STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF WATER RESOURCES

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REPORT ON WATERMASTER SERVICE IN SOUTH FORK PIT RIVER WATERMASTER SERVICE AREA MODOC AND LASSEN COUNTIES, CALIFORNIA 1954 SEASON

Sacramento, California
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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 South Fork Pit River Watermaster Service Area, Modoc and Lassen Counties, California, 1954 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 South Fork Pit River Watermaster Service Area, Modoc and Lassen Counties, California, 1954 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 South Fork Pit River Watermaster Service Area, Modoc and Lassen Counties, California, 1954 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 20th day of January, 1955.

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

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INTRODUCTION

This is the twentieth annual report on watermaster service in the South Fork Pit River Watermaster Service Area and covers the period of water distributed in 1954 beginning April 1 and terminating September 30.

The service area was created by order of the Department of Public Works on December 31, 1934, to include with minor exceptions the water rights on South Fork Pit River. Subsequent orders have revised and changed the service area to include the water right of the South Fork Irrigation District, the water rights on Pine Creek and on Pit River in Hot Springs Valley, and to exclude certain rights to water from springs in the South Fork Pit River area.

Prior to inclusion in the service area, the various water rights involved had been determined as follows:

South Fork Pit River	W. F. Armstrong v Frank McArthur, No. 3273 Superior Court, Modoc County, entered October 30, 1934.
Pine Creek	Agreement Determining Rights to Water and to the Use Thereof From Pine Creek Near Alturas, in Modoc County, California, dated, November 7, 1934.
Pit River in Hot Springs Valley	Agreement Determining Rights to Water and to the Use Thereof From Pit River and Rattlesnake Creek in Hot Springs Valley in Modoc County, California, dated November 22, 1933.

After Pine Creek and Pit River in Hot Springs Valley were included in the South Fork Pit River Watermaster Service Area, the two service areas which had been created on those streams on January 12, 1935, were abolished.

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 during each season.

The report is presented under four headings as follows: Introduction, Water Supply, Distribution of Water, and Changes in Ownership of Lands and Water Rights. Following the text are tables presenting precipitation data at Alturas and Jess Valley, water supply records at various locations within the area, and three plates showing hydrographs of (1) South Fork Pit River above Likely and West Valley Reservoir releases, (2) Pine Creek near Alturas below power house, and (3) Pit River near Canby and Big Sage Reservoir releases.

WATER SUPPLY

Precipitation

Data on precipitation, compiled from records of the United States Weather Bureau, for Alturas and Jess Valley are shown in Table 1. The records at these stations for the 1953-1954 season indicate a seasonal precipitation of 98 per cent and 97 per cent of normal, respectively.

Average water content of snow on Eagle Peak, Blue Lake Ranch, Cedar Pass, and Adin Mountain snow courses, as published in the bulletin "Water Conditions in California, April 1, 1954", was 12.5 inches. The average of the 50-year normals for the above courses was 16.4 inches. 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: 1954	Per cent of mean
Cedar Pass	7,200	19.9	14.6	73
Eagle Peak	7,500	18.2	16.0	88
Blue Lake Ranch	7,300	13.6	10.3	76
Adin Mountain	6,500	13.8	9.1	66

Stream Flow

South Fork of Pit River. A record of daily mean discharge of South Fork Pit River ne r Likely from April 1 to September 30, 1954, is presented in Table 2. These data were taken from preliminary records of the United States Geological Survey and represent impaired flow after use for upstream irrigation in Jess Valley and diversions for storage in West Valley Reservoir. The computed unimpaired flow of South Fork Pit River at the United States Geological Survey Station near Likely from April 1 to September 30 is shown in Table 4.

A record of the daily release from West Valley Reservoir during the period between April 1 and October 2, 1954, is presented in Table 3. The reservoir filled to capacity by the middle of May and remained full until about June 27. Water was diverted from South Fork Pit River into West Valley Reservoir until about May 1.

Data presented in Tables 2 and 3 are shown graphically on Plate 1. On the graph, the solid line represents the impaired discharge of South Fork Pit River and the dotted line represents water released from storage in West Valley Reservoir.

Fitzhugh Creek. A record of available water supply of Fitzhugh Creek above the Clark ranch is presented in Table 5. The daily mean discharges were computed from current meter measurements and a continuous record of the water stage for the period from April 14 to September 30. This creek flows in a westerly direction entering South Fork Valley at a point about 10 miles south of Alturas.

