STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

GOODWIN J. KNIGHT, Governor

FRANK B. DURKEE, Director of Public Works

A. D. EDMONSTON, State Engineer

REPORT ON WATERMASTER SERVICE IN NORTH FORK PIT RIVER WATERMASTER SERVICE AREA

Modoc 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 North Fork Pit River Watermaster Service Area, Modoc County, California, 1953 Season".

/s/ L.C. Jopson

Principal Hydraulic Enginneer

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 North Fork Pit River Watermaster Service Area, Modoc 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 North Fork Pit River Watermaster Service Area, Modoc 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

(SEAL)

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

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

L. C. Jopson
Principal Hydraulic Engineer

By
Jack W. Cook
Assistant Hydraulic Engineer
and Watermaster

T. R. Merryweather
Administrative Officer

INTRODUCTION

This is the fourteenth annual report on watermaster service in the North Fork Pit River Watermaster Service Area, and covers the period of water distribution in 1953 beginning on April 3 and terminating on September 29.

The service area was created by order of the Division of Water Resources on December 18, 1939, and was supplemented and revised by order of December 13, 1940. The service area includes the water rights determined by decrees of the Superior Court, Modoc County, on the North Fork Pit River and its tributaries except Franklin Creek and on various streams tributary to Goose Lake as follows:

New Pine Creek	Keller, et. al. v. Jensen, et. al.	2821
Cottonwood Creek	Oliver vs. Robnett, et. al.	2344
Davis Creek	Lake Shore Cattle Co., et. al. vs. Mulkey, et. al.	2782
Franklin Creek	Crowder, et. al. vs. Indart, et. al.	3118
North Fork Pit River Linville Creek Joseph Creek Thoms Creek Gleason Creek Parker Creek Shields Creek	In Re North Fork Pit River and all its tributaries except Franklin Creek in Modoc County, California	4074

Prior to December 18, 1939, service areas had been created on separate streams as the water rights had been determined on each. To simplify administration, these smaller service areas were combined into a single unit by the above dated orders.

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 four headings as follows: Introduction, Water Supply, Distribution of Water, Changes in Ownership of Lands and Water Rights. Following the text are tables presenting precipitation and hydrographic data.

WATER SUPPLY

Precipitation

Data on precipitation, as compiled from observations made by the United States Weather Bureau at Alturas, California and Lakeview, Oregon, for the period October 1, 1952 to September 30, 1953, are shown in Table I. The precipitation for the period was 14.65 inches for Alturas and 15.53 inches for Lakeview which is equivalent to about 120 per cent and 110 per cent respectively, of the normal precipitation.

The water content of the snowpack on Eagle Peak, Blue Lake Ranch and Cedar Pass snow courses in 1953, as published in the bulletin entitled "Water Conditions in California as of April 1, 1953", averaged 13.9 inches or 81 per cent of the computed normal for the three courses.

Stream Flow

Measuring stations equipped with water stage recorders were maintained on the various streams within the service area as follows:

New Pine Creek below Schroeder's - rated section.
Cottonwood Creek above Diversions - rated section.
Davis Creek at Old Fish Wheel - rated section.
Linville Creek at Old Power House - 3 foot rectangular weir.
Franklin Creek above Diversions - 4 foot rectangular weir.
Joseph Creek below Couch Creek - rated section.
Thoms Creek at Alturas-Cedarville Highway - rated section.
Gleason Creek at Jones Ranch - 3 foot rectangular weir.
Parker Creek at Fogarty Ranch - rated section.
Shields Creek below Pepperdine's - 6 foot rectangular weir.
Parker Creek above Highway 395 - rated section.
North Fork Pit River above old X-L Ranch - rated section.

The records of daily discharge for these stations are presented in Tables 3 to 14, inclusive, submitted at the end of this report.

DISTRIBUTION OF WATER

Distribution on the various streams within the North Fork Pit River Watermaster Service Area was in accordance with the allotments and priorities set forth in the respective decrees determining the rights thereon. The stream flow available for distribution was determined from the measured discharge at the respective measuring stations. A discussion of the results accomplished follows:

New Pine Creek

The available discharge of New Pine Creek was sufficient to supply all allotments until July 23, 1953. After June 30 the proration system was changed to a priority system of distribution in accordance with the New Pine Creek decree.

The distribution of water in per cent of priority allotments from July to September was as follows:

Priority	July	August	September
1st	100	100	100
2nd	100	100	64
3rd	100	87	10
4th	93	16	0

Cottonwood Creek

The discharge of Cottonwood Creek was sufficient to supply all allotments until June 30, 1953. By July 17, water was available for first priorities only. The new concrete Fleming diversion was constructed late in 1952 and was in use for the 1953 season. It displayed considerable resistance to flood conditions during the middle of May but needed backfill earth on downstream channel and north wing wall.

