feet diverted	2349	2588	91
Acreage irrigated	958	1178	81
Use in acre feet per acre	2.45	2.2	111
Use in acres per cubic foot per second	49	66	74

The above table indicates that more water was used per acre irrigated in 1928 as compared with that in 1927 with a duty correspondingly lower. The total amount of water used was about 9 per cent less in 1928, however, and the length of season was about 18 per cent shorter in 1928. There was about 19 per cent less land irrigated in 1928 than in 1927.

CROPS

A crop census was not taken of the area irrigated from Cedar Creek in 1928. It was observed that the general condition of the hay crops and pastures was not as satisfactory in 1928, as in 1927, due to an earlier failure of the water supply in 1928.

The alfalfa seed crop was about normal in 1928, as compared with an exceedingly heavy crop in 1927. In general, good crops were raised on the house gardens and orchards irrigated in Cedarville in 1928, by the McCulley Ditch. This is the only ditch utilized for irrigation of gardens and orchards.

DISCUSSION OF RESULTS IN 1928

The total water supply of Cedar Creek in 1928, as tabulated in Table 3 of this report, has been compared with that in 1927, as tabulated in Table 1 of the report for the previous season, in the following table:

Period	Water Supply - Cu. Ft. Per Sec.		Flow in 1928
	1928	1927	Expressed in per cent of Flow- 1927
April 1 to 10	16.5	16.7	99
April 11 to 20	19.6	15.4	127
April 21 to 30	19.3	28.9	67
May 1 to 10	20.2	22.2	91
May 11 to 20	14.8	19.6	75
May 21 to 30	10.8	14.4	75
Total	16.9	19.5	87

The above table indicates that the average flow in 1928, was about 87 per cent of that in 1927, and that the deficiency was more marked after May 11th. Similar studies made on Owl, Emerson and Soldier Creeks indicate that the flows of these streams in 1928, were from 74 to 77 per cent of that in 1927.

Previous studies that have been made indicate that the run-off in Surprise Valley was close to normal in 1927. It is therefore concluded that the run-off of Cedar Creek in 1928, was at least 13 per cent below normal.

The hydrographs on the plate submitted at the end of this report indicate that full allotments were available from Cedar Creek for 8 days in 1928, as compared with 16 days in 1927. Full allotments were not available at any time in 1926.

FINANCIAL STATEMENT

The investigation and water master service during the 1928 season on Soldier, Emerson, Owl, and Cedar Creeks were financed partly by subscription from the water users and partly by contribution by the Division of Water Rights.

No segregation was made in the expense of conducting the work in 1928, on these four stream systems in Surprise Valley, because it was handled as a unit.

The total unit cost of the work in 1928, on these four stream systems was \$0.23 per acre of irrigated land.

A financial statement in which receipts and disbursements are itemized, follows:

FINANCIAL STATEMENT
SURPRISE VALLEY WATER DISTRIBUTION
1928 SEASON

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RECEIPTS

Contributed by water users on Soldier Creek	\$300.00	
Contributed by water users on Owl Creek	233.00	
Contributed by water users on Emerson Creek	299.95	
Contributed by water users on Cedar Creek	200.00	
Contributed by Division of Water Rights	<u>800.00</u>	\$1,832.95

DISBURSEMENTS

Salaries	\$1269.35	
Board and Lodging	161.18	
Travel Expense	171.50	
Automobile Expense	200.92	
Printing and Blueprinting	<u>30.00</u>	\$1,832.95

TABLES

TABLE 1

PRECIPITATION AT CEDARVILLE FOR SEASONAL YEAR
1927-28 COMPARED WITH MEAN PRECIPITATION
(Records from 1894 to 1928)

Month	Mean Precipitation at Cedarville Inches	Precipitation for Seasonal Year 1927-28	
		In Inches	In Per Cent of Mean Total
September	0.53	0.32	2.5
October	1.08	0.86	6.7
November	1.71	2.87	22.5
December	1.62	0.86	6.7
January	1.74	0.92	7.2
February	1.56	0.75	5.9
March	1.47	2.93	23.0
April	0.90	0.81	6.4
May	1.07	0.00	0.0
June	0.62	0.55	4.3
July	0.26	0.00	0.0
August	0.19	0.00	0.0
Total	12.75	10.87	85.2

