DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

REPORTS OF THE
DIVISION OF WATER RESOURCES
EDWARD HYATT, STATE ENGINEER

REPORT ON WATER MASTER SERVICE ON CEDAR CREEK MODOC COUNTY, CALIFORNIA FOR SEASON OF 1931

BY LESLIE C. JOPSON, MODOC COUNTY WATER MASTER

SACRAMENTO, CALIFORNIA
FEBRUARY, 1932

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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 20, 1932

MR. HAROLD CONKLING
DEPUTY STATE ENGINEER
SACRAMENTO, CALIFORNIA

ATT'N: MR. GORDON ZANDER, SUPERVISING HYDRAULIC ENGINEER

DEAR SIR:

THERE IS TRANSMITTED HEREWITH A REPORT COVERING THE WATER DISTRIBUTION WORK OF THE WATER MASTER IN THE CEDAR CREEK WATER MASTER DISTRICT, MODOC COUNTY, CALIFORNIA, DURING THE PERIOD FROM MARCH 22ND TO MAY 16TH, 1931.

THE REPORT DESCRIBES THE METHODS AND PRACTICES FOLLOWED IN THE DISTRIBUTION OF THE WATERS OF CEDAR CREEK INCLUDING THE THOMS CREEK DITCH IN ACCORDANCE WITH THE DECREES IN THE CASES OF HILL VS. ACTY AND LIGHTY VS. COOK, AND PRESENTS THE RESULTS OBTAINED UNDER THIS DISTRIBUTION.

RESPECTFULLY SUBMITTED,

MODOC COUNTY WATER MASTER

ORGANIZATION

WALTER E. GARRISON	DIRECTOR OF PUBLIC WORKS
EDWARD HYATT	STATE ENGINEER
HAROLD CONKLING	DEPUTY STATE ENGINEER

GORDAN ZANDER
SUPERVISING HYDRAULIC ENGINEER

T. RUSSEL SIMPSON	SENIOR HYDRAULIC ENGINEER
LESLIE C. JOPSON	MODOC COUNTY WATER MASTER
HEATH STANLEY	DEPUTY WATER MASTER

REPORT ON WATER MASTER SERVICE ON CEDAR CREEK MODOC COUNTY, CALIFORNIA FOR SEASON OF 1931

GENERAL DESCRIPTION OF WORK

WATER MASTER SERVICE WAS CONDUCTED IN THE CEDAR CREEK WATER MASTER DISTRICT DURING THE 1931 SEASON IN ACCORDANCE WITH THE PROVISIONS OF THE DECREES IN THE CASES OF W. E. HILL, ET AL., VS. HERMAN ACTY, ET AL. AND D. H. LIGHTY VS. JOHN R. COOK, ET AL.

THE FIELD WORK WAS COMMENCED BY THE WRITER ON MARCH 22ND AND WAS TERMINATED FOR THE SEASON ON MAY 16TH. MR. HEATH STANLEY WAS EMPLOYED ON A PART TIME DAILY BASIS TO ASSIST AS WATER MASTER ON CEDAR, SOLDIER, OWL AND EMERSON CREEKS FROM APRIL 15TH TO JULY 1ST.

THE WATER SUPPLY OF CEDAR CREEK WAS SO LOW IN 1931 THAT SEVERAL OF THE DIVERSIONS ON THE CREEK WERE NOT OPENED DUE EITHER TO THERE BEING NO WATER AVAILABLE FOR ITS PRIORITY OR DUE TO OTHER ARRANGEMENTS BEING MADE TO CONVEY THE WATER TO THE PLACE OF USE. THE DIVERSIONS NOT OPENED IN 1931 WERE AS FOLLOWS:

FINK DITCH	(DIVERTED WATER THROUGH WALLACE DITCH)
TONEY NORTH DITCH	(USED SOUTH DITCH ONLY)
ACTY DITCH	(NO WATER AVAILABLE)
RINEHART DITCH	(USED CREEK CHANNEL)

THERE WAS NO CEDAR CREEK WATER AVAILABLE FOR THE SECOND RIGHTS AFTER APRIL 14TH, AND NO WATER AVAILABLE FOR THE THOMS CREEK DITCH RIGHTS AFTER MAY 16TH.

