Cedar Cr. 1927

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State of California
DEPARTMENT OF PUBLIC WORKS
Sacramento

Division of Water Rights
707 Forum Building

February 27, 1928

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

Attention: Mr. Gordon Zander, Associate Hydraulic Engineer

Dear Sir:

There is transmitted herewith a report on Water Master Service on Cedar Creek, Surprise Valley, Modoc County, California, for the period of April 1 to July 1, 1927.

The report describes 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., the decree entered under date of March 22, 1901, by the Superior Court of the State of California, in and for the County of Modoc, in the case of D. H. Lighty vs. John R. Cook et al.

The report also sets forth the resultant duties of water obtained by this distribution; shows the progress made in the installation of measuring devices on the stream and diversion ditches; and contains a financial statement showing the cost of Water Master Service in Surprise Valley during the 1927 irrigation season, covering Cedar, Owl and Soldier Creeks, and the sources from which such cost was met.

The report also sets forth certain recommendations for the betterment of conditions affecting the regulation and distribution of the water of Cedar Creek.

Respectfully submitted,

H. Searancke
Water Master

REPORT ON WATER MASTER SERVICE
ON
CEDAR CREEK
SURPRISE VALLEY, MODOC COUNTY, CALIFORNIA
DURING THE IRRIGATION SEASON OF 1927

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., and the relative rights of the users of water diverted from Tom's Creek and conveyed by Cedar Creek were established by a decree entered, under date of March 22, 1901, in the Superior Court of the State of California, in and for the County of Modoc, in the case of D. H. Lighty vs. John R. Cook, et al., copies of which decrees are on file in the office of the Division of Water Rights.

On June 19, 1926, an agreement was entered into by the Cedar Creek water users whereby the Division of Water Rights was empowered to appoint a Water Master to distribute the water of Cedar Creek during the 1927 irrigation season in accordance with the decrees above mentioned.

Harry Searancke was appointed by the Division of Water Rights to act as Water Master for Surprise Valley during the 1927 irrigation season. He arrived in Surprise Valley on March 28, 1927, and immediately assumed his duties in the field. He administered the waters of Cedar Creek in accordance with the above mentioned decrees until July 1, 1927, when the water supply reached such a low stage that it was apparent there was no further necessity for Water Master Service.

WATER SUPPLY

Cedar Creek rises on the easterly slope of the Warner Range of Mountains in Modoc County, California, and flows easterly into Surprise Valley emptying into Middle Lake, an alkali lake having no outlet.

The elevation of the head waters of Cedar Creek is about 7,000 feet above sea level, and the land served in Surprise Valley has an average elevation of about 4,500 above sea level.

The water shed covers an area of about 9.6 square miles, according to the topographic map of the U. S. Geological Survey.

Approximately 70 per cent of the annual run-off occurs during the months of March, April, May and June; March and April being the months of greatest flow.

A discussion of the water supply of Cedar Creek may be found in the report of D. M. Baker, Hydraulic Engineer, to the State Water Commission, dated April 22, 1918, entitled "Engineers Report on Applications 828 and 842 of Herman Acty and R. O. Fink." Mr. Baker's estimate of the normal flow of Cedar Creek during the irrigation season is as follows:

MONTH	PERCENT OF TOTAL ANNUAL RUN-OFF	AVERAGE RUN-OFF ACRE FEET	AVERAGE RUN-OFF SECOND FEET
March	40	1776	28.6
April	20	888	14.8
May	12	533	8.6
June	8	354	5.9

After the 1926 irrigation season a concrete cipoletti weir, having a crest of five feet, was built by the water users of Cedar Creek from a plan prepared in the office of the Division of Water Rights. The weir is located in the channel of Cedar Creek just above the mouth of the canyon.

On March 29, 1927, a staff gage, with zero point set at the elevation of the weir crest, was installed a few feet above the weir in the south side of the pond which was formed behind the weir. On April 1, 1927, a Zeitz water stage register was installed beside the staff gage to furnish a continuous record of gage readings throughout the irrigation season.

The average daily gage heights, as shown by the records of the water stage register, being used in connection with a weir table, gave the average daily discharges of Cedar Creek above all diversions. These discharges are listed in Table I of this report.