TABLE 2

CHARACTER OF PRECIPITATION AT CEDARVILLE FOR SEASONAL YEAR 1927-28
 COMPARED WITH MEAN

Month	Mean Precipitation				Precipitation 1927-28			
	Total Inches	Snow Inches	Rain Inches	Snow Expressed: in Per Cent of Total	Total Inches	Snow Inches	Rain Inches	Snow Expressed: in Per Cent of Total
December	1.62	1.20	0.42	74%	0.86	0.86	0.00	100%
January	1.74	1.40	0.34	80	0.92	.40	0.52	44
February	1.56	1.10	0.46	70	0.75	0.00	0.75	0
March	1.47	1.20	0.27	82	2.93	0.00	2.93	0
Total	6.39	4.90	1.49	77%	5.46	1.26	4.20	23%

Note: 10 inches of snow assumed equal to 1 inch of rain.

TABLE 3

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND,
OF CEDAR CREEK, INCLUDING THOMS CREEK WATER,
ABOVE ALL DIVERSIONS - 1928

Day	March	April	May
1			21.6
2		21.9	21.6
3		18.9	21.6
4		18.9	22.7
5		17.1	24.6
6		17.1	21.6
7		17.5	19.2
8		18.0	17.1
9		18.0	16.5
10		18.0	16.0
11		18.0	16.0
12	R	18.9	15.7
13	O	18.9	15.3
14	C	18.9	15.0
15	C	18.9	14.8
16	E	23.1	14.8
17	R	21.9	14.6
18		20.0	14.3
19	N	18.9	14.0
20	O	18.9	13.2
21		18.9	13.1
22		18.9	13.0
23		18.9	12.4
24		18.9	12.2
25		18.9	12.0
26	23.9	18.9	10.1
27	23.9	18.9	10.0
28	25.2	19.9	9.4
29	25.2	19.9	8.3
30	23.9	21.1	7.2
31	23.1	- - -	6.2
Total Sec.			67 day
Ft. Days	145.2*	555.0	464.1
Mean			
Sec. Feet	24.20*	18.50	14.97
Maximum			
Sec. Feet	25.2*	23.1	24.6
Minimum			
Sec. Feet	23.1*	17.1	6.2
Total			
Acre Feet	287.9*	1100.6	920.3
			2308.8

* 6 day period.

TABLE 4

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
THOMS CREEK DITCH ON THOMS CREEK AT HEAD - 1928

Day	March	April	May
1		0.0	
2			2.7
3			2.7
4			2.7
5			2.7
6			2.7
7			2.7
8			2.7
9			2.7
10			2.7
11			2.7
12	R		2.7
13	O		2.7
14	R	W	2.7
15	C	O	2.7
16	R	L	2.7
17	E	F	2.5
18			2.2
19			1.9
20	N	N	1.9
21			1.8
22			1.7
23			1.6
24			1.4
25			1.2
26	0.0		1.1
27		0.0	1.0
28		1.0	0.9
29		1.0	0.8
30		2.2	0.7
31	0.0	- - -	0.6
Total Sec.			67 Day
Ft. Days	0.0*	4.2	61.8
Mean			
Sec. Feet	0.0*	0.14	1.99
Maximum			
Sec. Feet	0.0*	2.2	2.7
Minimum			
Sec. Feet	0.0*	0.0	0.6
Total			
Acre Feet	0.0*	8.3	122.7
			131.0

TABLE 5

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
McCULLLEY DITCH ON CEDAR CREEK AT HEAD - 1928

