STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

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REPORT ON WATERMASTER SERVICE IN NORTH FORK PIT RIVER WATERMASTER SERVICE AREA MODOC COUNTY, CALIFORNIA 1956 SEASON

Sacramento, California
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SUBMISSION TO, AND ADOPTION BY
DEPARTMENT OF WATER RESOURCES

I, William R. Gianelli, Chief of Water Rights Section, Department of Water Resources of the State of California, approve this "Report on Watermaster Service in North Fork Pit River Watermaster Service Area, Modoc County, California, 1956 Season".

/s/ William R. Gianelli
Chief, Water Rights Section

I, Harvey O. Banks, Director of the Department of Water Resources of the State of California, approve and adopt this "Report on Watermaster Service in North Fork Pit River Watermaster Service Area, Modoc County, California, 1956 Season" as a report of the Department of Water Resources.

WITNESS my hand and the seal of the Department of Water Resources of the State of California, this 29th day of March, 1957.

State of California
Department of Water Resources

/s/ Harvey O. Banks

HARVEY O. BANKS
Director

ORGANIZATION

STATE DEPARTMENT OF WATER RESOURCES

Harvey O. Banks . . . . . .Director of Water Resources

M. J. Shelton. . . . . .Deputy Director of Water Resources

The activity covered by this report is under the direction of

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INTRODUCTION

This is the seventeenth annual report on watermaster service in the North Fork Pit River Watermaster Service Area and covers the period of water distribution in 1956 beginning April 1 and terminating September 30.

The service area was created by order of the Department of Public Works on December 13, 1939, and was supplemented and revised by order of December 31, 1940. The service area includes water rights determined by decrees of the Superior Court, Modoc County, on North Fork Pit River and tributaries except Franklin Creek and on various streams tributary to Goose Lake as follows:

Stream	Case	Number
*New Pine Creek	Keller, et al., vs. 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. To simplify administration, these smaller service areas were combined into a single unit by the above dated orders.

*Tributary to Goose Lake

Watermaster service has been provided during each irrigation season since the service area was created, and annual reports have been prepared to show the work accomplished.

The report is presented under four headings as follows: Introduction, Water Supply, Distribution of Water, and Changes in Ownership of Lands and Water Rights. Appendix A presents data on precipitation and stream flow, and Plates 1 and 2 present hydrographs of Linville Creek and Shields Creek for the 1956 season.

WATER SUPPLY

The above normal winter precipitation provided above normal soil moisture and the ensuing heavy runoff provided a generally adequate water supply prior to the beginning of haying season, about July 1.

Precipitation

Precipitation data at Alturas, California, and Lakeview, Oregon, as compiled from records of United States Weather Bureau for the period October 1, 1955, to September 30, 1956, are presented in Table A-1. The precipitation for the period was 15.75 inches for Alturas and 22.20 inches for Lakeview, which is equivalent to about 126 per cent and 157 per cent, respectively, of the mean precipitation at these stations.

The water content of the snowpack on Eagle Peak, Blue Lake Ranch, and Cedar Pass snow courses in 1956, as published in the Division of Water Resources bulletin entitled "Water Conditions

in California as of April 1, 1956", averaged 20.4 inches or 118 per cent of the computed mean for the three courses. This information is shown in more detail in the following tabulation.

Snow course	Elevation, in feet	Water content of snow, in inches: 50-year computed mean	Water content of snow, in inches: 1956	Per cent of mean
Eagle Peak	7,500	18.2	22.2	122
Blue Lake Ranch	7,300	13.6	15.8	116
Cedar Pass	7,200	19.9	23.2	117

Stream Flow

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

Recorder location	Control
New Pine Creek below Schroeder's	rated section
Cottonwood Creek below Larkin Garden Ditch	rated section
Davis Creek at Old Fish Wheel	rated section
Linville Creek above Renner House Ditch	2-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 below Thoms Creek	rated section

Records of daily discharge for these stations are presented in Tables A-2 to A-13, inclusive, in Appendix A.