The Tom's Creek Ditch diverts water from Tom's Creek,(a creek rising on the westerly slope of the Warner Range, and flowing westerly into the Pit River drainage basin) conveys it over the divide at Cedar Pass Summit, and discharges it into Cedar Creek. This foreign water thus available is an addition to the normal flow of Cedar Creek. A wooden rectangular measuring weir, having a crest width of 2.5 feet, was installed in the Tom's Creek Ditch in the flat about 1/4 mile below the summit. The estimated discharge of Tom's Creek Ditch is submitted on Table II.

DISTRIBUTION OF WATER

During the 1927 irrigation season the water of Cedar Creek was distributed to the various water users by the Water Master in accordance with the decree of the Superior Court of the State of California, in and for the County of Modoc, dated February 15, 1923, in the case of W. E. Hill et al. vs. Herman Acty, et al., establishing the rights of the various water users to the waters of Cedar Creek, and the decree of the Superior Court of the State of California, in and for the County of Modoc, dated May 22, 1901, in the case of D. H. Lighty vs. John R. Cook, et al., establishing the rights of the water users to Tom's Creek water diverted from Tom's Creek and conveyed to Cedar Creek by the Tom's Creek Ditch.

Cedar Creek Schedule

Water User	Ranch	Priority	Allotment: Miners inches (4 in. pressure)	Allotment: Cubic feet per second
L.E.McCulley	McCulley	First	250	5.00
T. B. Sizer	Sizer	Second	40	0.80
John Hoopes	Hoopes	Second	15	0.30
F.L.Wallace	Wallace	Second	55	1.10
J. L. Toney	Toney	Second	50	1.00
Norton & Marsh	Street	Second	115	2.30
H.E.Rinehart	H.E.Rinehart	Second	40	0.80
O. Crampton	Scammon	Second	70	1.40
Grace L. Beebe	Beebe	Second	130	2.60
M. W. Rinehart	A.E.Rinehart	Second	125	2.50
H. L. Hill	H. L. Hill	Second	45	0.90
W. E. Hill	W. E. Hill	Second	10	0.20
H. O. Hughes	Smalls	Second	55	1.10
Herman Acty	Acty	Third	150	3.00
R. O. Fink	Fink	Third	45	0.90
	TOTAL:		1195	23.90

TOM'S CREEK SCHEDULE

Water User	Successor To	Number of Parts Alloted
T.B.Sizer	J. R. Cook	24
F. L. Wallace	Jas. Wylie	16
R. O. Fink	D. H. Lighty	9
No User	Helen A.Cambridge	8
No User	Hironymous Estate	7
	TOTAL	64

The Tom's Creek water was used by four water users during the 1927 irrigation season as follows: T. B. Sizer, F. L. Wallace, R. O. Fink, and John Hoopes, T. B. Sizer having sold a right of the miners inches to John Hoopes with the right to use the Sizer Ditch to convey the water. The rights granted to Helen Cambridge and the Hironymous estate appear to have lapsed by non-use. No claimants appeared during the 1927 irrigation season to divert water under these rights.

The Tom's Creek water was divided among the four users mentioned above in the ratios that their rights called for.

The ditches diverting water from Cedar Creek during the 1927 irrigation season and the ranches irrigated therefrom, arranged in order down stream, are as follows:

Div.	Name of	Ranch Served
1	McCulley	L. E. McCulley
2	Sizer	T. B. Sizer and John Hoopes
3	Fink	R. O. Fink
4	Wallace	F. L. Wallace
5	Toney (South)	J. L. Toney
6	Street	Norton & Marsh,H.E.Rinehart & O.Crampton
7	Acty	Herman Acty
8	Beebe	Grace L. Beebe
9	Rinehart	H. M. Rinehart
	Lower Cedar Creek	H. M. Rinehart,H.O.Hughes, W.E.Hill, & H. L. Hill

The method used in distributing the water of Cedar Creek was in general as follows:

Both the discharge of the Tom's Creek Dich and the discharge of Cedar Creek above all diversions were ascertained. The discharge indicated in the Tom Creek Ditch was deducted from the flow of Cedar Creek, the remainder being the amount of water available for distribution among the Cedar Creek water users. From this amount was deducted the diversion of the McCulley ditch, leaving the amount available for the second and third priorities on Cedar Creek. This latter amount was distributed pro rata among the second priorities. If, after distributing the water among the second priorities to the full extent of their decreed allotments, there was more water available the remainder was pro-rated between the third priorities.

The users of the Street Ditch rotated between themselves when they found it desirable to do so.

During the last week in May and the first week in June, rotation was practised between the Street Ditch and the water users below the Beebe Ditch. No organized schedule was followed, the water users concerned applying the water where it seemed to be most required.

