STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

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GOODWIN J. KNIGHT, Governor

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REPORT ON WATERMASTER SERVICE IN SUSAN RIVER WATERMASTER SERVICE AREA

Lassen County, California

1953 SEASON

Sacramento, California
March, 1954

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SUBMISSION TO AND ADOPTION BY
DEPARTMENT OF PUBLIC WORKS

I, L. C. Jopson, Principal Hydraulic Engineer, Division of Water Resources, Department of Public Works of the State of California, submit this "Report on Watermaster Service in Susan River Watermaster Service Area, Lassen County, California, 1953 Season".

/s/ L. C. JOPSON
Principal Hydraulic Engineer

I, Harvey O. Banks, Assistant State Engineer, Division of Water Resources, Department of Public Works of the State of California, approve this "Report on Watermaster Service in Susan River Watermaster Service Area, Lassen County, California, 1953 Season".

/s/ HARVEY O. BANKS
Assistant State Engineer

I, A. D. Edmonston, State Engineer and Chief of the Division of Water Resources, Department of Public Works of the State of California, approve and adopt this "Report on Watermaster Service in Susan River Watermaster Service Area, Lassen County, California, 1953 Season", as a report of the Department of Public Works.

WITNESS my hand and the seal of the Department of Public Works of the State of California, this 30th day of March , 1954.

DEPARTMENT OF PUBLIC WORKS
STATE OF CALIFORNIA

By /s/ A. D. EDMONSTON
A. D. Edmonston
State Engineer

(SEAL)

ORGANIZATION
STATE DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

Frank B. Durkee . . . . . Director of Public Works

A. D. Edmonston . . . . . State Engineer

Harvey O. Banks . . . . . Assistant State Engineer

This report was prepared under the direction of

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INTRODUCTION

This is the twelfth annual report on watermaster service in the Susan River Watermaster Service Area, and covers the period of water distribution in 1953 beginning on April 1 and terminating on September 30.

The service area was created by order of the department on November 10, 1941, to include with certain exceptions, all the water rights determined in the decree entered April 18, 1940, in the case of J. J. Fleming, et al, vs. J. R. Bennett, et al, No. 4573, Superior Court, Lassen County. Watermaster service has been provided during each irrigation season since the service area was created and annual reports prepared to show the work accomplished during each season.

The report is presented herein under five headings as follows: Introduction, Water Supply, Distribution of Water, Eagle Lake, and Changes in Ownership of Lands and Water Rights. Following the text are tables presenting precipitation data at Susanville and water supply records at various locations within the area and a plate showing a hydrograph of Susan River above Susanville.

WATER SUPPLY

Precipitation

Records of precipitation, as compiled from observations made by the U. S. Weather Bureau at Susanville Airport are shown on Table 1. The precipitation for the period October 1, 1952 to September 30, 1953, was 13.93 inches which is equivalent to about 117 per cent of the ten-year mean.

According to the bulletin "Water Conditions in California, April 1, 1953", the water content of the snow on April 1 at the three stations in the Susan River watershed averaged about 70 per cent of the long time mean. Cold daily temperatures during April and May slowed the melting of the winter snowpack.

This, combined with above average precipitation in these months produced a surplus of water over most of the Susan River area until about June 1. Near normal water supply conditions prevailed during the remainder of the season.

Stream Flow

Records of discharge of Susan River at Haws are collected by the U. S. Geological Survey and will be available in publications of that agency. However, for the purpose of distributing the available water supply during the season a preliminary record of discharge for the Susan River at Haws, computed by applying gage heights obtained in the field to a preliminary rating curve for the station, was prepared and is included in Table 2. Final discharge records when published by the U. S. Geological Survey may vary slightly from the table. Stream flow measuring stations, equipped with automatic water stage recorders, were maintained by the Department for the period of watermaster service on the Old Channel of Susan River below Woodstock Dam, Susan River at Johnstonville Bridge, and Gold Run Creek above Diversions. Records of discharge at these stations are set forth in Tables 3, 4, and 5.

The discharge of the Ramsey Ditch, obtained from intermittent observations of the flow through a 2-foot Parshall flume located near the head of the ditch is shown in Table 6.