DISTRIBUTION OF WATER

Distribution on the various streams within the North Fork Pit River Watermaster Service Area was generally in accordance with the allotments and priorities set forth in the respective decrees determining the rights thereon. Stream flow available for distribution was determined from the measured discharge at the respective measuring stations.

New Pine Creek

The heavy snow pack in the New Pine Creek watershed caused very high flows in the Creek during the later part of May. These high flows completely changed the channel at the recorder station; therefore the flows were estimated for several weeks until the channel began to stabilize. The high flows caused no damage to diversion structures on the Creek. Sufficient water was available to supply all demands until July 9. The flow then gradually decreased until the first part of September when water was available for about 50 per cent of the second priority rights. The flow, then, held nearly constant until the end of the season.

In an attempt to facilitate the diversion and use of water from the Mill Ditch, an agreement as to the use of water and maintenance of the Ditch was entered into by the town users. Plans for construction of a new diversion structure were presented to the users and it was generally agreed the structure should be built.

A larger bridge over the California Ditch was installed by the County Road Department, and other maintenance work was completed on the Ditch to increase its capacity.

A summary of distribution of water by months is presented in the following tabulations:

Month	Per cent of allotments available			
	First priority	Second priority	Third priority	Fourth priority
April	Sufficient to supply all demands			
May	Sufficient to supply all demands			
June	Sufficient to supply all demands			
July	100	100	100	82
August	100	100	70	0
September	100	74	0	0

Cottonwood Creek

The discharge of Cottonwood Creek was sufficient to satisfy all demands until June 17. The flow then steadily declined until July 16, when water was available for first priority allotments only. During the latter part of July the Carmen P. Fleming Ranch did not use its entire allotment due to the unusually wet condition of the meadows on the ranch. By August 30 the first priority allotment of Carmen P. Fleming would no longer reach his ranch due to ditch loss and all water was diverted by the C. R. Vincent Ranch.

The use of water from the Allen Spring for domestic use was observed very closely due to a controversy over the source of the water. No irregularities were found in connection with the source of this water. It was found that the Spring would fill the regulatory pond in approximately 48 hours. The water was then released by Mr. Allen for domestic irrigation.

A summary of distribution of water by months is presented in the following tabulation:

Month	Per cent of allotments available					
	First priority	Second priority	Third priority	Fourth priority	Fifth priority	Sixth priority
April	Sufficient to supply all demands					
May	Sufficient to supply all demands					
June	100	100	100	95	90	85
July	80	78	66	33	0	0
August	80	0	0	0	0	0
September	42	0	0	0	0	0

Davis Creek

The flow of Davis Creek was sufficient to supply all demands until the last part of June. The flow then steadily declined through July and August. By the first part of September the flow had declined until water was available only for first and second priority allotments. Thereafter until the end of the season the flow remained nearly constant.

A summary of distribution of water during the season is presented in the following tabulation:

Month	Percent of allotments available			
	First priority	Second priority	Third priority	Fourth priority
April	Sufficient to supply all demands.			
May	Sufficient to supply all demands.			
June	100%	100%	94%	83%
July	100%	100%	45%	0%
August	100%	98%	20%	0%
September	100%	71%	0%	0%

Linville Creek

The weir at the Old Power House on Linville Creek was installed on April 24 to determine the water supply available for distribution, and intermittent measurements were made throughout the season at this point. The recorder station on Linville Creek above the Renner House Ditch washed out during the high winter flows and was replaced on May 10. The station is used to measure the water available for the Capic Ranch.

There was sufficient flow to supply a portion of the second priority rights during May. The flow then declined until the later part of June when water was available for approximately 70 per cent of the first priority allotments. The flow then remained nearly constant for the remainder of the season.

A summary of distribution by months is presented in the following tabulation:

Month	Per cent of allotments available	
	First priority	Second priority
May	75%	36%
June	47%	0%
July	30%	0%
August	19%	0%
September	20%	0%

A graphic comparison of the flow at Old Power House and Linville Creek above Renner House Ditch, together with the allotment of the Capic Ranch is presented on Plate 1.