After June 4 the flow of Cedar Creek had fallen off to such a low stage that it was not practical to run water down the channel below the Street Ditch.

Estimates of the diversions of the various ditches on Cedar Creek and of the flow of the lower channel are submitted in Tables III to XI (inclusive) of this report.

USE OF WATER

Table XII, entitled "Gross Use of Water From Cedar Creek During the Season of General Irrigation, April 1 to June 30, 1927," shows the name of each ditch diverting water, the property owners using water from the ditch, the area irrigated under the ditch, the total diversion in acre feet, the gross use of water during the period of irrigation in acre feet per acre, and in the number of acres irrigated per second foot diverted during the period of irrigation.

INSTALLATION OF MEASURING DEVICES

For convenience in distributing the water of Cedar Creek, the Water Master found it advisable to install timber weirs near the heads of all the ditches. The individual water users cooperated with the Water Master in this work, supplying both labor and materials.

There follows a list of the weirs which were installed during the season:

Ditch	Type of Weir
Toms Creek	30" rectangular
McCulley	30" rectangular
Sizer	18" Cipolletti
Fink	90° triangular notch
Wallace	18" Cipolletti
Toney (South)	90° triangular notch
Street	24" Cipolletti
Acty	18" Cipolletti
Beebe	18" Cipolletti

These weirs were found to be of great service in distributing the water. Some inconvenience was encountered by the deposits of silt and sand which formed immediately up stream, owing to the reduced

velocity in the ditches. This, however, was not of a very serious nature, and by the occasional use of a shovel, it was possible to keep all the weirs in fairly good working order.

In building the rectangular weir on the McCulley ditch, an original device was installed. An opening of considerable area was left in the face of the weir just below the crest, its lower edge being flush with the bottom of the ditch. This opening was provided with a wooden cover fitting over the upstream side. By removing the cover and permitting the water to flow through the opening instead of over the crest, deposits, which had formed behind the weir were washed out, and the channel scoured. The cover could then be replaced, and the device again operated as a weir.

DISCUSSION

The precipitation records of the U. S. Weather Bureau for the winter 1926-27, would indicate that the run-off of Cedar Creek during the 1927 irrigation was somewhat subnormal. The total run-off during the months of April, May and June, 1927, amounted to 2800 acre feet. Mr. D. M. Baker in his report, previously referred to in the Chapter on Water Supply, estimates that the normal run-off of Cedar Creek during these three months is 1775 acre feet. He estimates the normal run-off during March, however, as 1775 acre feet. While no records were kept of the run-off during March, 1927, it is probable that it did not exceed twenty-five per cent of Mr. Baker's estimate. With this assumption, the total run-off for the four months of March, April, May and June, 1927, would be approximately 3240 acre feet, or ninety-one per cent of what

Mr. Baker considered the normal run-off for these four months.

The prolonged cold weather in the spring of 1927 resulted in what was probably an abnormal distribution of run-off during the irrigating season.

From these considerations it would appear that, from the water users point of view, the 1927 irrigation season was unusually satisfactory. The main bulk of the run-off occurred late in the season when it undoubtedly was more needed than it would have been several weeks earlier. It spent itself in a moderate flow extending over a considerable period of time, thereby eliminating the waste that is inevitable in times of excessively high water.

As has been previously mentioned, a concrete weir was built on Cedar Creek above all diversions in the fall of 1926.

This weir was built to comply with a clause in the decree entered in the case of W. E. Hill et al., vs. Herman Acty, et al., which provided for the construction, at the expense of all parties to the suit, of a measuring device whereby it might be known by any of the parties concerned whether or not there was sufficient water flowing in Cedar Creek to permit the third priorities to divert.

This weir was also found to be of great service to the Water Master inasmuch as it eliminated the necessity of making current meter measurements, an operation which requires considerable time.

The lowering of the velocity of the flow immediately above the weir resulted in the deposit of considerable quantities of sand and gravel. This deposit gradually assumed such proportions that it constricted the

channel of approach, causing a velocity of approach too high to be ignored in computing the discharge over the weir. The weir is provided with a sluice gate on the north side and the opening of this gate was found to clear the north side of the channel, but was ineffective in scouring the sand bank on the south side. To move the sand and gravel by means of shovels from the south side of the channel into the main stream going through the sluice would involve much labor. It seems possible, however, that this condition might be remedied by the construction of one or more brush dams a short distance up stream, which would retain a considerable part of the sand and gravel which would other wise be deposited behind the weir.