Pine Creek near Alturas. A record of flow of Pine Creek near Alturas at the California-Oregon Power Company power house is presented in Table 6.

An automatic water stage recorder is maintained at this point which is above all irrigation diversion. A hydrograph of the flow of Pine Creek has been prepared from the data in Table 6 and is presented on Plate 2.

Pit River and Rattlesnake Creek in Hot Springs Valley, and Big Sage Reservoir. The principal sources of water for irrigation in Hot Springs Valley are North Fork and South Fork of Pit River, Big Sage Reservoir, and Rattlesnake Creek. The two forks of Pit River which combine at the upper end of the valley are joined a short distance below by Rattlesnake Creek. The natural channel of Rattlesnake Creek is also used to convey water released from Big Sage Reservoir to meet deficiencies in natural water supply.

Due to backwater conditions from river dams it has not been feasible to establish a measuring station below the junction of North Fork and South Fork of Pit River. Therefore, no record of flow entering Hot Springs Valley from these sources is presented in this report.

A record of water released from storage in Big Sage Reservoir is given in Table 8.

Below Rattlesnake Creek other small streams contribute to the water supply of Pit River in Hot Springs Valley during the early part of each season. In 1954 the flow from these sources continued until about July 1.

A stream flow measuring station is maintained by the United States Geological Survey on Pit River near Canby. This station is located at the outlet of Hot Springs Valley, and in the absence of other records, the flow there is indicative of water supply conditions in the Hot Springs Valley area. The record of discharge at this station also includes return flow

from irrigation in the area. Table 7 is a record of the flow of Pit River near Canby, as taken from preliminary records compiled by the United States Geological Survey.

A hydrograph prepared from the data in Table 7 is presented on Plate 3. Superimposed is a hydrograph of the flow released from Big Sage Reservoir.

DISTRIBUTION OF WATER

South Fork of Pit River

Regulation of diversions of the natural flow from South Fork of Pit River, including Fitzhugh Creek and other upstream tributaries, was made in accordance with Schedules 2 and 3 of the South Fork of Pit River Judgment and Decree No. 3273, which sets forth the several rights and priorities. The flow of West Valley Creek comprises a part of the South Fork of Pit River stream system, and its distribution is governed by the Judgment and Decree. Strict compliance with the decree would require the entire flow of West Valley Creek to pass unobstructed through West Valley Reservoir at all times that the water supply of the stream system was insufficient to fill all decreed allotments. However, in practice the flow of West Valley Creek is stored in the Reservoir during the irrigation season and is released from time to time along with water belonging to the South Fork Irrigation District. The District's water and the decreed allotments are then separated at the various head gates downstream. This separation of comingled water is simplified by the fact that there are only three ranches entitled to a share of the natural flow that are not within the South Fork Irrigation District.

The regulation of West Valley Reservoir storage was performed in accordance with the by-laws of the South Fork Irrigation District. Head

gates and river dams were adjusted to deliver storage water to district members requesting water. The amount of water to which each member was entitled was determined by multiplying the total amount of storage at the beginning of the season by the percentage factor of each owner listed below:

Name of present owner	Name of original owner	Per cent of stored water	Total per cent of stored water presently owned
Beeson, Somer and Beeson Georgia	Williams, Roy	0.80	0.80
Burmister, Arthur H.	Armstrong, W. E.	2.18	
	Stepp, Ray	1.07	3.25
Derner, Estate of Jacob F.	Gaustad, R. C.	1.79	1.79
Flournoy Bros.	Flournoy, J. D.	3.98	
	MaGarva, Douglas	0.24	
	Stinson, A. L.	0.03	
	Van Loan, D. E.	5.98	10.23
Flournoy, Arthur Kenneth and Flournoy, Mary M.	Coffman, A. T.	0.73	0.73
H. C. Cattle Company	Christensen, V. F.	20.46	20.46
McGarva, John and		2.63	
McGarva, Peter	Gaustad, R. J.	1.95	4.58
Monroe, N. H. and Monroe, Harold C.	McArthur, Frank	22.81	22.81
Nelson, Katie H.	Nelson, Katie H.	2.74	2.74
Ramsey, Maston and Ramsey, Addie M.	Hughes, Jesse	2.23	2.23
Van Loan, Kenneth D. and	Flournoy, W. H.	2.51	
Van Loan, Bernadine	Van Loan, D. E.	2.55	5.06
Williams, Gary and Williams, Theresa	Williams, Gary and Williams, Theresa	2.51	2.51
Winema Farms	McArthur, Frank	22.81	22.81
TOTALS		100.00	100.00

By June 1 the flow of South Fork of Pit River had decreased to an amount insufficient to supply the irrigation demand. On that date West Valley Reservoir was opened and this additional water delivered to district members. Haying operations commenced about July 1 and release of reservoir water was discontinued until July 11 when releases were started again for irrigation of fall pasture. Maximum releases during the season were made from July 30 through August 7. During this period the reservoir outlet pipe was discharging about 146 cubic feet per second.