Franklin Creek

The discharge of Franklin Creek was sufficient to supply all demands until June 5. The flow then declined steadily until the last part of July, when water was available for about 20 per cent of third priority allotments. Thereafter the flow remained nearly constant.

On July 3 as much of the flow of the Creek as could be diverted was turned into the Irman Ditch to reduce the flow of water into the low lying haylands. The flow in the Ditch was reduced to the normal allotment on July 18, when the other users on the Creek again had use for the water.

On September 14 approximately 50 per cent of the available water from the Creek was turned onto the Dawson meadow to provide stockwater for the Crowder Ranch.

A summary of the distribution of water by month is presented in the following tabulation:

Month	Per cent of allotments available			
	First priority	Second priority	Third priority	Fourth priority
April	Sufficient to supply all demands.			
May	Sufficient to supply all demands.			
June	100%	100%	75%	68%
July	100%	100%	39%	0%
August	100%	100%	29%	0%
September	100%	100%	22%	0%

Joseph Creek

The discharge of Joseph Creek was sufficient to supply all demands until the latter part of June. By the first part of September the flow had declined until only stockwater was available. Thereafter the flow remained nearly constant. Water was not released from Halls Meadow Reservoir for irrigation during the 1956 season.

A summary of distribution by months is presented in the following tabulation:

Month	Per cent of allotments available			
	First priority	Second priority	Third priority	Fourth priority
April	Sufficient to supply all demands.			
May	Sufficient to supply all demands.			
June	100%	100%	100%	99%
July	96%	55%	44%	0%
August	81%	0%	0%	0%
September	72%	0%	0%	0%

Thoms Creek

The high winter flows washed out the recorder station on Thoms Creek. The station was rebuilt on April 26. The flow of the Creek was sufficient to supply all demands until July 8 and then steadily declined until August 26, when there was 0.10 second-feet at the recorder station. The flow then remained nearly constant for the remainder of the season.

Gleason Creek

The discharge of Gleason Creek was sufficient to satisfy all demands until the latter part of May. The flow then steadily decreased until the middle of July, when only stock-water was available at the recorder station. A small flow continued at this point until August 10. Thereafter until the end of the season the Creek was dry.

Harold Stains changed the point of diversion (No. 88 on DWR map) to a point above the county road and above the recorder station. This change was tentatively approved by the watermaster.

A summary of distribution of water by months April, May, June and July is presented in the following tabulation:

Month	Per cent of allotments available				
	First priority	Second priority	Third priority	Fourth priority	Fifth priority
April	100%	100%	100%	100%	100%
May	100%	100%	97%	91%	65%
June	100%	65%	23%	0%	0%
July	80%	0%	0%	0%	0%

Shields Creek

Water from Shields Creek flowed into Plum Canyon Reservoir for a large part of the season. However, the reservoir filled during the winter runoff and most of this water spilled back into Plum Canyon Creek during the first part of the season. The Pepperdine Ditch, which supplies most of the water to the Reservoir was regulated on June 1 and only a small amount of return flow reached the Reservoir after this date.

Water was available to satisfy all demands on Shields Creek until July 17 and decreased gradually thereafter until the end of the season.

Hydrographs of Shields Creek below Pepperdine Ranch and Shields Creek above all Diversions for the period April 24 to September 30 are presented on Plate 2.

A summary of distribution of water by months is presented in the following tabulation:

Month	Per cent of allotments available			
	First priority	Second priority	Third priority	Fourth priority
April	Sufficient to supply all demands.			
May	Sufficient to supply all demands.			
June	Sufficient to supply all demands.			
July	100%	88%	--	52%
August	100%	74%	--	0%
September	100%	59%	--	0%

Allotments from Shields Creek are interrelated with those on Parker Creek, and no third priority allotments attach to Shields Creek.