THE SECOND PRIORITY USERS BELOW THE LAKE CITY-CEDARVILLE HIGHWAY ROTATED THE WATER AVAILABLE FOR THEIR USE IN ORDER TO PREVENT ALL POSSIBLE TRANSPORTATION LOSS AND ALSO TO SECURE AN ADEQUATE IRRIGATION HEAD. THERE WAS ONLY ENOUGH WATER AVAILABLE TO GIVE THEM ABOUT THIRTY PER CENT ALLOTMENTS AS A MAXIMUM. THIS ROTATION WAS HANDLED BY THE WATER MASTER WHO WAS PERMITTED TO USE HIS JUDGMENT AS TO THE LENGTH OF TIME EACH PARTY WAS TO HAVE THE WATER. THE TIME WAS BASED PRIMARILY ON TOTAL DELIVERIES IN PROPORTION TO THE RIGHTS OF THE RESPECTIVE PARTIES.

TWO ROTATION PERIODS WERE COMPLETED BEFORE THE WATER GAVE OUT BUT THE IRRIGATION WAS SO SHORT AND SO EARLY IN THE SEASON THAT BUT LITTLE BENEFIT WAS RECEIVED.

DISCUSSION OF RESULTS FOR THE SEASON

THE PRECIPITATION AT CEDARVILLE FOR THE SEASONAL YEAR, COMMENCING SEPTEMBER 1ST, 1930 AND TERMINATING AUGUST 31ST, 1931, HAS BEEN COMPARED WITH THE PRECIPITATION DURING PRECEDING SEASONS OF WATER MASTER SERVICE IN SURPRISE VALLEY IN TABLE 1 OF THIS REPORT. THE SEASONAL PRECIPITATION IN 1930-31 WAS ABOUT 75.5 PER CENT OF THE MEAN PRECIPITATION AT CEDARVILLE FOR THE PERIOD 1894-1931. THIS PERCENTAGE IS SOMEWHAT HIGHER THAN THE AVERAGE FOR THIS VICINITY DUE TO THE EFFECT OF A CLOUDBURST WHICH OCCURRED IN THE IMMEDIATE VICINITY OF CEDARVILLE ON JUNE 8TH. ABOUT 2.0 INCHES OF RAIN FELL DURING THE STORM WHICH WET THE GROUND IN GOOD SHAPE NEAR THE FOOTHILLS. HOWEVER, THE SEASON HAD BEEN SO DRY PRIOR TO THE STORM THAT MOST OF THE CROPS WERE BENEFITED VERY LITTLE. THE DISTRIBUTION AND OCCURRENCE OF THE PRECIPITATION DURING THE WINTER MONTHS WAS SUCH THAT VERY LITTLE SNOW WAS ON THE GROUND WHEN THE SPRING THAWS BEGAN.

TABLE 2 IS A TABULATION OF THE WATER SUPPLY OF CEDAR CREEK ABOVE ALL DIVERSIONS FOR THE 1931 SEASON. THE STREAM FLOW AS TABULATED IN TABLE 2 IS SHOWN GRAPHICALLY ON THE PLATE AT THE END OF THIS REPORT. THE WATER SUPPLY FOR THE 1927 SEASON IS ALSO SHOWN ON THE PLATE AS AN INDICATION OF APPROXIMATELY NORMAL RUN-OFF.

TABLE 3 IS A TABULATION OF THE DAILY DISCHARGE OF THE THOMS CREEK DITCH INTO CEDAR CREEK.

TABLE 4 IS A TABULATION OF THE PER CENT OF ALLOTMENTS DELIVERED TO EACH PRIORITY CLASS DURING THE PERIOD OF RECORD. THE TABLE ALSO GIVES THE AVERAGE DAILY DISCHARGE AND AVERAGE DAILY CHANNEL LOSSES OF THE CREEK.

TABLE 5 IS A TABULATION OF CROP YIELDS FROM TYPICAL LANDS ON CEDAR CREEK IN 1931. THE MCCULLEY RANCH, WHICH HAS THE FIRST RIGHT TO THE WATER, IS THE ONLY RANCH HAVING A REASONABLY GOOD CROP.