Another possible remedy would be the construction of a current deflector a short distance above the weir, so arranged as to direct the main thread of the current towards the south bank at the point where there is at present the greatest tendency for gravel and sand to deposit. Any deposit which would then occur on the north side of the channel could be removed by opening the sluice.

RECOMMENDATIONS

From a survey of the conditions affecting the distribution of water on Cedar Creek during the 1927 irrigation season, the following recommendations are made for the betterment of operation in the future:

1. That a study be made of conditions affecting the satisfactory operation of the weir on Cedar Creek above all diversions and an attempt be made to arrive at some plan to improve them.

2. That an automatic water stage register be installed in con-

nection with the Tom's Creek Ditch Weir.

3. The measuring weirs installed in the various ditches diverting from Cedar Creek are of a temporary character only. Moreover, weirs are not thought to be the most satisfactory form of measuring device for water that carries considerable sand and silt in suspension. It is recommended, therefore, that these weirs be replaced by such other form of measuring device as may be recommended by the Division of Water Rights, and that these measuring devices be permanent in character.

CHAPTER OF FINANCIAL STATEMENT

The Water Master Service during the 1927 season on Cedar, Owl and Soldier Creeks was financed partly by subscription from the water owners and partly by contribution by the Division of Water Rights.

No distinction was made in the expense of conducting the Water Master Service on each stream system because the field work was conducted as a unit.

The total unit cost of the Water Master Service in 1927 on the three streams systems mentioned above was 21.8 cents per acre of irrigated land. The unit cost to the water users was 16.3 cents per acre of irrigated land, and the unit cost to the Division of Water Rights was 5.5 cents per acre of irrigated land.

A financial statement in which receipts and disbursements are itemized is submitted on the following page.

FINANCIAL STATEMENT

SURPRISE VALLEY WATER DISTRIBUTION

1927 Season

Receipts

Contributed by Owl Creek Water Users	$400.00	
Contributed by Soldier Creek Water Users	396.00	
Contributed by Cedar and Toms Creeks Water Users	200.00	
Contributed by Division of Water Rights	350.00	1346.00

Disbursements

Salaries and Wages	$753.17	
Board, Lodging and Travel Expense	447.10	
Automobile Expense	135.69	
Blueprinting	.60	1336.56
		$ 9.44

TABLE I

MEAN DAILY DISCHARGE OF CEDAR CREEK ABOVE ALL DIVERSIONS - 1927

Date	April		May		June	
	Gage Ht.	Discharge	Gage Ht.	Discharge	Gage Ht.	Discharge
1	0.99	16.58	1.32	25.53	.86	13.43
2	0.99	16.58	1.26	23.81	.84	12.96
3	0.99	16.58	1.23	22.96	.81	12.27
4	0.97	16.08	1.21	22.35	.79	11.82
5	.96	15.83	1.21	22.35	.77	11.37
6	.98	16.33	1.21	22.35	.77	11.37
7	1.04	17.85	1.20	22.13	.78	11.60
8	1.04	17.85	1.13	20.22	.75	10.94
9	1.00	16.83	1.11	19.68	.71	10.07
10	.98	16.33	1.13	20.22	.68	9.44
11	.96	15.83	1.14	20.49	.66	9.03
12	.94	15.34	1.12	19.95	.64	8.62
13	.92	14.85	1.13	20.22	.64	8.62
14	.94	15.34	1.15	20.76	.60	7.82
15	.99	16.58	1.17	21.31	.58	7.44
16	.96	15.83	1.13	20.22	.56	7.05
17	.94	15.34	1.10	19.42	.54	6.68
18	.93	15.10	1.09	19.15	.54	6.68
19	.93	15.10	1.05	18.11	.52	6.31
20	.93	15.10	1.00	16.83	.49	5.78
21	.99	16.58	.95	15.59	.46	5.25
22	1.06	18.37	.98	16.33	.43	4.74
23	1.30	24.95	.92	14.85	.40	4.26
24	1.46	29.70	.89	14.13	.37	3.80
25	1.60	34.07	.87	13.71	.34	3.34
26	1.64	35.35	.86	13.43	.34	3.34
27	1.70	37.31	.87	13.71	.33	3.20
28	1.60	34.07	.87	13.71	.32	3.05
29	1.50	30.92	.91	14.61	.31	2.91
30	1.40	27.88	.89	14.13	.30	2.77
31			.87	13.71		
Total Sec.Ft.Days		610.45		575.97		225.96
Mean Sec. Feet		20.30		18.60		7.54
Max. Sec. Feet		37.31		25.53		13.43
Min. Sec. Feet		14.85		13.43		2.77
Total Acre Feet		1210.5		1142.2		448.2