Parker Creek

The discharge of Parker Creek was sufficient to satisfy all demands until July 21. On July 3, the Dorris Reservoir Ditch from Parker Creek was closed as the downstream users required the entire flow of the creek to satisfy the demands for water. By the middle of August the flow had gradually declined until approximately 15 per cent of third priority allotments were available. Thereafter the flow remained nearly constant until the end of the season.

A summary of distribution of water by months is presented in the following tabulation:

Month	Per cent of allotments available			
	First priority	Second priority	Third priority	Fourth priority
April	Sufficient to satisfy all demands.			
May	Sufficient to satisfy all demands.			
June	Sufficient to satisfy all demands.			
July	100%	100%	84%	84%
August	100%	100%	37%	0%
September	100%	100%	39%	0%

North Fork Pit River

The high winter flows washed out the recorder station on the North Fork Pit River above the X-L Ranch. The recorder station was rebuilt on April 26 at a new location below the mouth of Thoms Creek. This recorder station was used in conjunction with the recorder station on Parker Creek above Highway 395, which is just above its confluence with North Fork Pit River, to determine the total water available on North Fork Pit River.

There was sufficient flow in North Fork Pit River to satisfy all demands until June 8. By July 8 the available water supply was insufficient to satisfy all first priority rights.

By the first of August, the natural flow had nearly stabilized at approximately three second-feet. On August 8 water was released from Lauer Reservoir for use on the X-L Ranch.

Approximately five second-feet reached the Ranch in about 48 hours, and this flow of foreign water remained nearly constant for the remainder of the season.

A summary of distribution of water by months is presented in the following tabulation:

Month	Per cent of allotments available				
	First priority	Second priority	Third priority	Fourth priority	Fifth priority
April	Sufficient to satisfy all demands.				
May	Sufficient to satisfy all demands.				
June	100%	98%	92%	81%	78%
July	83%	69%	13%	3%	0%
August	59%	8%	0%	0%	0%
September	78%	8%	0%	0%	0%

Parker Creek joins North Fork Pit River downstream from the X-L Ranch, to which first priority allotments attach. Therefore, during a portion of the season, water is available from Parker Creek to supply second priority allotments when there is insufficient water available to completely satisfy first priority allotments on the main stream above this tributary.

CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS

Changes in ownership of lands and water rights which will be included in "Statement for North Fork Pit River Watermaster Service Area, County of Modoc, State of California, for 1957", are listed in the following tabulation:

Tract number	Name of water right owner appearing in 1956 statement	Name of water right owner to appear in 1957 statement	Amount of water in second-feet
9-51	Brunnemer, Earl and Brunnemer, Ruby	Brunnemer, Charles R.	0.40
9-56	Brunnemer, Earl and Brunnemer, Ruby	Brunnemer, William R.	0.01
9-113, 9-114	Collis, Randall	Collis, W.H. Langley	3.31
9-94	De Witt, Alfred	Armor, H.P.	0.01
9-53	Landrith, Richard	Brunnemer, Charles R.	0.95
9-48	Echard, Ron F. and Meza, Enid	Echard, Ron F.	1.40
9-79	Jacobs, Estate of V.L. and Jacobs, Georgia	Jacobs, Georgia	0.40
9-96	McKenney, Philip W. and McKenney, Aimee Curtis	Armor, H.P.	0.01
9-130	W.E. Minard	Baker, Paul B.	0.30
9-59, 9-60	Ong, Ralph O. and Ong, Peggy A.	Foster, Lavonne	0.40
9-81	Russell, Charles	Russell, Wayne S.	0.90

APPENDIX A

RECORDS OF WATER SUPPLY

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TABLE A-1

PRECIPITATION AT ALTURAS, CALIFORNIA, AND LAKEVIEW, OREGON

1955-1956

In Inches

Month	Alturas		Lakeview	
	Mean precipitation	1955-1956 precipitation	Mean precipitation	1955-1956 precipitation
October	0.99	0.05	0.96	0.44
November	1.23	1.61	1.62	2.90
December	1.51	4.00	1.79	5.20
January	1.79	3.15	1.93	4.93
February	1.37	1.19	1.85	1.84
March	1.40	0.40	1.43	0.43
April	1.11	0.93	1.18	1.63
May	1.19	1.27	1.25	2.30
June	0.79	0.90	0.92	1.41
July	0.40	1.49	0.31	0.83
August	0.22	0.10	0.25	0.02
September	0.53	0.66	0.64	0.37
TOTALS	12.53	15.75	14.13	22.20