RECOMMENDATIONS

DUE TO THERE BEING NO WATER MASTER ON CEDAR CREEK IN 1930, AND 1931 BEING A DRY AND VERY SHORT SEASON, NO PARTICULAR EFFORT HAS BEEN MADE DURING THOSE TWO YEARS TO KEEP THE HEADGATES AND MEASURING DEVICES ON CEDAR CREEK UP TO DATE. AS A RESULT, THE OLD WEIRS INSTALLED IN 1927 ARE PRACTICALLY USELESS AND SHOULD, IF THE FUNDS CAN BE MADE AVAILABLE, BE REPLACED IN 1932 WITH PARSHAL MEASURING FLUMES. THE MEASURING FLUMES REQUIRED ARE AS FOLLOWS:-

MCCULLEY DITCH	2 FOOT FLUME
SIZER DITCH	9 INCH FLUME
FINK DITCH	9 INCH FLUME
WALLACE DITCH	9 INCH FLUME
TONEY SOUTH DITCH	9 INCH FLUME
COMPANY DITCH	2 FOOT FLUME
ACTY DITCH	9 INCH FLUME
BEEBE DITCH	9 INCH FLUME

AND SOME PLACE BELOW THE BEEBE DITCH A MEASURING DEVICE SHOULD BE INSTALLED IN THE CREEK CHANNEL TO MEASURE THE WATER DELIVERED TO THE LOWER USERS.

FINANCIAL STATEMENT

THE FUNDS COLLECTED FROM THE WATER USERS IN THE VARIOUS WATER MASTER DISTRICTS TO DEFRAY THE EXPENSES OF WATER MASTER SERVICE ARE PLACED TO THE CREDIT OF THE WATER MASTER DISTRICT, IN WHICH THEY BELONG, BY THE STATE TREASURER. THE FUNDS ARE THEN SUBJECT TO DRAFT BY THE DIVISION OF WATER RESOURCES TO MEET THE COSTS OF WATER MASTER SERVICE IN THE DISTRICT.

THERE IS SUBMITTED ON THE FOLLOWING PAGE A STATEMENT OF THE CEDAR CREEK WATER MASTER SERVICE FUND SHOWING THE RECEIPTS AND DISBURSEMENTS DURING THE 1931 SEASON.

FINANCIAL STATEMENT

CEDAR CREEK WATER DISTRICT FUND

MARCH 1, 1932

RECEIPTS

Contributed by State in 1931	$200.00	
Contributed by Taxpayers (Jan. 1/31 to Mar. 1/32)	203.77	
		$403.77

DISBURSEMENTS
(Jan. 1/31 to Mar. 1/32)

Water Master Compensation	134.45	
Water Master Travel Expense	28.13	
Cost of Publication of Financial Statement	25.00	
		187.58
BALANCE		216.19

TABLES

TABLE 1

PRECIPITATION
Cedarville, California

Season	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Seasonal
1924-25	0.25	2.06	1.86	1.66	1.08	1.34	0.61	0.65	1.59	0.49	0.29	0.30	12.18
1925-26	1.34	1.57	1.31	1.25	1.06	1.18	.13	1.26	1.07	T	.09	.09	10.35
1926-27	.15	.53	2.73	1.16	1.82	2.02	1.73	.81	.95	.35	T	T	12.25
1927-28	.32	.86	2.87	.86	.92	.75	2.93	.81	T	.55	.00	.00	10.87
1928-29	.40	.15	1.43	.42	2.08	.59	1.20	1.85	.29	1.98	.00	T	10.39
1929-30	.07	.19	.00	3.02	3.39	1.53	.83	.51	.67	T	.02	T	10.23
1930-31	1.64	.59	1.22	.18	.67	.66	1.68	.58	.25	2.25	T	.00	9.72
Mean 1894-1930	.55	1.01	1.59	1.61	1.81	1.64	1.49	.89	1.12	.68	.28	.21	12.88
1930-31 in per cent of Total Mean	12.7	4.6	9.5	1.4	5.2	5.1	13.1	4.5	1.9	17.5	.0	.0	75.5

TABLE 2

CONTINUOUS RECORDS OF DAILY DISCHARGE IN CUBIC FEET PER SECOND OF CEDAR CREEK, INCLUDING THOMS CREEK DITCH, ABOVE ALL DIVERSIONS FOR THE PERIOD MARCH 22ND TO MAY 16TH, 1931.

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1							9.75	4.40				
2							8.40	4.30				
3							7.80	4.10				
4							7.00	4.00				
5							6.80	4.00				
6							6.60	4.00				
7							6.40	3.90				
8							6.20	3.80				
9							6.00	3.70				
10							5.90	3.50				
11							5.80	3.40				
12						No	5.70	3.30				
13							5.50	3.20				
14						RECORD	5.30	3.10				
15							5.10	3.00				
16							5.10	2.80				
17							5.10					
18							4.60					
19							4.10	NO				
20							4.05					
21							4.00					
22						13.4	3.95					
23						11.4	3.90					
24						9.80	4.30	RECORD				
25						9.25	4.50					
26						8.90	4.90					
27						8.90	4.90					
28						8.40	4.80					
29						8.00	4.70					
30						8.40	4.50					
31						10.2	——					
TOTAL SEC. FT. DAYS						96.65	165.65	58.50				56 DAY PERIOD
MEAN SEC. FEET						9.66	5.52	3.66				5.73
MAX. SEC. FT.						13.4	9.75	4.40				13.4
MIN. SEC. FT.						8.00	3.90	2.80				2.80
TOTAL AC. FT.						192	328	116				636

