1935

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1. Hydrographs of Soldier Creek showing Water Supply above all Diversions, 1932-1935.

November 19, 1938

Mr. Harold Conkling
Deputy State Engineer
Sacramento, California

Attention: Gordon Zander
Supervising Hydraulic Engineer

Dear Sir:

There is transmitted herewith a report covering the water distribution work of the Watermaster in the Soldier Creek Watermaster District, Modoc County, California, during the 1935 irrigation season.

The report describes the methods and practices followed in the distribution of the waters of Soldier Creek in accordance with the provisions of the decree in the case of San Francisco Cattle Loan Company, et al., vs. C. M. Crampton, et al., and presents the results obtained under this distribution.

Respectfully submitted

J. W. McPARTLAND
Deputy Water Master

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	Deputy Water Master

GENERAL DESCRIPTION OF WORK

Watermaster service was conintued in the Soldier Creek Watermaster District in 1935 in accordance with the provisions of Section 37a of the Water Commission Act. The service was commenced for the season on March 19th on Soldier Creek, and was continued until September 30th when watermaster service was terminated for the season.

The work of water distribution in the Soldier Creek Watermaster District was done by J. W. McPartland, Deputy Watermaster, under the direction of T. R. Simpson, Supervising Watermaster.

All ditches in the Soldier Creek Watermaster District were opened in 1935, and all users exercised their full legal rights whenever water was available for use. During the month of May and the first part of June water was available for the permit rights on Soldier Creek.

Rotation was practices from March 19th and continued until June 19th according to the decree. Simpson Canyon went dry on June 20th with 0.20 cubic foot per second in Daniels Canyon the end of June, during the early spring run-off both of these canyons produce sufficient water for the Daniel Ranch, generally after June 1st the Daniel allotment is from Soldier Creek.

DISCUSSION OF RESULTS

Table 1, contains the precipitation data at Cedarville. The monthly and seasonal precipitation for the period of watermaster Service in Surprise Valley and a comparison of the 1934-1935 seasonal precipitation with the 1894-1935 mean are also shown in the table. The 1934-1935 record shows the precipitation of the season as 86.0 per cent of the mean.

Table 2, contains the results of the snow surveys made annually at the three courses in the Upper Pit River Watershed. Considering the two snow courses on the Warner Range, namely, Eagle Peak and Cedar Peak, it is apparent that the 1935 snow surveys indicate that the water content of the snow on these two courses was 113.0 per cent and 98.2 per cent respectively of their respective deduced normals. A mean between these two figures is 105.6 per cent which should be indicative of the expected run-off from the Soldier Creek Watershed.

Table 3, is a tabulation of the water supply of Soldier Creek above all diversions of the season 1935. Plate 1, at the end of the report compares graphically the flow of 1935 with that of 1932. The allotments of water to the various priorities are also shown.

Table 4, is a tabulation of crop yields on typical lands irrigated from Soldier Creek.

No new installations of measuring devices were made, although several of the old structures were repaired.

The schedules of use were followed as closely as possible during the season of 1935.

VIOLATION OF DECREE OR CONTROVERSIES

No violations of the decree or controversies occurred over the distribution of the waters of Soldier Creek during the 1935 season.

RECOMMENDATIONS

When time and material is available, considerable construction of new headgates and measuring devices should be made.

TABLES

TABLE 1

PRECIPITATION

Cedarville, California

Season	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	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	.00	.00	9.72
1931-32	.33	3.20	.96	1.85	2.23	.70	1.97	1.87	.53	.22	T	T	13.86
1932-33	T	.13	.78	1.20	1.31	.81	.63	.86	1.06	.26	.25	T	7.29
1933-34	.42	1.23	T	.87	1.37	1.44	.98	.19	.94	1.14	.00	.13	8.71
1934-35	.52	.61	2.01	.85	1.32	.73	1.67	2.94	.32	.00	T	.00	10.97
Average 1925-1935	.49	1.01	1.38	1.21	1.57	1.07	1.30	1.12	.70	.66	.06	.05	10.62
Mean 1894-1935	.54	1.01	1.56	1.54	1.74	1.51	1.47	.91	1.00	.68	.22	.17	12.35
1925-35 in per cent of total mean	4.0	8.2	11.2	9.8	12.7	8.7	10.5	9.0	5.7	5.3	0.5	0.4	86.0