TABLE A-2

DAILY MEAN DISCHARGE OF NEW PINE CREEK BELOW SCHROEDER'S

April 6 to September 30, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	NO	60	200*	37	12.1	5.8
2		84	180*	35	11.8	5.6
3	RECORD	96	160*	33	11.5	5.4
4		105	160*	31	11.2	5.2
5		105	140*	29	10.9	5.0
6	19.2	84	120*	27	10.6	4.8
7	19.2	65	110*	25	10.3	4.7
8	19.2	60	100*	23	10.0	4.7
9	19.2	60	105*	22	9.8	4.6
10	20	63	110*	21	9.6	4.6
11	20	60	95*	21	9.4	4.6
12	20	50	88*	20	9.2	4.5
13	20	48	83*	20	9.0	4.5
14	21	48	88*	19.5	8.8	4.5
15	22	55	85*	19.0	8.6	4.4
16	22	68*	76*	18.5	8.4	4.3
17	23	96*	67*	18.0	8.2	4.8
18	23	117*	65*	17.5	8.0	5.4
19	24	165*	64*	17.0	7.8	5.7
20	29	200*	63*	16.5	7.6	5.7
21	38	250*	55*	16.0	7.4	5.4
22	60	300*	49	15.6	7.2	5.2
23	75	300*	47	15.2	7.0	5.0
24	87	290*	46	14.8	6.9	4.8
25	81	280*	44	14.4	6.8	4.6
26	68	280*	43	14.0	6.7	4.4
27	61	270*	42	13.6	6.6	4.2
28	54	260*	42	13.3	6.5	4.1
29	47	260*	40	13.0	6.4	4.0
30	40	240*	38	12.7	6.2	4.0
31		220*		12.4	6.0	
Mean	37.3	150	86.8	20.2	8.6	4.8
Runoff, in acre-feet	1850	9190	5160	1240	528	286

*Estimated

Total for period - 18,250 acre-feet

TABLE A-3

DAILY MEAN DISCHARGE OF COTTONWOOD CREEK BELOW LARKIN GARDEN DITCH

April 6 to September 28, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	NO	26	23	8.7	1.6	0.5
2	RECORD	28	22	8.3	1.5	0.5
3		28	22	7.2	1.4	0.5
4		32	21	6.5	1.3	0.4
5		32	19.4	6.0	1.2	0.4
6	10.3	31	17.5	5.5	1.1	0.4
7	10.3	30	15.2	5.0	1.0	0.4
8	10.3	27	14.6	4.5	1.0	0.4
9	11.0	29	15.8	4.0	0.9	0.4
10	15.8	29	16.3	4.2	0.9	0.4
11	19.0	28	17.5	4.2	0.8	0.4
12	19.0	31	17.5	4.5	0.8	0.4
13	18.0	31	16.3	4.2	0.8	0.4
14	19.0	35	18.1	4.0	0.7	0.4
15	20	35	17.6	3.7	0.7	0.4
16	21	34	15.8	3.4	0.7	0.4
17	22	34	13.5	2.9	0.7	0.4
18	24	35	13.0	2.5	0.7	0.4
19	27	38	13.0	2.5	0.6	0.6
20	29	42	12.4	2.5	0.6	0.7
21	32	40	11.4	2.3	0.6	0.6
22	34	42	11.0	2.3	0.6	0.5
23	33	44	10.5	2.1	0.6	0.4
24	34	41	10.0	2.1	0.6	0.4
25	31	36	9.6	1.9	0.5	0.4
26	30	32	8.7	2.1	0.5	0.3
27	29	29	8.7	1.9	0.5	0.3
28	27	27	8.7	1.7	0.5	0.3
29	26	24	8.7	1.7	0.5	0.3
30	25	22	8.7	1.6	0.5	0.3
31		21		1.6	0.5	
Mean	23	32	14.6	3.7	0.8	0.4
Runoff, in acre-feet	1140	1970	866	239	49.3	25.0

Total for period - 4290 acre-feet.