TABLE II

ESTIMATE OF DISCHARGE OF TOM'S CREEK DITCH

INTO CEDAR CREEK - 1927

Date	May Diversion c.f.s.	June Diversion c.f.s.	July Diversion c.f.s.
1		2.00	0.25
2		2.25	0.20
3		2.50	0.20
4		2.74	0.20
5		3.81	
6		3.50	
7		3.20	
8		2.75	
9	2.00	2.50	
10	2.35	2.25	
11	2.60	2.00	
12	3.00	1.70	
13	3.50	1.60	
14	3.81	1.40	
15	3.25	1.20	
16	2.74	1.00	
17	2.90	1.00	
18	3.00	0.75	
19	3.20	0.70	
20	3.30	0.60	
21	3.40	0.60	
22	3.50	0.50	
23	3.75	0.50	
24	3.75	0.50	
25	3.75	0.45	
26	4.00	0.45	
27	4.00	0.35	
28	4.25	0.35	
29	4.50	0.30	
30	3.70	0.30	
31	3.00		
Total Sec.Ft.Days	77.25	43.75	0.85
Mean Sec. Ft.	3.36	1.46	0.21
Max. Sec. Feet	4.50	3.81	0.25
Min. Sec. Feet	2.00	0.30	0.20
Total Acre Feet	153.2	86.8	1.7

TABLE III

ESTIMATE OF DISCHARGE OF MCCULLEY DITCH - 1927

Date	April Diversion c.f.s.	May Diversion c.f.s.	June Diversion c.f.s.
1	0.70	4.00	4.50
2	0.70	4.00	4.50
3	0.70	3.75	4.50
4	0.70	3.75	3.75
5	0.70	3.75	5.00
6	.70	3.75	5.00
7	.80	3.75	5.00
8	.80	3.95	4.90
9	.80	3.95	4.45
10	2.05	3.95	4.20
11	2.00	3.95	4.00
12	1.95	3.95	4.00
13	1.90	3.95	4.00
14	1.95	3.95	3.85
15	2.05	3.80	3.45
16	2.05	3.65	3.45
17	2.60	3.50	3.10
18	2.60	3.25	3.10
19	2.60	3.25	2.95
20	2.60	2.80	2.70
21	4.50	2.80	2.45
22	4.50	4.40	3.90
23	4.50	3.90	3.50
24	3.20	3.90	3.10
25	3.75	3.60	2.70
26	3.75	3.60	2.70
27	3.75	3.60	2.55
28	3.75	3.10	2.40
29	3.30	4.50	2.60
30	3.00	4.50	2.50
31		4.25	
Total Sec.Ft. Days	68.95	116.80	108.80
Total Acre Feet	136.8	231.6	215.7

TABLE IV

Estimate of Discharge of Sizer Ditch - 1927

Date	April Diversion c.f.s.	May Diversion c.f.s.	June Diversion c.f.s.
1	0.0	1.45	1.50
2		1.45	1.50
3		1.35	1.50
4		1.35	1.20
5		1.35	1.15
6		1.35	1.15
7	NO	1.35	1.15
8		1.35	1.10
9		1.35	1.00
10		1.35	.95
11		1.35	.90
12		1.35	.65
13		1.35	.65
14		1.35	.60
15		2.25	.60
16		2.15	.55
17	FLOW	2.05	.50
18		1.90	.50
19		1.90	.50
20	0.0	1.65	.45
21	1.20	1.65	.40
22	1.20	1.65	.30
23	1.20	1.45	.25
24	1.20	1.45	.20
25	1.45	1.35	.20
26	1.45	1.35	.20
27	1.45	1.35	.15
28	1.45	1.40	.15
29	1.25	1.45	
30	1.15	1.45	
31		1.35	
Total Sec.Ft. Days	13.00	46.90	19.95
Total Acre Feet	25.8	93.0	39.7