TABLE 2

DIVISION OF WATER RESOURCES

SNOW SURVEY - UPPER PIT RIVER

	1930	1931	1932	1933	1934	1935
Eagle Peak Course - Elev. 7500 Ft. Date of Survey	4/3	4/1	3/30	3/30	4/2	4/10
Depth of Snow - Inches	24.3	13.3	43.8	38.1	9.9	66.1
Water Content - Inches	11.0	5.2	18.7	14.3	3.3	22.6
Density - per cent	45.3	39.1	42.6	37.5	33.3	34.2
Deduced Normal Water Content % of Deduced Normal	55.0	27.0	94.0	71.5	16.5	113.0
Record Average - In. % of Record Average	78.0	36.3	131.0	100.0	23.0	158.0
Cedar Peak Course Elev. 7200 Ft. Date of Survey	3/31	3/31	3/26	3/28	3/31	3/27
Depth of Snow - In.	29.3	22.1	49.2	43.9	2.2	56.4
Water Content - In.	13.0	8.0	19.8	16.3	0.9	21.1
Density - per cent	44.4	37.6	40.3	37.1	40.8	37.4
Deduced Normal Water Content % of Deduced Normal	58.7	36.1	88.4	73.4	4.1	98.2
Record Average - In. % of Record Average	82.0	50.4	118.0	102.5	5.7	133.0
Adin Mountain Course - Elev. 6500 Ft. Date of Survey	3/27	3/27	3/24	3/27	4/1	4/17
Depth of Snow - In.	13.3	6.1	30.0	37.6	0	45.9
Water Content - In.	6.1	2.9	13.3	14.1	0	18.8
Density - Per Cent	45.6	47.3	44.3	37.5	0	40.9
Deduced Normal Water Content % of Deduced Normal	37.9	18.0	82.5	87.6	0	116.6
Record Average - In. % of Record Average	53.0	25.2	115.6	122.5	0	163.7

TABLE 3

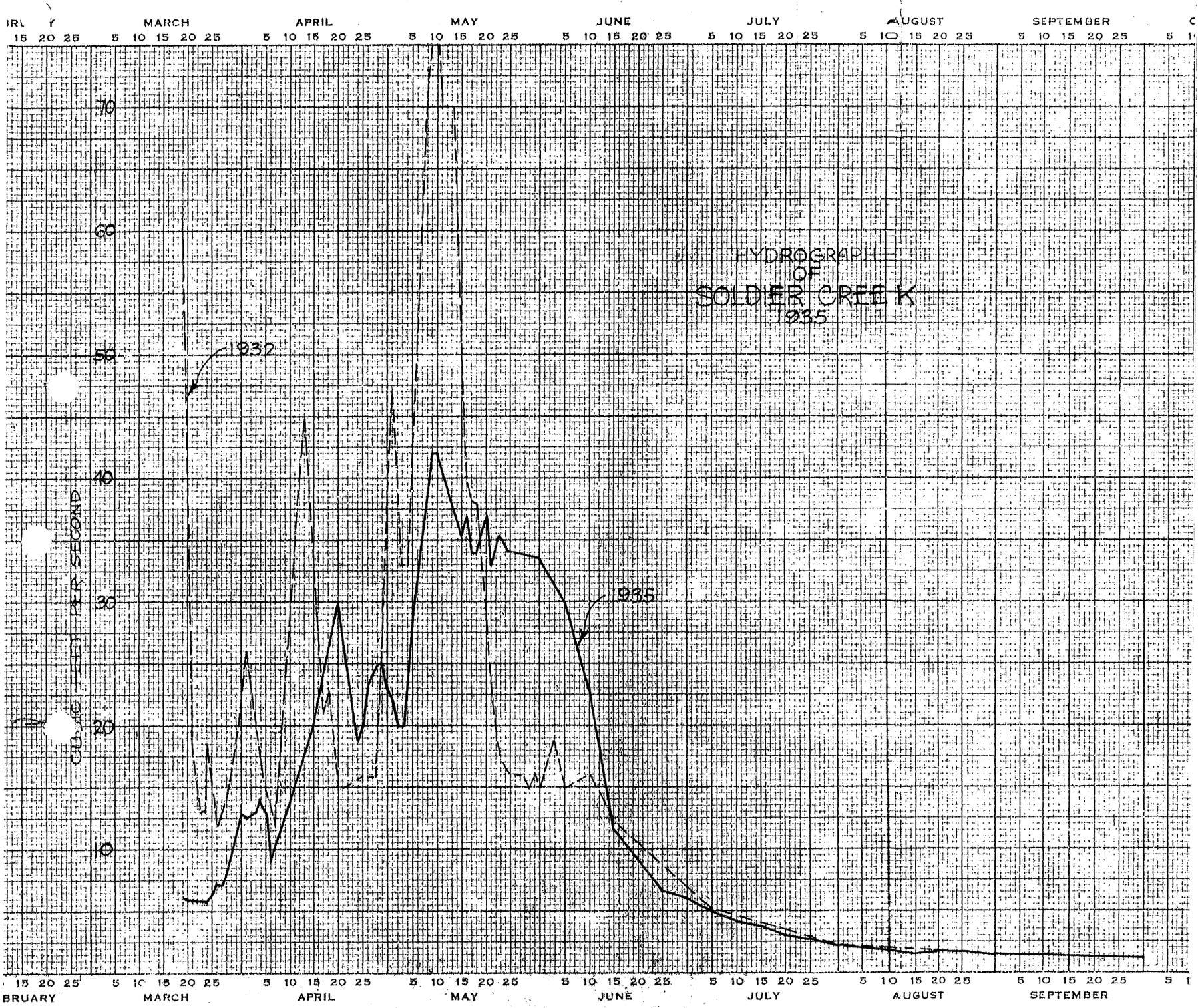
CONTINUOUS RECORDS OF DAILY DISCHARGE
IN CUBIC FEET PER SECOND OF SOLDIER CREEK ABOVE
ALL DIVERSIONS FOR THE PERIOD MARCH 19th
TO SEPTEMBER 30th, 1935