Day	March	April	May	
1		1.5	4.8	
2		1.5	4.8	
3		1.5	4.8	
4		1.5	4.8	
5		1.5	4.8	
6		1.5	4.8	
7		1.5	4.8	
8		1.5	4.8	
9		1.5	4.8	
10		1.5	4.8	
11		1.8	4.8	
12		1.8	4.8	
13		1.8	4.8	
14	D	1.8	4.8	
15	R	4.8	4.8	
16	O	4.8	4.8	
17	C	4.8	4.8	
18	E	4.8	4.8	
19	H	4.8	4.8	
20		4.8	4.8	
21	O	4.8	4.8	
22	N	4.8	4.8	
23		4.8	5.0	
24		4.8	5.0	
25		4.8	5.0	
26	1.5	4.8	5.0	
27	1.5	4.8	5.0	
28	1.5	4.8	5.0	
29	1.5	4.8	5.0	
30	1.5	4.8	5.0	
31	1.5	- -	5.0	
Total Sec.				67 Day
Feet Days	9.0*	99.0	150.6	Period
Mean				
Sec. Feet	1.50*	3.30	4.86	3.86
Maximum				
Sec. Feet	1.5 *	4.8	5.0	5.0
Minimum				
Sec. Feet	1.5 *	1.5	4.8	1.5
Total				
Acre Feet	17.8*	196.3	298.6	512.7

* 6 day period.

TABLE 6

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
SIZER DITCH ON CEDAR CREEK AT HEAD - 1928

Day	March	April	May	
1			2.3	
2		1.1	2.3	
3		1.1	2.3	
4		1.1	2.4	
5		1.1	2.4	
6		1.1	2.3	
7		1.1	2.1	
8		1.1	1.9	
9		1.1	1.9	
10		1.1	1.8	
11	NO RECORD	1.1	1.8	
12		1.1	1.8	
13		1.1	1.8	
14		1.1	1.8	
15		1.1	1.7	
16		1.1	1.7	
17		1.1	1.7	
18		1.1	1.6	
19		1.0	1.4	
20		1.0	1.4	
21		1.0	1.3	
22		1.0	1.3	
23		1.0	1.7	
24		1.0	1.7	
25		1.0	1.7	
26	0.0	1.0	2.1	
27	0.0	1.0	2.0	
28	0.0	1.5	1.7	
29	0.0	1.5	1.2	
30	0.0	2.1	1.1	
31	0.0	- -	0.6	
Total Sec.				67 Day
Feet Days	0.0*	32.8	54.8	Period
Mean				
Sec. Feet	0.0*	1.09	1.77	1.31
Maximum				
Sec. Feet	0.0*	2.1	2.4	2.4
Minimum				
Sec. Feet	0.0*	1.0	0.6	0.0
Total				
Acre Feet	0.0*	65.0	109.0	174.0

* 6 day period.

TABLE 7

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
PINK DITCH ON CEDAR CREEK AT HEAD - 1928

Day	March	April	May
1		0.5	0.5
2		0.5	0.6
3		0.5	0.6
4		0.5	0.6
5		0.0	0.6
6		0.0	0.6
7		0.0	0.6
8		0.0	0.6
9		0.0	0.6
10		0.0	0.6
11		0.0	0.6
12	NO RECORD	0.0	0.6
13		0.0	0.6
14		0.0	0.6
15		0.0	0.6
16		0.0	0.6
17		0.0	0.5
18		0.0	0.4
19		0.0	0.4
20		0.0	0.4
21		0.0	0.4
22		0.0	0.3
23		0.0	0.5
24		0.0	0.5
25		0.0	0.5
26	0.5	0.0	0.3
27	0.5	0.0	0.3
28	0.5	0.2	0.2
29	0.5	0.2	0.2
30	0.5	0.4	0.2
31	0.5	- -	0.0
Total Sec.			67 Day
Feet Days	3.0*	2.8	14.0
Mean			
Sec. Feet	0.5*	0.09	0.45
Maximum			
Sec. Feet	0.5*	0.5	0.6
Minimum			
Sec. Feet	0.5*	0.0	0.0
Total			
Acre Feet	6. *	6.	28.

* 6 day period.