TABLE A-4

DAILY MEAN DISCHARGE OF DAVIS CREEK AT OLD FISH WHEEL

April 17, to September 30, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	N	52	60	27	9.9	5.0
2	O	56	57	27	9.5	4.7
3		59	55	24	9.1	4.7
4	R	63	55	24	8.8	4.5
5	E	57	51	23	8.3	4.5
	C					
6	O	56	49	23	8.2	4.5
7	R	54	48	21	7.8	4.4
8	D	50	46	20	8.2	4.4
9		49	49	19.5	9.2	4.3
10		52	49	19.0	9.2	4.2
11		55	47	18.5	8.8	4.2
12		51	46	19.0	8.4	4.2
13		46	45	19.0	7.6	4.4
14		44	53	18.0	7.4	4.5
15		43	49	17.0	7.6	4.5
16		47	43	16.1	7.4	4.5
17	43	55	40	15.1	7.4	4.5
18	46	64	39	14.0	7.4	4.5
19	52	72	43	14.0	7.0	4.5
20	56	82	37	13.6	7.0	4.5
21	63	90	35	13.0	6.6	4.5
22	67	92	33	12.7	6.6	4.5
23	77	93	32	12.1	6.6	4.5
24	82	90	32	11.7	6.6	4.5
25	81	84	30	12.7	6.6	4.5
26	75	78	30	12.7	6.4	4.5
27	70	70	30	11.3	6.4	4.5
28	67	64	29	11.3	6.0	4.5
29	58	61	29	10.8	5.5	4.5
30	53	64	28	10.3	5.5	4.5
31		61		9.9	5.2	
Mean	64	61	42	16.8	7.5	4.5
Runoff, in acre-feet	1762	3870	2513	1030	460	266

Total for period - 9,901 acre-feet.

TABLE A-5

DAILY MEAN DISCHARGE OF LINVILLE CREEK ABOVE RENNER HOUSE DITCH

May 10, to September 14, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	N	N	2.5	1.2	0.8	0.6
2	O	O	2.3	1.3	0.9	0.6
3			2.2	1.3	0.9	0.6
4	R	R	2.4	1.4	0.9	0.6
5	E	E	2.4	1.5	1.0	0.7
	C	C				
6	O	O	2.2	1.4	1.0	0.7
7	R	R	1.8	1.4	1.0	0.7
8	D	D	1.8	1.3	1.0	0.7
9			1.8	1.3	0.9	0.8
10		5.0	1.6	1.4	0.9	0.8
11		5.8	1.8	1.5	0.9	0.8
12		4.6	1.5	1.5	0.9	0.9
13		3.2	1.5	1.5	0.8	0.9
14		2.4	3.0	1.5	0.7	1.0
15		2.1	2.3	1.4	0.4	
16		2.2	1.9	1.4	0.6	N
17		2.2	1.9	1.3	0.7	O
18		2.3	1.9	1.2	0.9	
19		2.4	2.8	1.0	0.9	R
20		2.5	2.3	1.0	0.5	E
						C
21		2.5	1.4	1.0	0.4	O
22		3.2	1.4	1.0	0.4	R
23		3.2	1.4	1.0	0.5	D
24		3.2	1.3	0.9	0.5	
25		3.1	1.2	0.8	0.6	
26		2.8	1.3	0.7	0.6	
27		3.0	1.2	0.6	0.6	
28		2.9	1.2	0.6	0.7	
29		2.6	1.2	0.6	0.7	
30		2.7	1.2	0.7	0.7	
31		2.6		0.8	0.7	
Mean		3.0	1.8	1.1	0.7	0.7
Runoff, in acre-feet		132	108	70	46	21

Total for period = 377 acre-feet.