The distribution of water in per cent of priority allotments from June to September was a follows:

Priority	June	July	August	September
1st	100	85	13	6
2nd	100	50	0	0
3rd	100	50	0	0
4th	100	18	0	0
5th	100	10	0	0
6th	99	0	0	0

Davis Creek

The discharge of Davis Creek was sufficient to supply nearly all allotments during April, May and June.

The distribution of water in per cent of priority allotments from April to September was as follows:

Priority	April	May	June	July	August	September
1st	100	100	100	100	100	100
2nd	100	100	100	100	100	100
3rd	62	100	100	42	12	4
4th	26	64	90	5	0	0

Linville Creek

The distribution of water in per cent of priority allotments from April to September was as follows:

Priority	April	May	June	July	August	September
1st	70	87	97	70	63	60
2nd	0	5	6	0	0	0

Franklin Creek

The discharge of Franklin Creek was sufficient to supply all allotments until June 23, excepting April and the early part of May.

The distribution of water in per cent of priority allotments from April to September was as follows:

Priority	April	May	June	July	August	September
1st	100	100	100	100	100	100
2nd	100	100	100	100	100	100
3rd	57	100	99	35	20	18
4th	11	97	83	0	0	0

Joseph Creek

The discharge of Joseph Creek was sufficient to supply all allotments until July 9 of this year although April was not as wet as May and June.

The distribution of water in per cent of priority allotments from July to September was as follows:

Priority	July	August	September
1st	100	100	100
2nd	70	10	0
3rd	50	0	0
4th	33	0	0

Thoms Creek

The discharge of Thoms Creek was sufficient to supply all allotments until August 9 this year.

The distribution of water in per cent of priority allotments during August and September was as follows:

Priority	August	September
1st	100	100
2nd	100	100
3rd	84	55

Gleason Creek

The discharge of Gleason Creek supplied all allotments until June 21 this year with the exception of the early and middle part of April. The stream was dry at the county road and recorder station on August 25.

The distribution of water in per cent of priority allotments from April to August was as follows:

Priority	April	May	June	July	August
1st	100	100	100	100	100
2nd	100	100	100	73	15
3rd	90	100	95	3	0
4th	32	100	66	0	0
5th	18	100	66	0	0

Parker Creek and Tributaries including Shields Creek

Two recorders are used in determining the total quantity of water available; one recorder was maintained on Parker Creek at Fogarty Ranch and another recorder was maintained on Shields Creek below the Pepperdine Ranch. The discharge was sufficient to supply all allotments until August 3 this year. The distribution of water in per cent of priority allotments from August to September was as follows:

Priority	August	September
1st	100	100
2nd	100	100
3rd	50	42
4th	3	0

North Fork Pit River

Two recorders are used in determining the total quantity of water available; one recorder is maintained above old X L Ranch and another recorder is maintained on Parker Creek at the confluence with North Fork Pit River.

The discharge of North Fork Pit River supplied all requirements until July 6 of this year.

The distribution of water in per cent of priority allotments from July to September was as follows:

Priority	July	August	September
1st	100	84	76
2nd	77	3	4
3rd	40	0	0
4th	30	0	0
5th	18	0	0

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 North Fork Pit River Watermaster Service Area, County of Modoc, State of California, for 1953", and which will be included in the statement for said watermaster service area for 1954, are listed in the following tabulation:

Tract No.	Name of Water Right Owner Appearing in 1953 Statement	Name and Address of Water Right Owner to Appear in 1954 Statement	Amount of WATER c.f.s.
9-6	Arney, Minnie Irene	Fernwood, Stanley M. 2261 East 14th St. Oakland, California	0.18
9-110	Brown, Gerald F. and Brown, Aletha Neff	Neff, D. C. W. and Neff, Lula G. Pascal, Washington	1.60
9-72 9-73 9-74 9-75	Chandler, Ernest T.	Comrie, J. F. and Comrie, Anna L. and Ganger, L. L. and Ganger, Lucille P. O. Box 45 Pendleton, Oregon	2.30
9-3 9-12	Robnett, Ernest and Robnett, Myra	Robnett, Ernest and Robnett, Myra and Robnett, Darwin and Robnett, Maxine New Pine Creek, Oregon	6.185
9-123	Shields, Jack	Judy, J. W. Alturas, California	2.62
9-87	Spaulding, C. A. and Spaulding, Elsie	Spaulding, C. A. and Spaulding, Elsie and Beebe, Louis Alturas, California	0.84

TABLE 1

PRECIPITATION AT ALTURAS, CALIFORNIA AND LAKEVIEW, OREGON 1952-1953

ALTURAS, CALIFORNIA - Elevation 4,460 feet

Month	Normal Precipitation Inches	1952-53 Precipitation Inches	Per Cent of Normal
October	1.23	0.15	12
November	1.37	0.80	58
December	1.36	2.63	193
January	1.58	1.99	126
February	1.29	1.15	89
March	1.25	1.03	82
April	1.19	0.90	76
May	1.10	3.35	3.00
June	0.72	2.10	2.91
July	0.33	0	0
August	0.30	0.55	183
September	0.50	0	0
TOTAL	12.22	14.65	120