TABLE 3

ESTIMATED DAILY DISCHARGE IN CUBIC FEET PER SECOND OF THOMS CREEK DITCH INTO CEDAR CREEK – 1931

DAY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1		0.00	0.70				
2		1.00	.60				
3		1.00	.60				
4		1.00	.60				
5		1.00	.55				
6		1.00	.50				
7		1.00	.50				
8		1.10	.45				
9		1.20	.45				
10		1.30	.40				
11		1.20	.40				
12		1.00	.30				
13	N O	.90	.20				
14		.90	.20				
15		.85	.10				
16		.85					
17		.80	N	N	N	N	N
18		.80	O	O	O	O	O
19	DIVERSION	.80					
20		.75	D	D	D	D	D
21		.70					
22		.60	V	V	V	V	V
23		.60	E	E	E	E	E
24		.70	R	R	R	R	R
25		1.00	S	S	S	S	S
26		1.00					
27		.95	O	O	O	O	O
28		.95	N	N	N	N	N
29		.90					
30		.80					
31		.—					
TOTAL SEC. FT. DAYS		* 26.65	** 6.55				44 DAY PERIOD
MEAN SEC. FT.		.92	.44				0.75
MAX. SEC. FT.		1.30	.70				1.30
MIN. SEC. FT.		0.00	0.00				0.00
TOTAL AC. FT.		52.8	13.0				65.8