TABLE A-6

DAILY MEAN DISCHARGE OF FRANKLIN CREEK ABOVE ALL DIVERSIONS

April 18, to September 30, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	N	11.2	13.7	4.9	3.2	2.8
2	O	10.9	12.7	4.9	3.3	2.8
3		11.6	12.3	4.7	3.2	2.8
4	R	12.7	11.8	4.6	3.2	2.8
5	E	12.5	11.1	4.6	3.1	2.8
	C					
6	O	12.5	10.2	4.5	3.1	2.8
7	R	12.2	9.7	4.2	3.1	2.7
8	D	11.6	8.8	4.1	3.1	2.7
9		10.9	8.5	4.1	3.1	2.7
10		11.4	8.2	4.1	3.1	2.7
11		11.1	8.0	3.9	2.9	2.7
12		10.5	7.8	4.1	2.9	2.7
13		10.4	7.5	4.2	2.8	2.7
14		10.2	8.8	4.1	2.8	2.7
15		10.2	8.2	3.8	2.8	2.7
16		10.9	7.8	3.7	2.8	2.7
17		12.2	7.2	3.5	2.8	2.7
18	11.2	13.5	6.8	3.4	2.8	2.8
19	11.6	14.6	7.8	3.5	2.8	3.3
20	12.7	15.6	7.5	3.5	2.7	3.2
21	13.7	15.8	6.8	3.5	2.7	2.9
22	14.2	16.2	6.4	3.4	2.8	2.9
23	14.6	16.6	6.3	3.4	2.8	2.9
24	14.6	17.0	6.0	3.5	2.8	2.9
25	14.2	16.6	5.9	3.9	2.7	2.9
26	13.8	16.2	5.0	4.2	2.7	2.9
27	13.7	16.8	5.0	3.8	2.8	2.9
28	12.2	16.4	4.9	3.7	2.8	2.9
29	11.1	15.0	4.9	3.5	2.8	2.9
30	10.5	14.4	4.7	3.4	2.8	2.9
31		14.2		3.3	2.8	
Mean	12.9	13.3	8.0	3.9	2.9	2.8
Runoff, in acre-feet	332	816	476	242	178	168

Total for period - 2,210 acre-feet.

TABLE A-7

DAILY MEAN DISCHARGE OF JOSEPH CREEK BELOW COUCH CREEK

April 17, to September 30, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	N	23	23	7.0	2.1	1.6
2	O	23	21	6.8	2.2	1.6
3		26	20	5.4	2.2	1.6
4	R	30	23	4.3	2.1	1.5
5	E	31	19.0	3.9	2.1	1.5
	C					
6	O	29	16.1	3.8	2.1	1.6
7	R	32	14.5	3.6	2.0	1.6
8	D	29	15.3	3.2	2.0	1.8
9		26	16.1	2.9	2.0	1.8
10		33	15.8	2.7	2.0	1.7
11		35	14.9	2.6	2.0	1.7
12		37	14.1	2.7	1.9	1.6
13		36	14.1	2.8	1.8	1.5
14		35	21	2.7	1.6	1.5
15		35	16.6	2.7	1.6	1.5
16		33	14.1	2.5	1.6	1.5
17	32	37	12.3	2.3	2.0	1.6
18	32	37	11.1	2.1	2.1	1.6
19	35	41	12.0	2.1	2.1	2.0
20	38	44	11.4	2.1	2.1	1.9
21	41	50	10.5	2.1	2.0	1.9
22	41	57	9.9	2.1	2.0	1.8
23	41	47	9.5	2.1	1.9	1.8
24	40	41	9.3	2.1	1.9	1.7
25	37	34	8.7	2.4	1.8	1.7
26	35	32	8.5	2.9	1.8	1.7
27	39	30	8.5	2.2	1.8	1.6
28	30	27	8.3	2.0	1.8	1.6
29	26	25	7.9	1.9	1.8	1.6
30	24	25	7.3	2.1	1.8	1.6
31		25		2.2	1.7	
Mean	4	34	14	3.0	1.9	1.7
Runoff, in acre-feet	97	2069	819	182.8	118.6	98.4

Total for period - 3,390 acre-feet.