The discharge of Susan River above the Ramsey Ditch, as shown in Table 7, was obtained by combining Tables 2 and 6. Table 8 sets forth the natural flow of Susan River above the Ramsey Ditch, exclusive of stored water released from McCoy and Hog Flat Reservoirs. The natural flow during periods of reservoir release was computed from measurements and observations taken before and during the release of stored water.

The released storage water available for rediversion below Susanville was computed from measurements and observations taken before and during the release and is shown in Table 9.

A hydrograph of the Susan River at Haws showing the daily discharge is shown on Plate 1.

DISTRIBUTION OF WATER

The water of Susan River and its tributaries was distributed during the 1953 season in accordance with the water rights defined in the decree in the case of J. J. Fleming, et al., vs. J. R. Bennett, et al., No. 4573, Superior Court, Lassen County, California. The rights fall into three groups as follows: Schedule 3 of the decree which defines the rights to the use of water from Willow Creek in Willow Creek Valley and Lower Willow Creek and the Susan River Delta below the Colony Dam; Schedule 4 of the decree which defines the rights to the use of water from Gold Run Creek, Piute Creek, Hills Creek, Holtzclaw Creek, and Lassen Creek above their confluence with Susan River; and Schedules 5 and 6 of the decree which defines the rights to the use of water from Susan River exclusive of its tributaries.

A discussion of water distribution for the 1953 season in the three groups follows:

Willow Creek (Schedule 3)

Willow Creek Valley. There was ample water for all uses in Willow Creek until about May 1 when the stream approached its summer flow with water available only for first priority and about sixty per cent of second priority allotments. Intermittent rainfall during May and June, supplemented by water stored in the Walsh Reservoir, was sufficient to supply almost all irrigation needs until the start of the haying season about July 1. Subsequent to this time little more than stock water was required or supplied below the Barron ranch.

Lower Willow Creek and Susan River Delta below Colony Dam. The water requirements of this section were satisfied generally until about August 1, as supplemental water was received from the Susan River above its confluence with Willow Creek.

After the first of September the Susan River delta area was almost entirely dependent upon the flow from lower Willow Creek. This supply was sufficient to satisfy all first priority allotments and about forty per cent of the second priority allotments. The supply of second priority water was ample to fill stockwatering requirements throughout the remainder of the season.

Lassen, Gold Run, Hills, and Piute Creeks (Schedule 4)

Lassen Creek. The flow of Lassen Creek was adequate to meet all irrigation needs until the end of the haying season about September 1. Stock water was available where needed along the creek during the entire season.

Holtzclaw Creek, a tributary of Lassen Creek, supplied water to all priorities until about June 1. Thereafter the entire flow was used on the Hulsman ranch.

Gold Run Creek. The flow of Gold Run Creek was sufficient to meet all requirements until about the first of July. Subsequent to August 1 and until the end of the season, water was available only for stock water down to and including the Rahm (Dotson) ranch.

Hills Creek. The flow of Hills Creek was adequate to supply all irrigation requirements until about July 1 after which the water supply rapidly decreased. During the low flow period after August 1, the available flow was sufficient to supply stock water to all ranches.

Piute Creek. There was sufficient water in Piute Creek to satisfy all requirements until about July 15th. Thereafter water was available for only forty per cent of allotments with all of the available water, except 0.27 cubic foot per second required for the pro rata allotments of the downstream users, being diverted by the California Pacific Utilities Company.

Susan River (Schedules 5 and 6)

Schedule 5. The natural flow of Susan River was adequate to meet all

irrigation requirements until about June 20. Subsequent to that date, the ranches in the delta area reduced their diversions for haying and little shortage was felt until after August 1. During August and September water was available for all first priority rights and some stock water was available under second priority rights.

The Woodstock, Bantley, Johnstonville, Ripley, Old Kelly, Johnston and Chappius, Bill, and Tanner dams were used during the 1953 season. The Barham dam suffered a complete failure on June 10, and the Bantley dam suffered a temporary failure during the first week of July.