LAKEVIEW, OREGON - Elevation 4750 Feet

Month	Normal Precipitation Inches	1952-53 Precipitation Inches	Per Cent of Normal
October	0.96	0.35	36
November	1.62	0.89	55
December	1.79	2.47	138
January	1.93	2.89	150
February	1.85	1.54	83
March	1.43	1.63	114
April	1.16	0.87	74
May	1.25	2.61	209
June	0.92	1.65	179
July	0.31	0	0
August	0.25	0.56	224
September	0.64	0.07	11
TOTAL	14.13	15.53	110

Data compiled from records of U. S. Weather Bureau

TABLE 2

SNOW SURVEY DATA - UPPER PIT RIVER AREA
APRIL 1st MEASUREMENT

	Water Content of Snow - Inches		
Year	Eagle Peak Elevation - 7,500	Blue Lake Ranch Elevation - 7,200	Cedar Pass Elevation 7,200
1942	14.7	11.7	19.3
1943	23.7	15.3	25.8
1944	13.5	8.5	12.3
1945	22.2	15.8	22.4
1946	21.2	16.2	22.9
1947	6.4	5.3	10.3
1948	14.4	10.1	15.7
1949	19.1	16.7	22.0
1950	17.9	11.3	19.1
1951	13.6	9.4	12.8
1952	32.6	22.6	34.1
1953	14.9	10.1	16.6
Computed 63-year Normal	18.9	11.7	20.7
Per Cent of Normal	79%	86%	80%

Data compiled from records of California Cooperative Snow Surveys.

TABLE 3

Daily Discharge
New Pine Creek Below Schroeders
April 24 to September 22, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1		32.0	100.0	53.0	17.5	9.0
2		32.0	118.0	49.0	17.5	9.0
3		32.0	118.0	49.0	16.5	9.0
4		32.0	118.0	49.0	16.5	8.5
5		37.0	125.0	46.5	16.5	8.0
6		41.0	160.0	44.0	16.5	7.5
7		42.0	110.0	42.5	16.0	7.0
8		42.0	127.0	39.0	16.0	6.5
9		37.0	120.0	38.0	16.5	7.0
10		31.0	91.0	37.0	16.0	6.5
11		25.0	90.0	35.0	15.5	6.0
12	NO	25.0	88.0	38.0	15.5	6.0
13		25.0	79.0	30.0	14.5	5.0
14	RECORD	25.0	82.0	27.0	14.5	4.5
15		25.0	84.0	26.0	14.5	4.0
16		27.0	87.0	24.0	14.0	4.0
17		40.0	92.0	24.0	13.0	4.0
18		60.0	100.0	24.0	12.5	4.0
19		77.8	92.0	25.0	12.0	4.0
20		77.8	86.0	26.0	11.3	4.0
21		77.8	82.0	26.0	11.3	4.5
22		80.0	78.0	23.0	10.5	4.0
23		82.0	81.0	21.0	10.5	4.0
24	37.0	82.0	82.0	20.0	10.0	
25	37.0	82.0	75.0	19.0	10.0	
26	40.0	82.0	73.0	19.0	10.5	
27	41.0	82.0	67.0	18.5	10.0	
28	40.0	82.0	65.0	18.5	10.0	NO
29	39.0	82.0	61.0	19.0	12.5	
30	37.0	82.0	60.3	18.5	10.5	RECORD
31	--	82.0	--	18.5	9.5	
Total Sec. Ft. Days	*271.0	1661.4	2791.3	947.0	418.1	**136.0
Mean Sec. Ft.	* 38.7	53.6	93.0	30.5	13.5	**5.9
Total Ac. Ft.	*537	3294	5535	1878	829	**270

*7 Day Record
**23 Day Record

Total for period - 12343 acre-feet.

TABLE 4

Daily Discharge
Cottonwood Creek Above All Diversions
May 27 to September 22, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1			21.0	13.2	1.70	0.50
2			20.2	13.0	1.70	0.50
3			22.0	12.5	1170	0.42
4			23.0	12.5	1.50	0.42
5			25.0	12.2	1.30	0.42
6			27.0	12.2	1.10	0.35
7			29.0	10.6	0.90	0.35
8			30.0	10.0	0.90	0.35
9			32.0	7.8	0.90	0.32
10			33.0	6.7	0.90	0.32
11			32.0	6.3	0.90	0.28
12			30.0	6.0	0.90	0.28
13			29.0	6.0	0.90	0.24
14			28.0	5.7	0.90	0.24
15			27.0	5.5	0.90	0.21
16			25.0	3.6	0.83	0.21
17		NO	25.0	3.0	0.83	0.21
18			24.0	3.0	0.83	0.21
19		RECORD	23.0	2.9	0.83	0.18
20			23.0	2.7	0.83	0.18
21			22.0	2.7	0.83	0.15
22			21.0	2.5	0.70	0.15
23			21.0	2.5	0.70	
24			20.0	2.4	0.70	
25			20.0	2.4	0.70	
26			19.0	2.4	0.70	
27		23.5	16.0	2.2	0.70	
28		23.0	17.0	2.1	0.60	NO
29		22.0	16.0	2.1	0.60	
30		22.0	14.5	2.1	0.60	RECORD
31		21.0		2.0	0.50	
Total Sec. Ft. Days		*111.5	716.7	180.8	28.58	**6.49
Mean Sec. Ft.		*22.3	23.9	5.8	0.92	**0.29
Total Ac. Ft.		*221	1421	358	56.7	**13