TABLE 8

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
WALLACE DITCH ON CEDAR CREEK AT HEAD - 1928

Day	March	April	May
1			1.9
2		1.1	1.8
3		1.1	1.8
4		1.1	1.9
5		1.1	1.9
6		1.1	1.8
7		1.1	1.8
8		1.1	1.6
9		1.1	1.6
10		1.1	1.5
11	NO R E C O R D	1.1	1.5
12		1.1	1.5
13		1.1	1.5
14		1.1	1.5
15		1.1	1.4
16		1.1	1.4
17		1.1	1.3
18		1.1	1.2
19		1.0	1.1
20		1.0	1.1
21		1.0	1.1
22		1.0	1.1
23		1.0	1.3
24		1.0	1.3
25		1.0	1.3
26	1.1	1.0	1.7
27	1.1	1.0	1.7
28	1.1	1.3	1.5
29	1.1	1.3	1.1
30	1.1	1.7	0.9
31	1.1	- -	0.6
Total Sec.			67 Day
Feet Days	6.6*	33.0	44.7
Mean			
Sec. Feet	1.10*	1.10	1.44
Maximum			
Sec. Feet	1.1*	1.7	1.9
Minimum			
Sec. Feet	1.1*	1.0	0.6
Total			
Acre Feet	13.1*	65.4	88.6

* 6 day period.

TABLE 9

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
COMBINED TONEY DIVERSIONS FROM CEDAR CREEK - 1928

Day	March	April	May
1		1.0	1.0
2		1.0	1.0
3		1.0	1.0
4		1.0	1.0
5		1.0	1.0
6		1.0	1.0
7		1.0	0.8
8		1.0	0.7
9		1.0	0.7
10		1.0	0.6
11		1.0	0.6
12	D	1.0	0.6
13	C	1.0	0.5
14	C	1.0	0.5
15	H	1.0	0.5
16	R	1.0	0.5
17		1.0	0.5
18		1.0	0.5
19	N	1.0	0.5
20		1.0	0.4
21		1.0	0.4
22		1.0	0.4
23		1.0	0.6
24		1.0	0.6
25		1.0	0.6
26	0.0	1.0	1.0
27	0.0	1.0	1.0
28	0.0	1.0	1.0
29	0.0	1.0	0.8
30	0.0	1.0	0.0
31	0.0	- -	0.0
Total Sec.			67 Day
Feet Days	0.0*	30.0	20.3
Mean			Period
Sec. Feet	0.0*	1.0	0.65
Maximum			0.75
Sec. Feet	0.0*	1.0	1.0
Minimum			
Sec. Feet	0.0*	1.0	0.0
Total			
Acre Feet	0.0*	59.	40.
			99.

* 6 day period.

TABLE 10

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
STREET DITCH ON CEDAR CREEK AT HEAD - 1928

Day	March	April	May	
1		4.5	4.2	
2		4.5	4.2	
3		4.5	4.2	
4		4.5	4.5	
5		4.5	4.5	
6		4.5	4.2	
7		4.5	3.5	
8		4.5	2.8	
9		4.5	2.6	
10		4.5	2.5	
11	P	4.5	2.5	
12	H	4.5	2.5	
13	O	4.5	2.3	
14	C	4.5	2.3	
15	H	4.5	2.2	
16	H	4.5	2.2	
17		4.5	2.2	
18	N	4.5	2.2	
19	O	4.2	2.2	
20		4.2	1.9	
21		4.2	1.9	
22		4.2	1.9	
23		4.2	2.2	
24		4.2	2.1	
25		4.2	1.9	
26	4.5	4.2	0.0	
27	4.5	4.2	0.0	
28	4.5	4.2	0.0	
29	4.5	4.2	0.0	
30	4.5	4.2	0.0	
31	4.5	- -	0.0	
Total Sec.				67 Day
Feet Days	27.0*	131.4	69.7	Period
Mean				
Sec. Feet	4.5*	4.38	2.25	3.41
Maximum				
Sec. Feet	4.5*	4.5	4.5	4.5
Minimum				
Sec. Feet	4.5*	4.2	0.0	0.0
Total				
Acre Feet	54. *	260.	138.	452.

* 6 day period.

TABLE 11

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
ACTY DITCH ON CEDAR CREEK AT HEAD - 1928

Day	March	April	May
1		2.0	0.0
2		2.0	
3		2.0	
4		2.0	
5		2.0	
6		2.0	
7		2.0	
8		2.0	
9		2.0	
10		2.0	
11		2.0	
12		2.0	
13		2.0	
14		2.0	
15		2.0	
16		2.0	
17		0.0	
18			
19			
20			
21			
22			
23			
24			
25			
26	3.0		
27	3.0		
28	3.0		
29	3.0		
30	3.0	0.0	
31	3.0		0.0
Total Sec. Feet Days	18.0*	32.0	0.0
Mean			
Sec. Feet	3.00*	1.07	0.0
Maximum			
Sec. Feet	3.0 *	2.0	0.0
Minimum			
Sec. Feet	3.0 *	0.0	0.0
Total			
Acre Feet	36. *	63.	0.0

* 6 day period.