The per cent of allotments delivered to the first, second, and third priority rights under Schedule 5 are given by months in the following tabulation:

Month	Percentage of Allotments		
	First Priority	Second Priority	Third Priority
April	100	100	100
May	100	100	100
June	100	100	40
July	100	30	25
August	100	25	20
September	100	15	20

Schedule 6. There was sufficient water in Susan River to meet nearly all requirements under Schedule 6 as late as June 24. Thereafter the entire water supply was used by earlier priorities set forth in Schedules 3 and 5. Stock water was available in Hartson Slough throughout most of the season.

Susan River Reservoirs 1953

The Lassen Irrigation Company owns and operates three reservoirs in

the Susan River stream system. Lake Leavitt, from which water is released into the company distribution system, was filled to capacity in April with releases for irrigation beginning in May. McCoy Reservoir in the upper drainage area was filled to capacity in April. Hog Flat Reservoir near McCoy Reservoir was filled to approximately one-half of capacity by the end of the spring runoff. Release of water from McCoy Reservoir for replenishment of storage in Lake Leavitt began on July 16 and was terminated on August 20. No release was made from Hog Flat Reservoir during the season. About two thousand acre-feet of storage remained in McCoy Reservoir, and about three thousand acre-feet in Hog Flat Reservoir at the end of the season.

The amount of stored water released from McCoy Reservoir, measured at Susanville, was 7,110 acre-feet. Lake Leavitt Reservoir was practically empty on September 30. 1953

EAGLE LAKE

In order to secure a record of the changes in water surface elevation of Eagle Lake, the department in 1947, began taking occasional measurements from an established bench mark to the water surface of the lake. These observations were continued during the 1953 season. The elevations of the water surface at the various times of observation prior to 1953 may be found in the 1950, 1951, and 1952 reports on Watermaster Service in the Susan River Watermaster Service Area. Observations of the elevation of water surface during 1953 are shown in the following tabulation:

Date	Distance in Feet to Water Surface	Water Surface Elevation
4-23-53	13.12	84.94
5-28-53	12.88	85.18
7-12-53	13.20	84.86
8-12-53	13.72	84.34
9-16-53	14.13	83.93

CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS

The changes in ownership of lands and water rights which have occurred subsequent to filing "Statement for Susan River Watermaster Service Area, County of Lassen, State of California, for 1953" and which shall be included in the 1954 statement for said service area, are listed in the following tabulations:

Tract No.	Name of Water Right Owner Appearing in 1953 Statement	Name of Water Right Owner to Appear in 1954 Statement	Amount of Water c.f.s.
12-59, 12-122	Bantley, Antone and Bantley, Nelia M.	Bantley, Nelia M. and Bantley, Estate of Antone	1.39
12-28	Brown, T. S.	Brown, T. S.; Brown, Florence, Brown, Robert D. and Brown, Patricia V.	1.403
12-14	Compton, James W. and Compton, C. F.	Farris, George A.	0.05
12-50	Cramer, Catherine O.	Cramer, Leroy and Cramer, Eva M.	1.35
12-65	Emerson, Clarissa; Wheeler, Juanita; Emerson, Hayden; Mortimer, Jane and Emerson, Rollie D.	Emerson, Clarissa; Emerson, Rollie D. and Emerson, Hayden	10.65
12-55	Ferrell, Harvey G.	Ferrell, Harvey G; Ferrell, James O. and Ferrell, Eva Althea	0.90
12-30	Garcia, Lloyd and Garcia, Antonia	Riedel, John A. and Riedel, Maybelle M.	0.04
12-77	Gunter, Fannie Leavitt	Vella, Phillip and Vella, Ruth	1.50
12-99	McClelland, Esther A.	McClelland, Esther A. and McClelland, James P.	10.75
12-43	Month, John F. and Month, Leah C.	Sorenson, Stanley B. and Sorenson, Carole M.	0.035
12-91, 12-92	Miller, Herbert A.	Miller, Herbert A. and Miller, Martha Grace	1.10
12-43	Spurgeon, Guy O. and Spurgeon, Barbara Jo	Snyder, Albert L. and Snyder, Golda A.	0.27
12-97	Wagner, Gustav	Wagner, Herbert H. and Wagner, Harold L.	0.60
12-94	Woodstock, George L.	Woodstock, Dora S. and Woodstock, Estate of George L.	1.05