* 5 Day Record
** 22 Day Record

Total for period - 2070 acre-feet.

TABLE 5

Daily Discharge
Davis Creek at Old Fishwheel
April 6 to September 24, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1		44.0	43.4	40.2	12.0	6.8
2	NO	41.0	44.6	40.2	11.2	6.6
3		39.6	43.4	39.0	10.8	6.6
4	RECORD	40.8	45.0	35.8	10.4	6.6
5		42.2	48.0	35.2	10.1	6.6
6	27.0	46.0	49.6	34.8	9.8	6.4
7	26.6	46.8	52.0	32.6	9.8	6.4
8	26.4	46.8	54.0	31.2	9.6	6.4
9	25.6	45.0	56.8	30.4	9.3	6.3
10	26.0	43.0	58.0	28.7	9.3	6.3
11	24.3	40.8	58.0	27.4	8.8	6.2
12	22.5	39.6	58.6	26.0	8.8	6.2
13	24.3	38.8	57.2	24.5	8.6	6.2
14	24.0	46.0	58.6	23.4	8.6	6.0
15	24.5	46.8	65.0	21.6	8.6	6.0
16	25.6	46.0	63.0	20.4	8.4	6.0
17	26.4	49.6	74.4	19.0	8.4	6.0
18	27.0	54.0	80.5	18.6	8.4	6.0
19	28.4	84.0	82.0	17.6	8.2	6.0
20	29.0	79.2	79.3	17.4	8.2	6.0
21	29.5	76.5	73.0	16.0	8.2	5.7
22	34.8	64.6	72.4	15.0	8.0	5.7
23	42.0	62.6	75.0	14.2	8.0	5.7
24	46.0	62.6	63.0	15.0	8.0	5.7
25	49.6	58.0	56.0	15.0	7.6	5.7
26	54.0	52.0	54.0	14.4	7.6	
27	60.0	48.0	49.6	14.2	7.6	NO
28	52.8	45.6	49.0	14.0	7.3	
29	49.0	42.2	45.0	13.4	7.0	RECORD
30	46.0	40.8	41.0	12.6	7.0	
31	--	42.2	--	12.3	6.8	
Total Sec. Ft. Days	*855.3	1555.1	1749.4	720.1	270.4	**148.4
Mean Sec. Ft.	*34.2	50.2	58.3	23.2	8.7	**6.2
Total Ac. Ft.	*1696	3084	3468	1429	536	**294

* 25 Day Record
** 24 Day Record

Total for period - 10507 acre-feet.

TABLE 6

Daily Discharge
Linville Creek at Old Power House
April 3 to September 24, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	NO	2.9	4.0	3.4	2.5	2.4
2	RECORD	2.9	3.9	3.3	2.5	2.4
3	2.8	2.9	3.9	3.2	2.5	2.4
4	2.8	2.9	3.9	3.1	2.5	2.4
5	2.8	2.9	3.9	3.1	2.5	2.4
6	2.8	2.9	4.5	2.9	2.5	2.3
7	2.8	2.9	5.2	2.8	2.5	2.3
8	2.8	2.9	5.3	2.7	2.5	2.3
9	2.8	2.9	5.3	2.7	2.5	2.3
10	2.8	2.9	5.3	2.7	2.5	2.3
11	2.8	2.9	5.0	2.7	2.5	2.3
12	2.8	2.9	4.8	2.7	2.5	2.3
13	2.8	2.9	4.6	2.7	2.5	2.3
14	2.8	3.3	4.4	2.7	2.5	2.3
15	2.8	3.4	4.2	2.7	2.5	2.3
16	2.8	3.4	4.0	2.7	2.5	2.3
17	2.8	3.6	3.9	2.7	2.5	2.3
18	2.8	3.6	3.9	2.7	2.5	2.3
19	2.8	4.8	3.8	2.6	2.5	2.3
20	2.8	5.0	3.8	2.6	2.5	2.3
21	2.8	5.2	3.7	2.6	2.5	2.3
22	2.8	5.0	3.6	2.6	2.5	2.3
23	2.8	4.9	3.6	2.6	2.5	2.3
24	2.8	4.7	3.6	2.6	2.5	2.3
25	2.8	4.5	3.5	2.6	2.5	
26	2.9	4.4	3.5	2.5	2.5	
27	3.1	4.3	3.5	2.5	2.5	NO
28	3.0	4.3	3.5	2.5	2.5	
29	3.0	4.2	3.4	2.5	2.5	RECORD
30	2.9	4.2	3.4	2.5	2.5	
31	--	4.0	--	2.5	2.4	
Total Sec. Ft. Days	*79.3	114.5	122.9	84.7	77.4	**55.7
Mean Sec. Ft.	*2.8	3.7	4.1	2.7	2.5	**2.3
Total Ac. Ft.	*157	227	244	168	153	**110