TABLE V

Estimate of Discharge of Fink Ditch - 1927

Date	April Diversion c.f.s.	May Diversion C.F.S.	June Diversion c.f.s.
1	0.0	1.70	.90
2		1.70	.85
3	NO	1.60	.80
4	FLOW	1.60	.80
5	0.0	1.60	1.60
6	1.05	1.60	1.60
7	1.15	1.60	1.60
8	1.15	1.20	1.60
9	1.10	1.20	1.45
10	.90	1.20	1.35
11	.90	1.20	1.30
12	.85	1.20	1.05
13	.85	1.20	1.05
14	.85	1.20	.90
15	.90	.60	.90
16	.90	.55	.85
17	1.90	.55	.85
18	1.90	.50	.85
19	1.90	.50	.80
20	1.90	.45	.70
21	1.45	.45	.65
22	1.45	1.30	
23	1.45	1.30	
24	1.05	1.15	
25	1.25	1.05	
26	1.25	1.05	
27	1.25	1.05	
28	1.25	1.05	
29	1.10	.95	
30	1.00	.95	
31		.90	
Total Sec.Ft.Days	30.70	34.15	22.45
Total Acre Feet	60.9	67.6	44.4

TABLE VI

Estimate of Daily Discharge of Wallace Ditch - 1927

Date	Diversion c.f.s.	Diversion c.f.s.	Diversion c.f.s.
1	0.90	1.75	1.70
2	.90	1.75	1.65
3	.90	1.65	1.55
4	.90	1.65	1.55
5	1.00	1.65	0.0
6	1.05	1.65	
7	1.15	1.65	NO
8	1.15	2.10	
9	1.10	1.60	FLOW
10	1.25	1.60	
11	1.20	1.60	0.0
12	1.15	1.60	.25
13	1.15	1.60	.25
14	1.15	1.60	.20
15	1.20	2.00	.20
16	1.20	1.90	.20
17	1.10	1.80	.15
18	1.10	1.70	.15
19	1.10	1.70	.15
20	1.10	1.45	.15
21	1.05	1.45	.15
22	1.05	1.75	.35
23	1.05	1.75	.30
24	1.20	1.50	.25
25	1.45	1.45	.20
26	1.45	1.45	.20
27	1.45	1.45	.20
28	1.45	1.45	.20
29	1.30	1.80	
30	1.15	1.80	
31		1.75	
Total Sec.Ft.Days	35.80	51.60	10.00
Total Acre Feet	71.0	102.3	19.8

TABLE VII

Estimate of Discharge of Toney South Ditch - 1927

Date	April Diversion c.f.s.	May Diversion c.f.s.	June Diversion c.f.s.
1		1.15	.35
2		1.15	.35
3		1.05	.35
4		1.05	.35
5		1.05	
6		1.05	
7		1.05	
8		.95	
9		.95	
10	.50	.95	
11	.50	.95	
12	.45	.95	
13	.45	.95	
14	.45	.95	
15	.50	.85	
16	.50	.85	
17	.75	.80	
18	.75	.75	
19	.75	.75	
20	.75	.65	
21	.70	.65	
22	.70	.60	
23	.70	.50	
24	1.15	.50	
25	1.40	.50	
26	1.40	.50	
27	1.40	.50	
28	1.40	.50	
29	1.25	.20	
30	1.10	.20	
31		.15	
Total Sec.Ft.Days	17.55	23.65	1.40
Total Acre Feet	34.8	46.9	2.8

TABLE VIII

Estimate of Discharge of Street Ditch - 1927

Date	April Diversion c.f.s.	May Diversion c.f.s.	June Diversion c.f.s.
1	3.75	4.90	2.25
2	3.75	4.90	0.0
3	3.75	4.55	0.0
4	3.75	4.55	0.0
5	2.95	4.55	2.30
6	3.05	4.55	2.30
7	3.30	4.55	2.30
8	3.30	3.75	2.20
9	3.15	3.75	2.00
10	2.60	3.75	1.90
11	2.50	3.75	1.80
12	2.40	3.75	1.50
13	2.40	3.75	1.50
14	2.40	3.75	1.30
15	2.55	3.85	1.30
16	2.55	3.65	1.20
17	2.25	3.50	1.20
18	2.25	3.25	1.20
19	2.25	3.25	1.10
20	2.25	2.80	1.00
21	1.85	2.80	.90
22	1.85	2.40	
23	1.85	2.40	
24	2.80	2.10	
25	3.30	1.95	
26	3.30	1.95	
27	3.30	1.95	
28	3.30	3.30	
29	2.95	3.20	
30	2.65	3.20	
31		3.05	
Total Sec.Ft.Days	84.30	107.40	29.25
Total Acre Feet	167.2	213.0	58.0