Daily mean releases for the 1954 season from West Valley Reservoir are given in Table 3.

Average percentages of decreed allotments available from the natural flow of South Fork of Pit River - exclusive of West Valley Reservoir releases - are shown in the following tabulation:

Priority	Average percentages of allotments available					
	April	May	June	July	August	September
First	100	100	100	100	100	100
Second	53	83	45	11	4	4

Distribution of Fitzhugh Creek water was made in accordance with provisions of the decree. Average percentage of allotments available are presented in the following tabulation:

Priority	Average percentages of allotments available					
	April	May	June	July	August	September
First	100	100	100	100	100	100
Second	98	54	53	19	6	6

Pine Creek Near Alturas

Distribution of Pine Creek water was made in accordance with the allotments set forth in Schedule 2 of the Pine Creek Agreement.

Considerable regulation was necessary throughout the season to secure proper distribution. At no time was the flow sufficient to provide full allotments. During the haying period, when water is quite often available for diversion into Dorris Reservoir, the ranchers were able to use the entire flow of the creek by shifting the water to different parts of their ranches as the harvesting proceeded.

The average percentages of allotments delivered from Pine Creek are presented in the following tabulation:

Priority	Average percentages of allotments delivered					
	April	May	June	July	August	September
First	100	100	100	100	72	59
Second	12	61	32	4	0	0

Hot Springs Valley

Distribution of Pit River water was made in accordance with the allotments set forth in Schedule 2 and 3 of the Hot Springs Valley Agreement. The distribution of Big Sage Reservoir water was made in accordance with the by-laws of the Hot Springs Valley Irrigation District. As the major part of the water from both these sources is used by the same parties through the same irrigation system and devices, the method of distribution is similar for both stored water and natural flow. The Godfrey Dam, the use of which is

regulated by agreement among parties affected by its operation, was not used in 1954.

Releases from Big Sage Reservoir from May 6 to July 1 were mainly for use on lands adjoining Rattlesnake Creek and lands irrigated from the Kelly ditch. Reservoir water was not needed until after haying for all lands irrigated by diversion directly from Pit River. Releases for irrigation of fall pasture commenced August 1 and ended September 11. Maximum releases for the season occurred between August 31 and September 11 when the discharge averaged 76 cubic feet per second.

CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS

Changes in ownership of lands and water rights which have occurred subsequent to filing "Statement for South Fork Pit River Watermaster Service Area, Counties of Modoc and Lassen, State of California, for 1954" and which will be included in the 1955 statement for the service area, are listed in the following tabulation:

Tract number	Name of water right owner appearing in 1954 statement	Name of water right owner to appear in 1955 statement	Amount of water, in cubic feet per second
7-61	Hays, J. C. and Hays, N. V.	Cummings, John O. and Cummings, Irene Williams	0.44
7-11, 7-14 7-44	Walsh, Patrick, H.	Estate of Patrick H. Walsh, Jr. c/o Patrick H. Walsh	4.46
7-86	Ohm, Peter and Ohm, Elfrieda	Von Borstel, William	0.12

TABLE 1

PRECIPITATION AT ALTURAS AND JESS VALLEY,
MODOC COUNTY, CALIFORNIA
1953-1954

In Inches

Month	Alturas		Jess Valley	
	Normal precipitation	1953-1954 precipitation	Normal precipitation	1953-1954 precipitation
October	0.99	0.70	1.43	1.06
November	1.23	1.91	1.91	2.98
December	1.51	1.20	1.91	2.54
January	1.79	1.48	1.91	1.28
February	1.37	1.11	1.90	0.94
March	1.40	1.76	1.89	2.63
April	1.11	1.12	1.66	1.57
May	1.19	0.35	1.93	0.64
June	0.79	1.67	1.52	2.95
July	0.40	0.60	0.34	0
August	0.22	0.33	0.25	0.12
September	0.53	0.05	0.69	0.15
TOTALS	12.53	12.28	17.34	16.86