* 28 Day Record
** 24 Day Record

Total for period - 1059 acre-feet.

TABLE 7

Daily Discharge
Franklin Creek Above Diversions
April 3 to September 22, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	NO	11.1	15.4	6.8	3.7	3.2
2	RECORD	11.1	16.2	6.4	3.7	3.2
3	4.6	10.9	18.8	6.3	3.7	3.2
4	5.0	10.9	17.2	6.1	3.7	3.2
5	5.4	10.9	17.6	6.0	3.5	3.2
6	5.1	10.9	18.1	5.9	3.5	3.2
7	4.9	10.9	18.7	5.6	3.5	3.3
8	4.5	10.9	19.1	5.4	3.5	3.3
9	4.3	10.2	20.0	5.3	3.5	3.3
10	4.6	10.0	19.3	5.3	3.5	3.3
11	4.7	10.0	18.7	5.1	3.4	3.3
12	4.9	9.8	18.1	4.9	3.4	3.3
13	5.0	9.8	17.6	4.7	3.4	3.3
14	5.1	11.6	17.0	4.6	3.4	3.3
15	5.3	12.0	16.4	4.3	3.4	3.3
16	5.4	13.7	15.8	4.3	3.4	3.3
17	5.7	13.7	14.6	4.2	3.4	3.3
18	6.0	14.6	14.2	4.2	3.5	3.3
19	6.3	20.2	13.5	4.1	3.5	3.2
20	6.6	20.0	12.7	4.1	3.5	3.2
21	6.8	19.8	12.2	3.9	3.5	3.2
22	7.5	18.1	11.8	3.9	3.5	3.2
23	8.3	17.4	11.4	3.9	3.5	
24	9.2	16.6	10.9	3.9	3.4	
25	9.7	16.2	10.5	3.8	3.4	
26	10.4	15.2	10.2	3.8	3.4	
27	12.7	16.0	9.7	3.8	3.4	NO
28	11.2	15.8	9.3	3.7	3.4	
29	11.2	15.6	8.7	3.7	3.4	RECORD
30	11.1	15.6	8.3	3.7	3.3	
31	---	15.4	---	3.7	3.3	
Total Sec. Ft. Days	191.5	424.9	440.0	145.4	107.6	**71.6
Mean Sec. Ft.	*6.8	13.7	14.7	4.7	3.5	**3.3
Total Ac. Ft.	*380	843	872	288	213	**142

* 28 Day Record
** 22 Day Record

Total for period - 2738 acre-feet.

TABLE 8

Daily Discharge
Joseph Creek Below Couch Creek
April 6 to September 25, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1		21.0	44.0	17.5	4.4	1.60
2	NO	18.0	50.0	17.5	4.6	1.50
3		16.0	46.5	18.0	4.6	1.50
4	RECORD	17.0	44.0	12.6	4.4	1.40
5		17.5	46.5	11.8	4.2	1.40
6	11.6	20.0	60.0	11.0	4.0	1.30
7	10.8	22.0	90.0	11.4	4.0	1.30
8	9.8	26.0	80.0	9.0	3.8	1.30
9	9.8	24.0	75.0	8.4	3.8	1.40
10	8.8	24.0	65.0	7.6	3.8	1.40
11	8.4	22.0	55.5	7.4	3.8	1.40
12	9.0	21.0	57.0	7.2	3.8	1.40
13	10.0	20.0	50.0	7.0	3.8	1.40
14	9.0	27.0	47.0	6.4	6.4	1.40
15	8.0	31.0	44.0	5.8	5.0	1.50
16	7.0	29.4	50.0	5.0	4.2	1.60
17	8.6	31.0	58.0	4.6	4.2	1.80
18	8.4	31.0	57.0	4.2	4.2	2.20
19	8.4	100.0	47.0	4.0	4.2	4.60
20	10.0	85.0	42.0	3.8	4.2	4.60
21	12.4	80.0	36.5	3.5	4.2	3.80
22	15.0	71.0	35.0	3.2	4.2	3.50
23	18.0	70.0	39.4	3.0	4.0	3.50
24	17.5	68.0	27.0	2.9	4.0	3.00
25	17.5	55.0	30.0	2.9	4.0	2.30
26	18.4	54.0	17.0	2.9	3.9	
27	40.3	47.0	18.4	2.9	3.9	NO
28	31.8	47.0	17.5	2.9	3.9	
29	27.0	46.5	16.0	***4.6	****2.2	RECORD
30	22.8	44.0	17.0	4.8	2.2	
31	--	46.5	--	4.4	2.0	
Total Sec. Ft. Days	*358.3	1231.9	1360.3	218.2	123.9	**50.60
Mean Sec. Ft.	*14.3	39.7	45.3	7.0	4.0	**2.0
Total Ac. Ft.	*710	2443	2697	433	246	**100