TABLE IX

Estimate of Discharge of Acty Ditch - 1927

Date	April Diversion c.f.s.	May Diversion c.f.s.
1	2.50	0.85
2	2.50	0.85
3	2.50	0.80
4	2.50	0.80
5	0.0	0.80
6		0.80
7	NO	0.80
8	FLOW	.70
9		.70
10		.70
11	0.0	0.0
12	.95	
13	.95	
14	.95	
15	1.05	
16	1.05	
17	0.0	
18		
19	NO	
20		
21	FLOW	
22	0.0	
23	3.00	
24	2.30	
25	2.70	
26	2.70	
27	2.70	
28	2.70	
29	2.40	
30	2.15	
31		
Total Sec. Ft. Days	35.60	7.80
Total Acre Feet	70.6	15.5

TABLE X

Estimate of Discharge of Beebe Ditch - 1927

Date	April Diversion c.f.s.	May Diversion c.f.s.	June Diversion c.f.s.
1	2.15	0.65	.90
2	2.15	0.65	.80
3	2.15	0.65	.75
4	2.15	0.65	.75
5	2.80	0.65	
6	2.80	0.65	
7	3.10	0.65	
8	3.10	1.25	
9	3.00	1.25	
10	1.90	1.25	
11	1.80	1.45	
12	1.55	1.45	
13	1.55	1.45	
14	1.55	1.45	
15	1.65	2.20	
16	1.65	2.10	
17	.95	2.00	
18	.95	1.90	
19	.95	1.90	
20	.95	1.65	
21	.90	1.65	
22	.90	1.75	
23	.90	1.55	
24	1.65	1.50	
25	1.95	1.40	
26	1.95	1.40	
27	1.95	1.40	
28	1.95	1.45	
29	1.75	.95	
30	1.55	.95	
31		.90	
Total Sec.Ft.Days	54.30	40.75	3.20
Total Acre Feet	107.7	80.8	6.3

TABLE XI

Estimate of Discharge of Cedar Creek below Beebe Ditch - 1927

Date	April Diversion c.f.s.	May Diversion c.f.s.	June Diversion c.f.s.
1	5.00	7.70	0.0
2	5.00	6.00	1.95
3	5.00	6.00	1.90
4	5.00	5.60	1.85
5	5.95	5.60	
6	6.00	5.60	
7	6.95	5.40	
8	6.95	4.25	
9	6.50	3.75	
10	5.75	4.25	
11	5.60	4.75	
12	4.65	4.25	
13	4.65	4.75	
14	4.65	4.50	
15	5.65	4.05	
16	4.90	3.85	
17	4.45	5.00	
18	4.45	3.70	
19	4.45	3.45	
20	4.45	4.45	
21	3.70	3.00	
22	5.50	.85	
23	9.10	.75	
24	13.50	.70	
25	15.50	.70	
26	16.80	.65	
27	18.50	.70	
28	15.50	0.0	
29	14.10	0.0	
30	12.60	0.0	
31		0.0	
Total Sec.Ft.Days	230.80	104.25	5.70
Total Acre Feet	457.7	206.7	11.30

TABLE XII

Gross Use of Water From Cedar Creek

During the Season of General Irrigation

April 1 to June 30, 1927

Ditch	Property Owner	Area Irrigated	Total Ac.Ft. Diverted 1927	Total Ac. Ft.Alloted Season Gen. Irrigation	Percentage of full allotment received 1927	Gross Use of Water During Period of Gen. Irrigation - 1927: Ac.Ft.Per Acre Irrigated	Gross Use of Water During Period of Gen. Irrigation - 1927: Acres Irr. Per Second Foot
McCulley	L. E. McCulley	250.0	584.1	902.3	65	2.33	77
Sizer	T. B. Sizer	40.0					
	John Hoopes	15.0	158.5	550.4	29	2.88	63
		55.0					
Fink	R. O. Fink	45.0	172.9	328.4	53	3.84	47
Wallace	F. L. Wallace	55.0	193.1	492.6	39	3.51	51
Toney	J. L. Toney	50.0	84.50	180.4	47	1.69	106
Street	Norton & Marsh	108.0					
	H.E. Rinehart	40.0					
	O. Crampton	70.0	438.2	812.0	54	2.01	90
		218.0					
Acty	H. Acty	140.0	86.10	541.4	16	0.61	291
Beebe	Grace L.Beebe	130.0	194.8	469.2	41	1.50	120
Lower Cedar Creek	M.H.Rinehart	125.0					
	W. E. Hill	10.0					
	H. L. Hill	45.0					
	H. O. Hughes	55.0	675.7	848.1	80	2.88	63
		235.0					