TABLE A-8

DAILY MEAN DISCHARGE OF THOMS CREEK AT CEDARVILLE - ALTURAS HIGHWAY

April 26, to September 30, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	N	34	24	3.4	1.0	0.1
2	O	34	20.0	3.2	1.0	0.1
3		36	18.0	3.2	1.0	0.1
4	R	39	17.0	3.0	1.0	0.1
5	E	41	16.2	2.9	0.9	0.1
	C					
6	O	42	13.0	2.8	0.8	0.1
7	R	43	11.0	2.5	0.8	0.1
8	D	43	10.5	2.2	0.7	0.1
9		46	9.6	2.1	0.7	0.1
10		43	8.8	2.3	0.5	0.1
11		46	7.8	2.5	0.5	0.1
12		47	6.1	2.4	0.4	0.1
13		53	6.7	2.4	0.2	0.1
14		60	16.0	2.5	0.2	0.1
15		66	10.2	2.4	0.2	0.1
16		72	9.3	2.4	0.1	0.1
17		72	7.0	2.1	0.2	0.1
18		71	6.5	2.0	0.2	0.1
19		72	7.6	1.9	0.2	0.6
20		75	6.1	1.9	0.2	0.5
21		72	5.6	1.9	0.2	0.4
22		72	5.2	1.6	0.2	0.3
23		71	5.1	0.9	0.2	0.2
24		61	4.7	0.8	0.2	0.2
25		51	4.6	1.8	0.1	0.1
26	45	44	4.2	2.3	0.1	0.1
27	48	37	3.9	1.8	0.1	0.1
28	41	31	3.8	1.4	0.1	0.1
29	37	30	3.7	1.4	0.1	0.1
30	34	29	3.5	1.1	0.1	0.1
31		26		1.0	0.1	
Mean	41	50	9.2	2.1	0.4	0.2
Runoff, in acre-feet	406	3087	545.9	130.8	24.4	9.1

Total for period - 4,200 acre-feet.

TABLE A-9

DAILY MEAN DISCHARGE OF GLEASON NEAR JONES RANCH

April 4, to August 3, 1956

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	N	3.2	1.4	0.2	N	N
2	O	3.1	1.3	0.2	O	O
3		3.1	1.2	0.2		
4	R	3.4	1.2	0.2	F	F
5	E	3.5	1.0	0.2	L	L
	C				O	O
6	O	3.6	0.8	0.2	W	W
7	R	3.7	0.6	0.2		
8	D	3.6	0.6	0.2		
9		3.6	0.5	0.2		
10	6.3	4.6	0.4	0.2		
11	6.6	6.1	0.3	0.2		
12	6.5	6.7	0.3	0.2		
13	6.6	7.7	0.3	0.1		
14	6.5	8.9	0.3	0.1		
15	6.5	8.9	0.3	0.1		
16	6.3	7.7	0.3	0.1		
17	6.0	7.0	0.3	0.1		
18	6.0	6.5	0.3	0.1		
19	5.9	5.7	0.3	0.1		
20	5.7	5.0	0.3	0.1		
21	5.6	4.3	0.3	N		
22	5.0	3.8	0.3	O		
23	4.7	3.4	0.3			
24	4.5	3.0	0.3	F		
25	4.3	2.7	0.3	L		
				O		
26	4.2	2.3	0.3	W		
27	4.3	2.1	0.3			
28	3.9	1.9	0.3			
29	3.7	1.8	0.3			
30	3.4	1.7	0.3			
31		1.5				
Mean	5.4	4.3	0.5	0.2	0	0
Runoff, in acre-feet	223	266	30	6	0	0

Total for period - 525 acre-feet.