TABLE 12

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
BEEBE DITCH ON CEDAR CREEK AT HEAD - 1928

Day	March	April	May	
1		2.6	2.4	
2		2.1	2.4	
3		2.1	2.4	
4		1.0	2.6	
5		1.0	2.6	
6		1.0	2.4	
7		2.6	2.0	
8		2.6	1.6	
9		2.6	1.5	
10		2.6	1.5	
11	NO RECORD	2.6	1.5	
12		2.6	1.2	
13		2.6	1.2	
14		2.6	1.0	
15		2.6	1.0	
16		2.6	1.0	
17		2.6	1.0	
18		2.6	1.0	
19		2.4	1.0	
20		2.4	1.0	
21		2.4	1.0	
22		2.4	1.0	
23		2.4	1.1	
24		2.4	1.0	
25		2.4	1.0	
26	2.6	2.4	0.0	
27	2.6	2.4	0.0	
28	2.6	2.4	0.0	
29	2.6	2.4	0.0	
30	2.6	2.4	0.0	
31	2.6	- -	0.0	
Total Sec. Feet Days	15.6*	69.8	37.4	67 Day Period
Mean Sec. Feet	2.60*	2.33	1.21	1.83
Maximum Sec. Feet	2.6 *	2.6	2.6	2.6
Minimum Sec. Feet	2.6 *	1.0	0.0	0.0
Total Acre Feet	30.9*	138.4	74.2	243.5

* 6 day period.

TABLE 13

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF
LOWER CHANNEL OF CEDAR CREEK BELOW BEEBE DITCH - 1928

Day	March	April	May	
1		7.6	4.5	
2		5.1	4.5	
3		5.1	4.5	
4		4.4	4.9	
5		4.9	6.8	
6		5.3	4.5	
7		4.2	3.6	
8		4.2	3.1	
9		4.2	2.8	
10		4.2	2.7	
11	NO RECORD	4.8	2.7	
12		4.8	2.7	
13		4.8	2.6	
14		4.8	2.5	
15		4.8	2.6	
16		6.0	2.6	
17		6.8	2.6	
18		4.9	2.6	
19		4.5	2.6	
20		4.5	2.2	
21		4.5	2.2	
22		4.5	2.2	
23		4.5	0.0	
24		4.5		
25		4.5		
26	10.7	4.5	NO FLOW	
27	10.7	4.5		
28	12.0	4.5		
29	12.0	4.5		
30	10.7	4.5		
31	9.9	- -	0.0	
Total Sec. Feet Days	66.0*	144.9	72.0	67 Day Period
Mean Sec. Feet	11.00*	4.83	2.32	4.22
Maximum Sec. Feet	12.0 *	7.6	6.8	12.0
Minimum Sec. Feet	9.7 *	4.2	0.0	0.0
Total Acre Feet	130.9 *	287.3	142.8	561.0