TABLE 1

PRECIPITATION AT SUSANVILLE AIRPORT, LASSEN COUNTY, CALIFORNIA

Monthly, Seasonal, and Average Amounts in Inches

1943-44 to 1952-53

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Season
1943-44	1.17	.89	.90	2.06	3.14	1.98	1.03	.14	1.82	.47	.04	.19	13.83
1944-45	.35	3.67	1.58	.38	2.42	.80	.33	.77	.46	.27	.09	.47	11.59
1945-46	2.92	2.01	3.65	.40	.89	1.21	.25	.07	.01	.59	.00	.20	12.20
1946-47	.25	3.28	1.50	.25	1.28	1.37	.67	1.13	.47	.00	.18	.02	10.40
1947-48	1.57	.07	.15	.91	.66	.85	1.85	1.39	1.43	.00	.00	.04	8.92
1948-49	.61	.48	1.55	.24	.60	.97	.01	1.89	.00	.04	.00	.24	6.63
1949-50	.01	1.11	.17	1.36	1.86	1.36	.72	.36	.98	.00	.21	1.33	9.47
1950-51	2.44	3.11	2.03	2.06	.78	.09	1.56	.86	.50	.00	.12	.03	13.58
1951-52	1.93	1.06	3.49	4.79	2.21	3.10	.32	.53	.19	.67	.00	.43	18.72
1952-53	.14	1.07	3.39	3.72	.08	1.27	.79	1.70	.50	.96	.10	.21	13.93
10-Year Mean	1.14	1.67	1.84	1.61	1.40	1.30	.75	.88	.64	.30	.07	.32	11.92

TABLE 2

Daily Discharge
SUSAN RIVER AT HAWS BELOW RAMSEY DITCH
INCLUDING WATER RELEASED FROM STORAGE
April 1 to September 30, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	127	305	150	34	116	11.0
2	127	275	148	32	116	11.0
3	144	267	144	31	118	11.0
4	156	267	142	29	116	11.0
5	182	275	144	27	114	10.9
6	167	280	174	26	114	10.8
7	155	275	197	24	114	10.8
8	137	267	231	22	111	10.8
9	127	256	252	22	108	10.8
10	117	228	250	21	107	10.6
11	102	210	239	20	105	10.5
12	95	205	210	18.3	108	10.5
13	95	203	190	17.7	109	10.6
14	95	196	148	16.5	108	10.7
15	99	208	138	16.5	106	10.7
16	109	242	134	47	104	10.7
17	120	235	131	99	104	10.7
18	116	235	128	101	104	10.7
19	126	300	127	101	100	10.6
20	178	380	119	101	95	10.6
21	177	460	113	107	32	10.5
22	208	470	105	114	25	10.5
23	252	450	95	114	20	10.7
24	235	405	91	118	15.0	10.8
25	226	330	81	120	11.5	10.7
26	226	252	77	118	10.4	10.7
27	410	210	65	118	10.5	10.7
28	420	167	52	118	11.0	10.7
29	370	155	45	120	11.5	10.7
30	340	144	41	120	20	10.7
31	—	146	—	115	20	—
Total Sec. Ft. Days	5,438	8,303	4,161	2,088	2,363.9	321.7
Mean Sec. Ft.	181	268	139	67.4	76.4	10.7
Total Ac. Ft.	10,770	16,440	8,240	4,133	4,680	637

Total for period - 44,900 acre-feet.

Note: This table subject to revision upon publication of U. S. Geological Survey records.