Table 2

DAILY MEAN DISCHARGE OF SOUTH FORK PIT RIVER NEAR LIKELY

April 1 to September 30, 1954

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	17	142	87	82	176	46
2	17	133	92	59	176	46
3	18	131	93	39	172	46
4	25	137	108	36	170	46
5	30	158	131	34	170	46
6	34	170	133	31	166	46
7	30	178	119	30	162	47
8	27	186	121	23	116	45
9	26	195	105	22	85	44
10	22	191	144	25	86	42
11	22	184	118	40	85	43
12	30	178	105	53	85	49
13	39	168	111	52	87	29
14	54	160	98	52	96	14
15	62	154	98	54	93	28
16	82	148	93	53	93	41
17	110	148	88	48	93	48
18	131	138	83	48	90	47
19	137	131	79	56	89	50
20	133	129	69	72	79	50
21	129	119	68	83	69	48
22	140	106	66	94	69	55
23	162	105	64	94	67	55
24	184	96	60	93	67	53
25	170	90	74	93	63	54
26	178	83	80	108	62	56
27	208	74	79	116	56	55
28	213	73	74	111	52	54
29	164	86	73	129	50	53
30	146	100	74	162	49	54
31	—	89	—	178	46	—
Mean	91	135	93	70	97	46
Runoff in acre-feet	5,430	8,290	5,530	4,300	5,990	2,760

Total for period - 32,300 acre-feet.

TABLE 3

DAILY MEAN RELEASES FROM WEST VALLEY RESERVOIR

May 1 to October 2, 1954

In Cubic Feet per Second

Day	May	June	July	August	September	October
1	N	25	25	146	32	26
2		25	0	146	32	N
3	O	43	0	145	32	
4		43	0	145	32	O
5		43	0	144	32	
6	R	43	0	144	32	R
7		43	0	143	32	
8	E	1	0	68	32	E
9		1	0	68	32	
10	L	1	0	68	32	L
11	E	1	25	67	31	E
12		1	25	67	31	
13	A	1	25	80	0	A
14		1	25	80	0	
15	S	1	25	80	26	S
16	E	1	25	80	26	E
17		0	25	79	26	
18		0	25	79	26	
19		0	44	79	26	
20		0	44	58	26	
21		0	60	58	26	
22		0	60	58	26	
23		0	60	58	26	
24		0	60	58	26	
25		25	59	41	26	
26		25	83	41	26	
27		25	83	32	26	
28		25	82	32	26	
29		25	125	32	26	
30		25	147	32	26	
31			147	32		
Mean		14	41	79	27	1
Release in acre-feet		840	2,540	4,840	1,580	50

Total for season - 9,850 acre-feet.

TABLE 4

UNIMPAIRED FLOW OF
SOUTH FORK OF PIT RIVER AT UNITED STATES GEOLOGICAL SURVEY
STATION NEAR LIKELY

April 1 to September 30, 1954

In [redacted] Acre-Feet

	April	May	June	July	August	September	Total
Impaired discharge at United States Geological Survey station	5,430	8,290	5,530	4,300	5,990	2,760	32,300
Differential in storage of West Valley Reservoir*	2,360	460	-460	-2,620	-5,050	-1,520	-6,830
Estimated consumption in Jess Valley	0	900	1,800	1,200	500	500	4,900
Unimpaired flow	7,790	9,650	6,870	2,880	1,440	1,740	30,370

* Evaporation from reservoir surface not included.