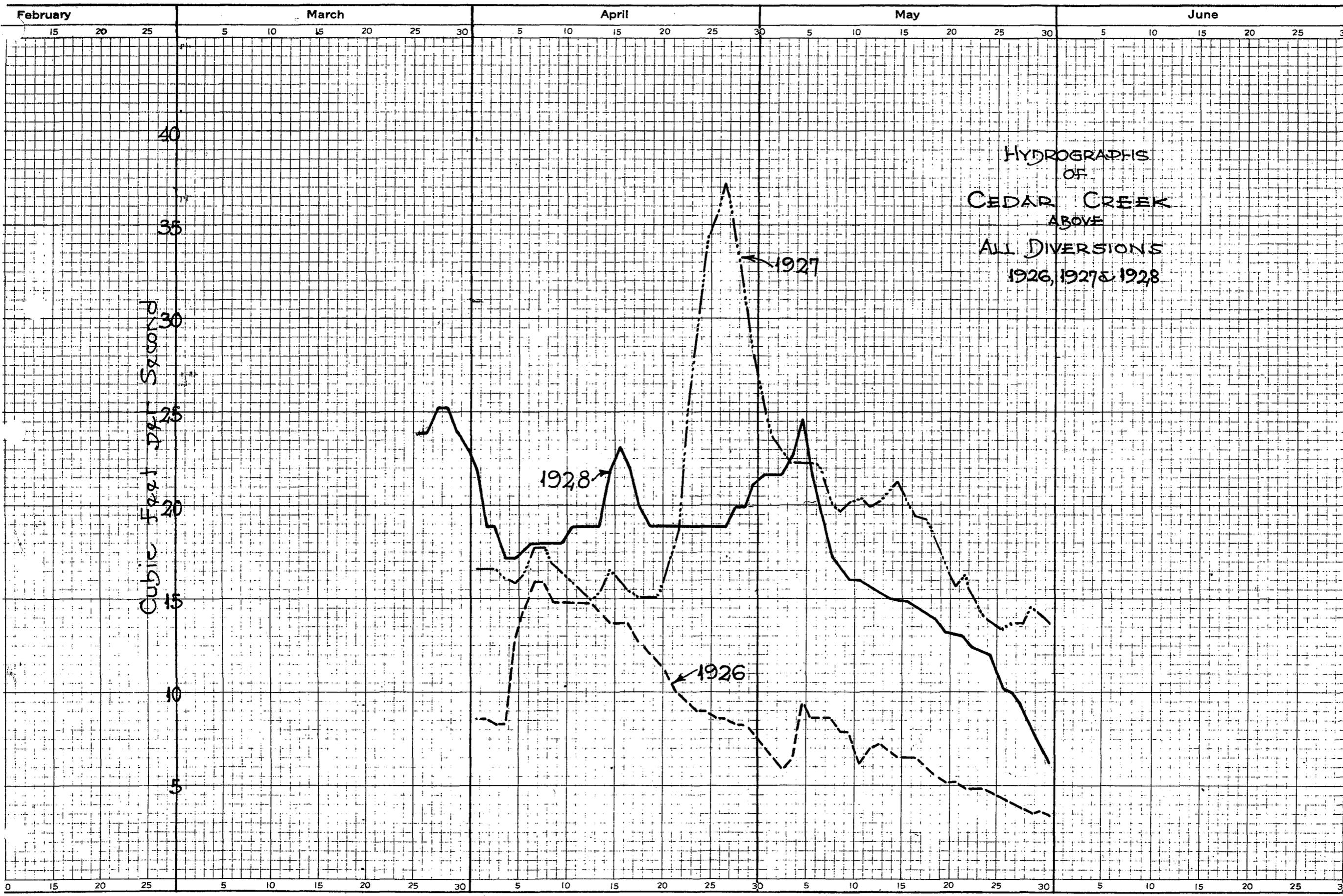
* 6 day period.

TABLE 14

USE OF WATER IN 1928 FOR ACREAGE IRRIGATED FROM
CEDAR CREEK

: Diversion : Ditch	: Number of : Days Irrigated:	: Total Acre : Feet Diverted:	: Acreage :Gross Use During Period:		
			: Irrigated: : 1928	: Ac. Ft. : per Ac.	: Acres per : c.f.s.
: McCulley	: 67	: 513	: 250	: 2.06	: 65
: Sizer	: 61	: 174	: 55	: 3.16	: 62
: Pink	: 66	: 40	: 30	: 1.25	: 98
: Wallace	: 67	: 167	: 78	: 2.14	: 62
: Toney Combined	: 61	: 99	: 45	: 2.20	: 55
: Street	: 61	: 452	: 160	: 2.82	: 43
: Acty	: 22	: 99	: 50	: 1.98	: 22
: Beebe	: 61	: 244	: 75	: 3.25	: 37
: Lower Channel	: 58	: 561	: 215	: 2.61	: 44
: TOTAL	: 60	: 2349	: 958	: 2.45	: 49

PLATE



HYDROGRAPHS
OF
CEDAR CREEK
ABOVE
ALL DIVERSIONS
1926, 1927 & 1928