TABLE 3

Daily Discharge
OLD CHANNEL OF SUSAN RIVER BELOW WOODSTOCK DAM
April 17 to September 30, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1		12	12	10.0	8.0	9.0
2		10	12	10.0	8.0	9.0
3		8	13	9.5	8.5	9.0
4		10	13	9.5	8.5	8.5
5		18	15	9.0	8.5	8.0
6		18	15	8.0	8.5	8.0
7	No	18	17	7.5	8.5	8.0
8	Record	18	17	7.0	8.0	7.5
9		18	17	6.5	8.0	7.5
10		18	16	6.0	8.0	7.5
11		18	16	5.0	7.5	7.0
12		18	15	4.5	8.0	7.0
13		18	14	7.0	8.5	7.0
14		18	13	8.5	10.0	6.5
15		18	13	8.0	8.5	6.5
16		20	12	7.5	8.0	6.5
17	18	20	12	7.0	8.0	6.0
18	18	22	12	6.5	8.0	6.0
19	18	22	12	6.0	8.0	5.5
20	19	22	12	5.5	8.0	5.0
21	20	22	11	8.0	8.0	4.5
22	21	25	10	10.0	8.0	4.5
23	21	18	10	10.0	6.0	4.5
24	18	12	10	9.0	12.0	4.5
25	17	12	12	8.0	10.0	4.0
26	20	12	12	7.5	8.5	4.0
27	23	12	12	8.0	8.5	4.0
28	12	12	12	8.0	8.5	4.0
29	12	12	11	8.0	8.0	4.0
30	12	12	11	8.0	12.0	4.0
31	—	12	—	8.0	12.0	—
Total Sec. Ft. Days	249	505	389	241.0	266.5	187.0
Mean Sec. Ft.	17.8	16.3	13.0	7.8	8.6	6.2
Total Ac. Ft.	493	1,000	771	478	528	370

Total for period - 3,640 acre-feet.

TABLE 4

Daily Discharge
SUSAN RIVER AT JOHNSTONVILLE BRIDGE
May 16 to September 30, 1953

In Cubic Feet Per Second

Day	May	June	July	August	September
1		120	15.0	5.5	4.0
2		130	13.0	5.0	4.0
3		120	12.0	3.5	3.5
4		120	20.0	3.5	3.5
5		140	12.0	4.0	4.0
6		140	11.0	4.0	3.5
7	No	160	8.0	4.0	3.5
8	Record	180	9.0	4.5	3.2
9		220	10.0	4.0	3.2
10		210	10.0	4.0	3.2
11		210	10.0	3.8	3.2
12		200	9.5	3.8	3.2
13		170	9.5	3.5	3.2
14		140	9.0	3.5	3.2
15		120	9.0	3.2	3.2
16	190	105	8.5	3.2	3.0
17	150	100	8.5	3.2	3.0
18	130	90	8.5	3.0	3.0
19	200	80	8.5	3.0	3.0
20	270	70	8.5	3.0	3.0
21	370	40	8.0	2.7	3.0
22	430	38	8.0	4.0	4.0
23	390	35	8.0	3.0	4.0
24	320	35	8.5	2.7	4.0
25	230	33	9.0	2.7	4.0
26	190	33	8.8	3.0	4.0
27	165	30	8.8	3.5	4.0
28	125	30	8.8	3.0	4.0
29	100	25	8.0	3.0	4.0
30	110	20	7.0	3.0	4.0
31	110	—	6.0	3.5	—
Total Sec. Ft. Days	3,480	3,144	298.4	109.3	105.6
Mean Sec. Ft.	218	105	9.6	3.5	3.5
Total Ac. Ft.	6,902	6,235	592	217	209