* 25 Day Record
** 25 Day Record
*** Halls Meadow Reservoir turned on.
**** Halls Meadow Reservoir turned off.

Total for period - 6629 acre-feet.

TABLE 9

Daily Discharge
Thoms Creek at Cedarville-Alturas Highway
April 3 to September 23, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	NO	40.0	90.2	12.4	3.1	2.0
2	RECORD	39.7	80.0	10.8	3.0	1.8
3	23.4	43.8	72.0	9.2	3.0	1.4
4	26.0	49.0	69.0	9.0	2.9	1.3
5	27.8	45.0	64.0	8.5	2.8	1.1
6	29.4	41.4	85.0	7.8	2.5	1.3
7	27.0	41.0	135.0	7.4	2.4	1.3
8	19.8	40.2	150.0	7.3	2.3	1.1
9	15.8	39.7	125.0	7.1	2.2	1.0
10	15.3	40.0	109.0	6.6	2.1	1.0
11	14.2	38.6	108.0	6.0	2.0	1.0
12	13.6	38.0	105.0	5.7	1.8	1.1
13	12.8	37.5	85.0	5.2	1.8	1.1
14	12.2	37.0	77.0	4.8	1.7	1.2
15	12.0	42.2	69.0	4.4	1.7	1.2
16	10.8	41.7	63.4	4.2	1.6	1.2
17	11.0	49.5	58.0	4.1	1.5	1.2
18	12.0	56.0	53.0	4.0	1.5	1.2
19	14.0	125.0	49.0	4.0	1.4	1.2
20	19.3	114.0	41.4	4.0	1.4	1.3
21	34.8	106.0	32.0	4.0	1.5	1.3
22	65.0	96.0	34.7	4.0	1.6	1.4
23	52.0	93.5	28.5	4.1	1.6	1.4
24	41.4	90.0	25.0	4.0	1.7	
25	39.0	80.6	19.5	4.0	1.7	
26	31.4	78.6	19.5	4.0	1.7	
27	56.0	77.0	17.8	3.9	1.7	NO
28	53.5	77.0	16.0	3.7	1.7	
29	43.7	74.0	14.6	3.5	2.2	RECORD
30	41.4	72.4	13.5	3.4	2.2	
31	--	72.4	--	3.2	2.1	
Total Sec. Ft. Days	*773.6	1916.8	1914.1	174.3	62.4	**29.1
Mean Sec. Ft.	*27.6	61.8	63.8	5.6	2.0	**1.3
Total Ac.Ft.	*1534	3801	3795	346	124	**58

* 28 Day Record
** 23 Day Record

Total for period - 9658 acre-feet.

TABLE 10

Daily Discharge
Gleason Creek Near Jones Ranch
April 3 to August 25, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	NO	3.94	7.72	1.33	0.13	
2	RECORD	3.94	7.46	1.09	0.12	
3	2.93	3.83	7.08	0.83	0.12	
4	2.65	3.83	7.33	0.76	0.12	
5	2.46	3.83	7.46	0.70	0.11	
6	2.37	3.83	10.30	0.64	0.11	
7	2.37	3.83	10.20	0.58	0.09	
8	2.20	3.83	10.20	0.53	0.09	
9	2.11	3.83	9.49	0.47	0.08	
10	1.94	3.73	9.48	0.47	0.07	
11	1.77	3.73	9.06	0.42	0.07	
12	1.77	3.73	8.65	0.37	0.07	
13	1.69	3.73	8.12	0.34	0.07	
14	1.61	3.73	7.46	0.30	0.06	
15	1.38	3.73	6.70	0.30	0.06	
16	1.46	3.73	5.85	0.30	0.05	
17	1.53	3.73	5.38	0.28	0.05	
18	1.61	6.21	4.91	0.28	0.05	
19	1.94	10.90	4.36	0.24	0.04	
20	2.20	10.00	3.73	0.21	0.03	
21	2.46	10.00	2.93	0.19	0.03	
22	2.74	10.00	2.65	0.17	0.02	
23	2.83	10.20	2.20	0.17	0.02	
24	3.03	10.60	2.02	0.17	0.01	
25	3.22	10.00	1.94	0.16	0.01	
26	3.32	9.76	1.86	0.15		
27	3.42	9.62	1.77	0.15	NO	
28	3.62	9.48	1.69	0.15		
29	4.04	9.20	1.61	0.15	FLOW	
30	4.04	8.65	1.61	0.15		
31	--	8.12	--	0.13		
Total Sec. Ft. Days	*68.71	197.27	171.71	12.23	**1.68	
Mean Sec. Ft.	*2.5	6.4	5.7	0.39	**0.07	
Total Ac. Ft.	*136	391	340	24	**3	

* 28 Day Record
** 25 Day Record Total for period - 894 acre-feet.