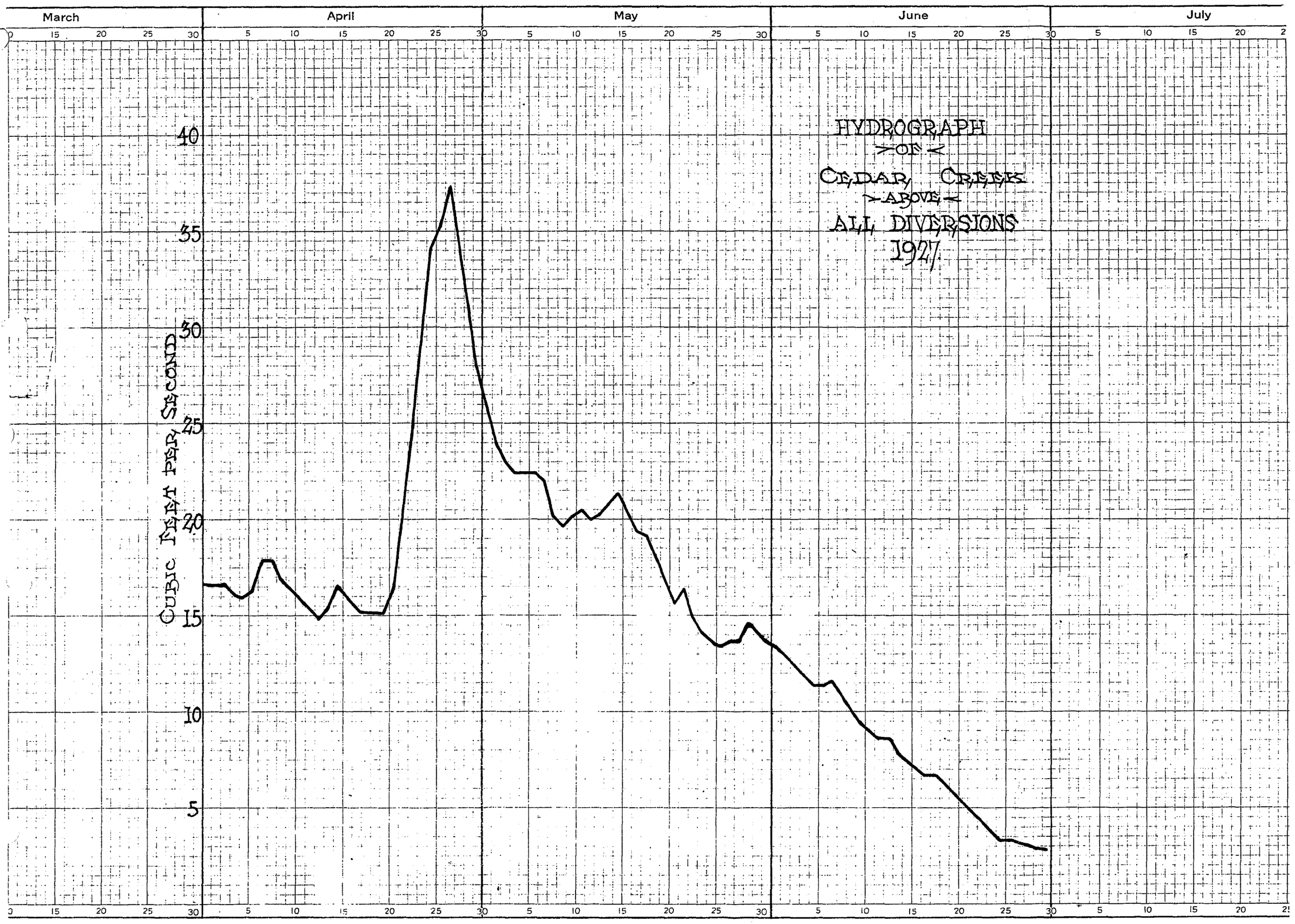
HYDROGRAPH
OF
CEDAR CREEK
ABOVE
ALL DIVERSIONS
1927
March
April
May
June
July
CUBIC FEET PER SECOND
40
35
30
25
20
15
10
5

PLATE I