Total for period - 14,155 acre-feet

TABLE 5

Daily Discharge
GOLD RUN CREEK ABOVE DIVERSIONS
May 7 to September 30, 1953

In Cubic Feet Per Second

Day	May	June	July	August	September
1		16	9.0	2.0	1.4
2	No	16	9.0	2.0	1.4
3	Record	16	9.0	2.0	1.4
4		16	9.0	2.0	1.4
5		18	9.0	2.0	1.4
6		20	8.6	1.8	1.4
7	45	22	8.6	1.8	1.4
8	45	25	8.4	1.8	1.4
9	40	25	8.4	1.8	1.4
10	40	22	8.0	1.8	1.3
11	40	20	8.0	1.8	1.3
12	35	20	8.0	1.8	1.3
13	35	20	8.0	1.8	1.3
14	30	18	7.8	1.6	1.2
15	30	18	7.6	1.6	1.2
16	30	18	7.4	1.6	1.2
17	35	18	7.2	1.6	1.2
18	30	18	7.0	1.6	1.2
19	35	17	6.5	1.6	1.2
20	40	17	6.0	1.6	1.2
21	35	17	5.5	1.6	1.2
22	25	16	5.0	1.6	1.2
23	25	16	5.0	1.6	1.2
24	20	14	5.0	1.6	1.2
25	20	14	4.5	1.6	1.1
26	16	12	4.0	1.6	1.1
27	14	12	3.5	1.6	1.1
28	14	10	3.0	1.8	1.1
29	14	10	2.5	1.8	1.1
30	14	10	2.5	1.6	1.1
31	14	—	2.0	1.4	—
Total Sec. Ft. Days	721	511	203.0	53.4	37.6
Mean Sec. Ft.	28.8	17.0	6.5	1.7	1.2
Total Ac. Ft.	1,430	1,012	402	106	75

Total for period - 3,025 acre-feet

TABLE 6

Daily Discharge
RAMSEY DITCH AT HEAD
April 1 to September 30, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	2.0	2.5	3.6	3.0	3.4	2.3
2	2.0	2.5	3.6	4.0	3.4	2.3
3	2.0	2.5	3.6	3.8	3.4	2.1
4	2.0	2.5	3.6	3.6	3.4	2.1
5	2.0	2.5	3.6	3.5	3.4	2.1
6	2.0	2.5	3.6	3.5	3.4	2.1
7	2.5	2.5	4.0	3.5	3.4	2.1
8	2.5	2.5	4.0	3.5	3.4	2.0
9	2.5	2.5	4.5	3.5	3.4	2.0
10	2.5	2.5	5.0	3.5	3.4	2.0
11	2.5	2.5	5.0	3.5	3.4	2.0
12	2.5	2.5	5.0	4.0	3.4	2.0
13	2.5	3.0	5.0	3.8	3.4	2.0
14	2.5	4.1	5.0	3.8	3.4	2.0
15	2.5	4.1	5.0	3.5	3.4	2.0
16	2.5	4.1	5.0	3.0	3.4	1.8
17	2.5	4.1	5.0	2.0	3.4	1.6
18	2.5	4.1	5.0	3.0	3.4	1.4
19	2.5	4.7	5.0	3.5	3.4	1.4
20	2.5	5.0	5.0	4.0	3.4	1.4
21	2.5	2.0	4.0	4.0	3.4	1.4
22	2.5	2.0	4.0	4.0	3.4	1.4
23	2.5	2.0	4.0	4.6	3.4	1.4
24	2.5	2.0	1.0	4.6	3.2	1.4
25	2.5	2.0	3.0	4.8	3.2	1.4
26	2.5	2.0	3.0	3.4	3.0	1.4
27	2.5	1.5	4.0	3.4	3.0	1.4
28	2.5	1.5	4.0	3.4	3.0	1.4
29	2.5	1.2	5.0	3.4	3.0	1.4
30	2.5	2.2	4.0	3.4	2.7	1.4
31	—	3.2	—	3.4	2.5	—
Total Sec. Ft. Days	72.0	84.8	125.1	111.9	101.8	52.7
Mean Sec. Ft.	2.4	2.7	4.2	3.6	3.3	1.8
Total Ac. Ft.	144	169	249	222	202	104

Total for period - 1,090 acre-feet.