TABLE 11

Daily Discharge
Parker Creek at Fogarty Ranch
April 4 to September 23, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1	NO	100.0	109.0	32.0	11.5	7.0
2		99.0	123.0	30.5	11.5	5.3
3	RECORD	106.5	101.0	28.5	11.0	6.0
4	68.0	105.0	95.5	28.0	11.0	5.7
5	73.0	97.0	90.5	27.5	11.0	6.0
6	73.0	90.5	129.0	26.0	10.5	6.5
7	65.0	86.0	255.0	24.0	10.0	6.5
8	57.0	82.0	230.0	18.5	9.5	6.0
9	56.0	81.0	185.0	19.5	9.0	6.0
10	57.0	78.5	149.5	18.0	6.0	6.0
11	51.0	77.5	142.5	17.5	5.0	6.0
12	47.0	76.5	145.5	17.0	5.5	6.0
13	47.0	73.0	129.0	16.0	5.5	6.0
14	45.5	71.0	109.5	13.5	5.0	6.0
15	45.5	99.0	100.0	13.0	5.0	6.0
16	48.5	99.0	100.0	12.5	5.0	6.0
17	53.0	106.0	99.0	11.5	5.0	6.0
18	57.0	110.5	76.0	15.5	5.0	5.7
19	65.0	215.0	75.0	14.5	5.3	5.5
20	75.0	178.0	71.0	14.0	5.5	5.5
21	82.0	159.0	62.0	13.5	3.3	5.5
22	90.5	140.0	56.5	13.0	3.3	5.7
23	106.5	142.5	51.0	12.5	3.5	6.0
24	102.0	142.5	47.0	12.5	4.0	
25	101.5	130.0	43.5	12.0	4.0	
26	106.5	125.0	41.0	12.0	4.0	
27	125.0	113.0	37.0	11.5	5.0	NO
28	130.0	103.0	36.0	12.0	5.3	
29	103.0	99.0	35.5	13.5	5.7	RECORD
30	101.5	95.5	32.5	12.5	7.5	
31	---	97.0	---	12.0	7.5	
Total Sec. Ft. Days	*2033.0	3389.5	2940.0	533.5	205.9	**136.9
Mean Sec. Ft.	*75.3	109.3	98.3	17.2	6.6	**6.0
Total Ac. Ft.	*4031	6720	5846	1058	408	**271

* 27 Day Record
** 23 Day Record

Total for period - 18334 acre-feet.

TABLE 12

Daily Discharge
Shields Creek Below Pepperdine Ranch
April 15 to September 23, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1		11.7	13.7	7.7	3.7	2.0
2		11.5	13.7	7.7	3.5	2.0
3		11.2	11.2	7.5	3.5	2.0
4		11.0	11.2	7.2	3.4	2.2
5		11.0	11.7	7.0	3.4	2.5
6		10.8	17.6	6.8	3.2	2.8
7	NO	10.8	17.6	6.4	3.1	2.8
8		10.8	13.7	6.1	2.9	2.6
9	RECORDS	10.8	12.4	5.9	2.8	2.6
10		10.8	12.4	5.7	2.8	2.6
11		10.5	12.2	5.5	2.6	2.6
12		10.5	11.9	5.3	2.6	2.6
13		10.5	11.5	5.1	2.6	2.6
14		10.5	11.2	4.7	2.6	2.6
15	2.3	12.4	10.8	4.6	2.6	2.6
16	2.6	13.4	10.5	4.6	2.6	2.5
17	3.9	14.2	10.3	4.4	2.6	2.6
18	3.7	13.7	10.1	4.2	2.6	2.6
19	3.4	21.2	9.6	4.0	2.6	2.6
20	3.7	13.7	9.4	4.0	2.6	2.5
21	4.2	15.4	9.2	3.9	2.6	2.5
22	4.4	15.4	8.9	3.9	2.6	2.5
23	5.9	16.2	8.7	3.9	2.6	2.5
24	5.7	17.6	8.5	3.9	2.6	
25	6.4	15.4	7.9	3.9	2.8	
26	7.9	12.9	7.9	3.9	2.8	
27	14.4	12.4	7.9	3.9	2.8	NO
28	14.9	11.2	7.9	3.9	2.6	
29	12.4	10.8	7.9	3.9	2.6	RECORD
30	11.9	10.8	7.9	3.9	2.5	
31	---	11.2	---	3.9	2.5	
Total Sec. Ft. Days	*107.7	390.3	325.4	157.1	87.1	**57.5
Mean Sec. Ft.	*6.7	12.6	10.8	5.1	2.8	**2.5
Total Ac. Ft.	*214	714	645	312	173	**114.0

*16 Day Record
**23 Day Record

Total for period - 2232 acre-feet.