* 29 DAY PERIOD

** 15 DAY PERIOD

TABLE 4

WATER DELIVERIES ON CEDAR CREEK COMPARED WITH ALLOTMENTS — 1931 SEASON

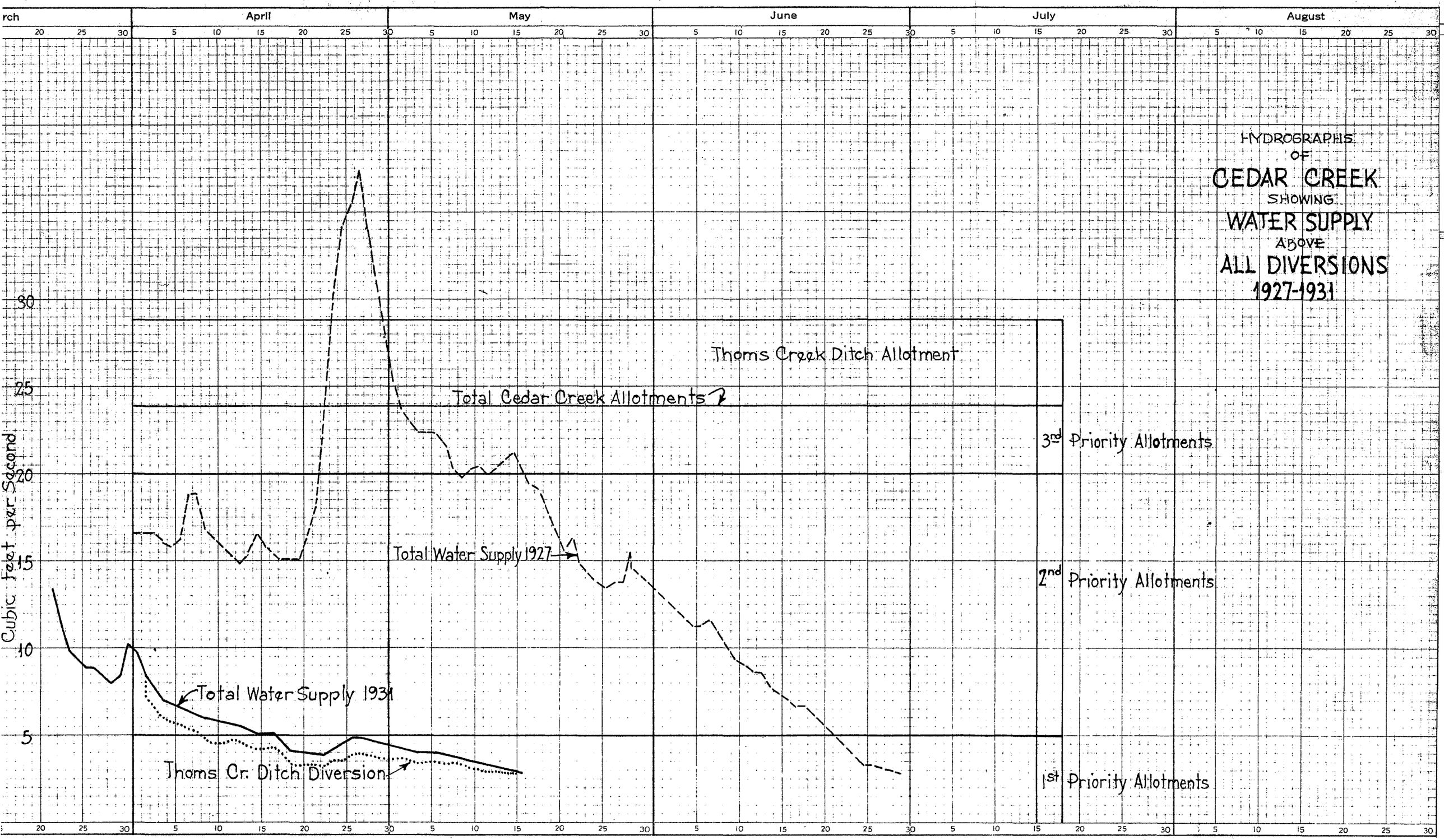
PERIOD 1931	AVERAGE DAILY DISCHARGE INCLUDING THOMS CREEK DITCH C.F.S.	CEDAR CREEK							THOMS CREEK DITCH	
		AVERAGE CHANNEL LOSS C.F.S.	AVERAGE COMBINED DIVERSIONS C.F.S.	PER CENT OF FULL ALLOTMENTS DELIVERED					AVERAGE COMBINED DIVERSIONS C.F.S.	PER CENT OF FULL ALLOTMENT DELIVERED (5.00 C.F.S.)
				1ST PRIORITY (5.00 C.F.S)	2ND PRIORITY (15.00 C.F.S.)	3RD PRIORITY (3.90 C.F.S.)	TOTAL (23.90 C.F.S)			
3/22 TO 3/28	10.07	1.92	8.15	60	34	0	41		0.00	0
3/29 TO 4/4	8.46	1.80	6.23	60	22	0	31		.43	8
4/5 TO 4/11	6.24	1.70	3.43	60	3	0	17		1.11	22
4/12 TO 4/18	5.20	0.30	4.03	75	2	0	20		.87	17
4/19 TO 4/25	4.11	0.30	2.97	59	0	0	15		.74	15
4/26 TO 5/2	4.67	0.30	3.53	71	0	0	18		.84	17
5/3 TO 5/9	3.93	0.30	3.11	62	0	0	16		.52	10
5/10 TO 5/16	3.19	0.30	2.66	53	0	0	13		.23	5
MEAN	5.73	0.82	4.16	62	7	0	21		.75	15

TABLE 5

CROP PRODUCTION ON TYPICAL LANDS IRRIGATED FROM CEDAR CREEK

1931

OWNER	CROP	ACRES	TOTAL YIELD		YIELD PER ACRE	
			SACKS	TONS	SACKS	TONS
H.L. HILL	MEADOW		NO CROP			
H.O. HUGHES	MEADOW	75	FAIR PASTURE			
L.E. MCCULLEY	ALFALFA HAY	100		250		2.5
	MEADOW HAY	150		300		2.0
	GARDEN & ORCHARD			POOR GOOD		
	PASTURE	30				
NORTON & MARSH	ALFALFA HAY	75		60		0.8
	GRAIN	12		FAILURE		
	PASTURE	35		POOR		
M.E. RINEHART	ALFALFA	50 (NOT IRRIGATED IN 1931)		30		0.6


HYDROGRAPHS
OF
CEDAR CREEK
SHOWING
WATER SUPPLY
ABOVE
ALL DIVERSIONS
1927-1931
rch
April
May
June
July
August
Cubic feet per Second
30
25
20
15
10
5
Thoms Creek Ditch Allotment
Total Cedar Creek Allotments
3rd Priority Allotments
2nd Priority Allotments
1st Priority Allotments
Total Water Supply 1927
Total Water Supply 1931
Thoms Cr. Ditch Diversion