TABLE 7

Daily Discharge
SUSAN RIVER ABOVE RANSEY DITCH INCLUDING WATER
RELEASED FROM STORAGE
April 1 to September 30, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	129	307	153	37	119	13.3
2	129	278	151	36	120	13.3
3	146	269	147	35	121	13.1
4	158	270	146	33	120	13.1
5	184	277	148	30	117	13.0
6	169	283	178	30	118	12.9
7	157	277	201	27	117	12.9
8	140	270	235	26	115	12.8
9	129	258	257	25	111	12.8
10	120	231	255	24	110	12.6
11	102	212	244	23	109	12.5
12	98	208	215	22	111	12.5
13	97	206	195	22	113	12.6
14	98	200	153	20	111	12.7
15	101	212	143	20	110	12.7
16	112	246	139	50	107	12.5
17	122	239	136	101	107	12.3
18	119	239	133	104	108	12.1
19	128	305	132	104	103	12.0
20	181	385	124	105	99	12.0
21	179	462	117	111	35	11.9
22	211	472	109	118	29	11.9
23	254	452	99	118	23	12.1
24	238	407	92	123	19.0	12.2
25	228	332	84	125	14.7	12.1
26	229	254	80	121	13.4	12.1
27	412	212	69	121	13.5	12.1
28	423	169	56	121	14.0	12.1
29	372	157	50	125	14.5	12.1
30	343	146	45	125	23	12.1
31	—	149	—	119	22	—
Total Sec. Ft. Days	5,508	8,384	4,286	2,201	2,467.1	374.4
Mean Sec. Ft.	184	270	143	71	80	12.5
Total Ac. Ft.	10,920	16,630	8,500	4,365	4,890	740

Total for period - 46,045 acre-feet.

TABLE 8

Daily Discharge
NATURAL FLOW OF SUSAN RIVER ABOVE RAMSEY DITCH
April 1 to September 30, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	129	307	153	37	13.5	13.3
2	129	278	151	36	13.3	13.3
3	146	269	147	35	13.0	13.1
4	158	270	146	33	13.0	13.1
5	184	277	148	30	13.0	13.0
6	169	283	178	30	13.0	12.9
7	157	277	201	27	13.0	12.9
8	140	270	235	26	13.0	12.8
9	129	258	257	25	13.0	12.8
10	120	231	255	24	13.0	12.6
11	102	212	244	23	13.3	12.5
12	98	208	215	22	14.3	12.5
13	97	206	195	22	15.5	12.6
14	98	200	153	20	14.5	12.7
15	101	212	143	20	13.3	12.7
16	112	246	139	16.5	13.0	12.5
17	122	239	136	16.0	12.9	12.3
18	119	239	133	16.0	12.9	12.1
19	128	305	132	15.5	12.9	12.0
20	181	385	124	15.3	12.9	12.0
21	179	462	117	15.0	12.9	11.9
22	211	472	109	14.7	12.9	11.9
23	254	452	99	14.3	13.0	12.1
24	238	407	92	14.0	14.0	12.2
25	228	332	84	13.9	13.7	12.1
26	229	254	80	13.7	13.4	12.1
27	412	212	69	13.5	13.5	12.1
28	423	169	56	13.5	14.0	12.1
29	372	157	50	13.5	14.5	12.1
30	343	146	45	13.5	23.5	12.1
31	—	149	—	13.5	22.5	—
Total Sec. Ft. Days	5,508	8,384	4,286	642.4	434.2	374.4
Mean Sec. Ft.	184	270	143	20.7	14.0	12.5
Total Ac. Ft.	10,920	16,630	8,500	1,275	860	740

Total for period - 38,925 acre-feet.