TABLE 13

Daily Discharge
Parker Creek Above Highway 395
April 7 to September 25, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1		141.5	114.0	24.7	9.3	8.0
2	NO	137.0	166.0	24.5	9.0	8.0
3		130.0	140.0	24.5	6.5	8.0
4	RECORD	126.0	122.0	23.0	2.7	8.0
5		120.0	107.5	23.0	5.0	7.8
6		108.5	117.5	22.0	5.0	7.5
7	19.5	111.0	380.0	19.5	2.3	7.4
8	18.0	114.0	360.0	18.0	3.3	7.2
9	17.0	121.0	325.0	17.5	4.0	6.7
10	15.5	111.0	270.0	17.0	2.7	6.5
11	14.5	97.0	260.0	16.0	1.7	6.5
12	13.0	94.0	236.0	14.0	1.5	5.0
13	12.5	82.5	238.5	12.0	1.5	1.5
14	12.5	40.0	193.0	11.0	2.5	1.7
15	12.3	71.0	173.0	10.0	2.7	4.0
16	12.3	75.0	167.5	9.7	2.7	4.6
17	14.0	73.0	150.0	9.5	2.8	4.4
18	14.5	90.0	140.0	8.5	2.7	4.2
19	15.0	172.5	89.0	9.0	2.6	4.4
20	15.0	190.0	67.0	9.5	3.0	4.4
21	21.0	203.5	62.0	10.5	4.2	4.6
22	37.5	232.5	57.0	11.0	2.7	7.0
23	109.5	234.0	55.5	10.0	2.0	7.5
24	109.5	240.0	52.0	9.5	2.3	6.0
25	109.5	221.5	47.5	9.0	2.3	5.0
26	116.5	202.0	40.0	8.5	2.7	
27	155.5	186.0	36.0	8.0	4.4	NO
28	169.5	170.0	34.0	7.5	6.0	
29	143.0	121.5	31.5	8.7	7.0	RECORD
30	136.0	117.5	30.0	9.5	8.0	
31	--	109.5	--	9.3	8.0	
Total Sec. Ft. Days	*1312.1	4243.0	4261.5	424.4	123.1	**145.9
Mean Sec. Ft.	*54.7	136.8	142.0	13.7	4.0	**5.8
Total Ac. Ft.	*2602	8414	8450	842	244	**289

* 24 Day Record
** 25 Day Record

Total for period - 20,841 acre-feet.

TABLE 14

Daily Discharge
North Fork of Pit River Above X L Ranch
May 22 to September 25, 1953

In Cubic Feet Per Second

Day	April	May	June	July	August	September
1			162.0	42.5	4.6	12.5
2			170.0	39.0	4.6	12.5
3			157.0	36.0	4.6	12.5
4			134.4	33.0	4.6	12.5
5			157.0	32.0	4.6	12.5
6			208.0	29.0	4.6	12.5
7			450.0	27.5	4.6	12.5
8			400.0	25.0	4.6	12.5
9			350.0	22.5	4.6	12.5
10			290.0	1[illegible].5	4.0	12.5
11			230.0	17.0	4.0	12.5
12		NO	200.0	16.0	3.0	11.5
13			188.0	15.0	3.0	11.5
14		RECORD	185.0	13.5	3.0	11.5
15			162.0	11.0	3.0	11.5
16			150.0	10.0	3.0	11.5
17			135.0	10.0	3.0	10.0
18			114.0	9.0	3.0	10.0
19			100.0	8.0	3.0	10.0
20			86.0	7.0	3.0	10.0
21			75.0	6.0	1.6	10.0
22		208.0	63.6	4.6	1.6	10.0
23		208.0	66.0	4.6	1.6	10.0
24		310.0	59.0	4.6	2.5	10.0
25		290.0	54.5	4.6	2.0	10.0
26		195.0	51.0	4.6	2.0	
27		182.0	51.0	4.6	2.0	NO
28		170.0	47.0	4.6	2.0	
29		157.0	47.0	4.6	***10.0	RECORD
30		157.0	45.0	4.6	12.5	
31		160.0	---	4.6	12.5	
Total Sec. Ft. Days		*1967.0	4590.5	472.5	126.7	**225
Mean Sec. Ft.		* 196.7	153.0	15.2	4.1	** 11.4
Total Ac. Ft.		*3900	9103	937	251	**565

*10 Day Record
**25 Day Record
***Lauer Res. turned on

Total for period - 14,756 acre-feet.