Day	March	April	May	June	July	August	Sept.	
1		12.8	22.0	32.0	5.60	2.20	1.40	
2		13.1	20.5	32.0	4.80	2.00	1.40	
3	N	14.4	20.3	31.3	4.80	2.00	1.40	
4	O	13.1	22.5	31.3	4.60	1.90	1.40	
5		12.8	29.3	30.6	4.80	1.90	1.20	
6		9.00	36.0	31.3	4.60	1.90	1.40	
7		15.6	35.3	30.0	4.30	2.00	1.40	
8	R	17.8	34.5	27.6	4.30	2.00	1.40	
9	E	15.1	42.0	27.0	4.30	1.90	1.40	
10	C	13.8	42.0	23.0	4.30	1.90	1.30	
11	O	15.1	41.5	22.4	4.10	1.90	1.40	
12	R	17.0	39.0	22.4	4.10	1.80	1.40	
13	D	19.1	39.6	21.5	3.80	1.60	1.40	
14		19.1	38.0	14.2	3.80	1.60	1.40	
15		20.0	35.3	11.4	3.80	1.50	1.40	
16		21.5	36.7	10.80	3.50	1.60	1.40	
17		20.5	34.0	9.80	3.50	1.60	1.40	
18		20.5	34.5	9.80	3.30	1.60	1.30	
19	6.10	24.0	35.3	9.80	3.10	1.60	1.30	
20	6.00	30.0	36.7	9.00	3.00	1.60	1.20	
21	5.70	28.0	33.5	8.60	3.00	1.60	1.20	
22	5.70	22.0	34.5	8.20	3.00	1.60	1.20	
23	5.70	19.6	35.3	7.80	3.00	1.60	1.20	
24	5.70	18.8	33.5	7.20	2.70	1.60	1.20	
25	6.60	20.0	34.0	6.60	2.70	1.60	1.00	
26	7.20	23.5	33.5	6.60	2.60	1.50	1.10	
27	7.00	24.5	34.5	6.30	2.40	1.50	1.20	
28	8.30	25.00	34.0	6.30	2.40	1.60	1.20	
29	11.2	25.0	35.3	6.00	2.40	1.50	1.20	
30	13.5	23.0	32.6	6.00	2.40	1.50	1.20	
31	13.1	----	33.5	----	2.20	1.40	----	
Total Sec. Ft. Days	101.8	573.7	1047.4	506.8	111.2	53.1	39.0	196 Day Period
Mean Sec. Ft.	7.83	19.1	33.8	16.9	3.59	1.71	1.30	12.4
Max Sec. Ft.	13.5	30.0	42.0	32.0	5.60	2.20	1.40	42.0
Min Sec. Ft.	5.70	9.00	20.5	6.30	2.20	1.40	1.00	1.00
Total Ac. Ft.	202.	1138.	2077.	1005.	221.	105.	77.3	4825.

TABLE 4

ESTIMATED CROP YIELDS ON TYPICAL LANDS
IRRIGATED FROM SOLDIER CREEK - 1935.

OWNER	CROP	ACRES	TOTAL YIELD		YIELD PER ACRE	
			TONS	SACKS	TONS	SACKS
GEORGE HEARD	Barley	40.0		650		16.2
	Wheat	40.0		650		16.2
G. McMULLEN	Alfalfa Hay	30.0	30		1.0	
	Alfalfa Seed	10.0		100		10.0
JOHN STREET	Alfalfa Hay	80.0	80		1.0	
	Meadow Hay	25.0	40		1.6	
	Wheat	20.0		66		3.3
	Alfalfa Seed	80.0	40- (not threshed.)			
GEORGE M. WARRENS	Alfalfa Hay	55.0	110		2.0	
	Rye	12.0		67		5.5
	Alfalfa Seed	120.0	120- (Straw)	6.5- (Seed)	1.0	


HYDROGRAPH
OF
SOLDIER CREEK
1935
1932
1935
CUBIC FEET PER SECOND
70
60
50
40
30
20
10
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
BRUARY