TABLE 9

WATER RELEASED FROM MCCOY RESERVOIR AND AVAILABLE FOR
RE-DIVERSION AT SUSANVILLE
July 16 to August 25, 1953

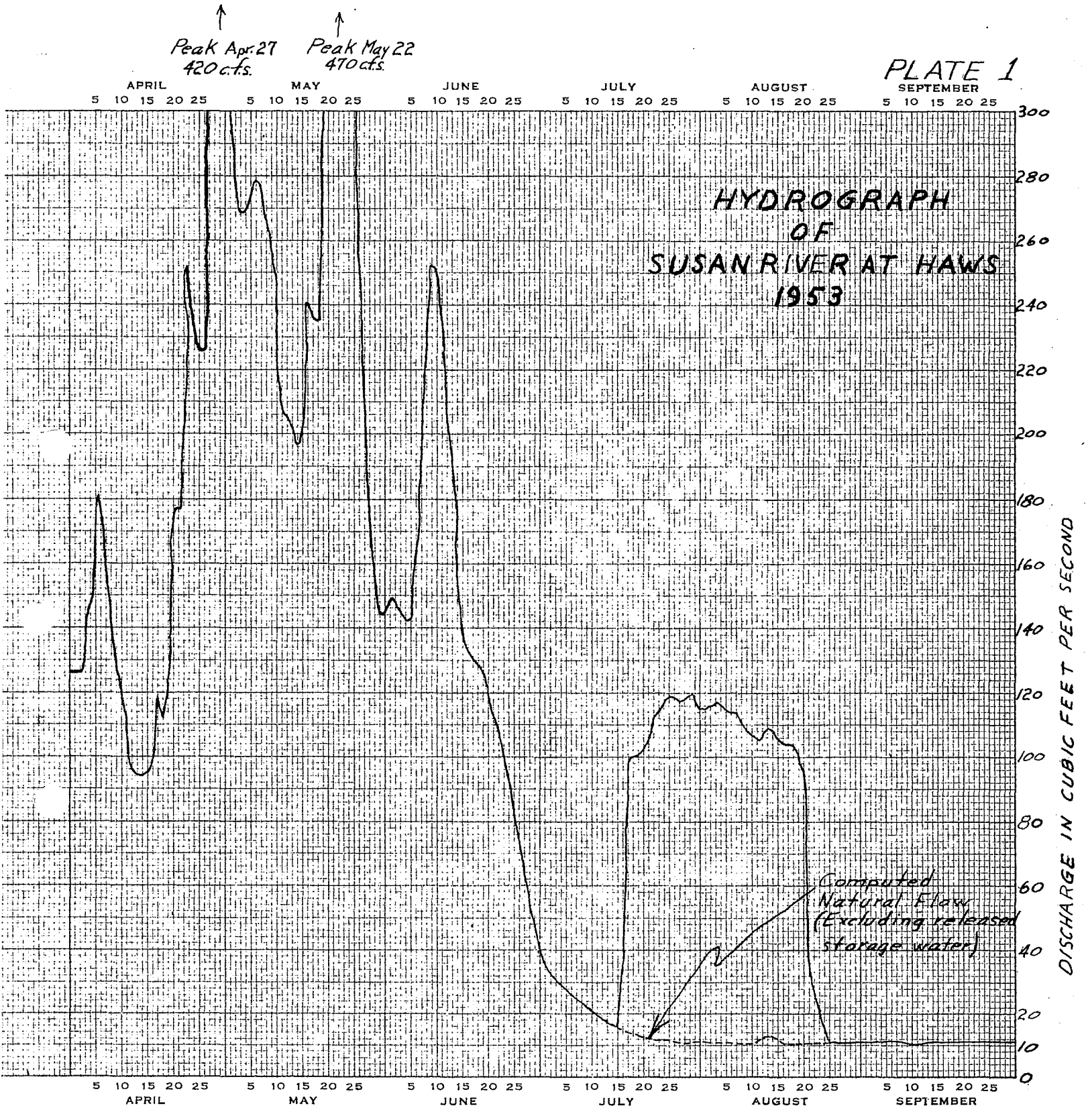
In Cubic Feet Per Second

Day	June	July	August	September
1			105	
2			107	
3			108	
4			107	
5			104	
6			105	
7	No Release	No Release	104	No Release
8			102	
9			98	
10			97	
11			96	
12			97	
13			98	
14			96	
15			97	
16		33	94	
17		85	94	
18		88	95	
19		88	90	
20		90	86	
21		96	22	
22		103	16	
23		104	10	
24		109	5	
25		111	1	
26		107		
27		107		
28		108	No Release	
29		111		
30		112		
31		106		
Total Sec. Ft. Days		1,558	2,034	
Mean Sec. Ft.		97.4	81.4	
Total Ac. Ft.		3,090	4,030	

Total Release for period - 7,120 acre-feet.

Note: No Release from Hog Flat Reservoir in 1953

PLATE 1


Peak Apr. 27
420 c.f.s.
Peak May 22
470 c.f.s.
HYDROGRAPH
OF
SUSAN RIVER AT HAWS
1953
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
5 10 15 20 25
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
10
0
DISCHARGE IN CUBIC FEET PER SECOND
Computed
Natural Flow
(Excluding released
storage water)