TABLE 5

DAILY MEAN DISCHARGE OF FITZHUGH CREEK ABOVE CLARK RANCH

April 14 to September 30, 1954

In Cubic Feet per Second

Day	April	May	June	July	August	September
1		6.1	4.6	5.1	1.5	1.7
2		8.0	4.3	4.9	1.5	1.6
3	N	6.9	4.4	4.7	1.6	1.6
4	O	6.5	4.6	[illegible]	1.6	1.5
5		6.5	5.0	[illegible]	1.5	1.5
6	R	6.5	5.2	4.3	1.5	1.6
7	E	6.7	5.4	4.0	1.5	1.5
8	C	6.9	6.1	3.8	1.5	1.5
9	O	7.1	6.1	3.6	1.6	1.5
10	R	7.3	6.3	3.6	1.6	1.5
	D					
11		6.1	6.1	3.4	1.6	1.5
12		6.9	6.1	3.2	1.6	1.5
13		8.6	6.6	2.9	1.5	1.5
14	9.2	8.4	6.8	2.7	1.5	1.5
14	10.3	8.0	6.9	2.5	1.5	1.5
16	11.9	8.0	9.7	2.1	1.5	1.5
17	14.4	7.3	8.2	2.0	1.5	1.5
18	14.4	7.1	8.0	2.1	1.6	1.6
19	13.0	6.9	6.9	2.1	1.7	1.6
20	10.6	6.1	6.1	2.0	2.0	1.6
21	9.4	5.3	6.1	1.6	2.0	1.6
22	9.3	5.3	6.1	1.6	1.8	1.6
23	9.2	5.0	6.0	1.6	1.6	1.6
24	9.2	2.8	5.8	1.6	1.6	1.7*
25	9.2	2.5	5.6	1.6	1.6	1.7*
26	9.1	3.2	5.6	1.8	2.0	1.7*
27	9.0	3.2	5.4	1.8	2.0	1.7*
28	8.9	3.2	5.1	1.6	1.8	1.7*
29	8.7	4.0	5.1	1.6	1.8	1.7*
30	6.9	6.9	5.1	1.5	1.7	1.7*
31	——	6.1	——	1.5	1.7	——
Mean	10.2	6.1	6.0	2.8	1.6	1.6
Runoff in acre-feet	~~97~~ 342	~~96~~ 375	~~90~~ 356	~~43~~ 172	~~26~~ 98	~~24~~ 95

Total for period - ~~165~~ 1438 acre-feet.

* Estimated

TABLE 6

DAILY MEAN DISCHARGE OF PINE CREEK NEAR ALTURAS BELOW POWER HOUSE

April 12 to September 30, 1954

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	N	35	33	35	17.9	16.0
2	O	35	32	34	14.2	14.7
3		35	32	31	14.2	14.2
4	R	35	32	28	14.2	13.5
5	E	35	33	26	14.7	13.0
	C					
6	C	35	31	26	12.8	12.4
7	R	35	31	25	14.7	11.9
8	D	42	32	25	14.2	11.5
9		43	32	24	14.7	11.0
10		49	33	24	14.2	9.8
11		55	32	23	14.2	10.6
12	20	51	32	22	14.2	11.5
13	20	49	33	22	13.5	11.5
14	21	49	32	21	13.5	11.5
15	21	52	32	20	13.5	11.5
16	22	53	32	18.0	14.2	11.5
17	23	56	32	20	13.5	11.5
18	25	56	33	20	13.5	11.5
19	26	56	35	19.1	13.5	11.5
20	26	57	36	18.5	14.2	11.5
21	26	53	36	18.5	13.5	11.5
22	26	49	35	19.1	13.5	11.5
23	26	47	35	19.1	13.0	11.5
24	26	46	35	19.1	13.0	11.5*
25	26	43	34	17.9	13.0	11.5*
26	26	42	35	12.8	14.2	11.9*
27	26	40	35	11.5	16.6	11.9*
28	27	39	35	12.8	16.6	11.9*
29	29	39	34	19.1	14.7	11.9*
30	36	38	33	19.1	17.2	11.9*
31	—	37	—	18.5	18.5	—
Mean	25.2	44.7	33.2	21.6	14.5	12.0
Runoff in acre-feet	948	2,750	1,980	1,330	887	712

Total for period - 8,610 acre-feet.

* Estimated

TABLE 7

DAILY MEAN DISCHARGE OF PIT RIVER NEAR CANBY

April 1 to September 30, 1954

In Cubic Feet per Second

Day	April	May	June	July	August	September
1	284	389	96	68	41	40
2	237	362	96	40	43	43
3	224	322	104	45	40	36
4	228	241	121	78	32	25
5	275	241	152	115	28	20
6	448	205	136	73	36	57
7	530	149	115	62	38	119
8	598	143	152	623	26	126
9	535	136	190	316	23	129
10	394	192	162	146	21	130
11	337	179	241	110	19	112
12	289	245	347	80	27	154
13	280	216	384	68	67	172
14	280	124	327	62	84	147
15	307	21	312	58	77	120
16	312	14	266	68	77	100
17	307	42	166	66	88	74
18	312	35	93	51	87	65
19	322	217	80	44	109	61
20	332	216	62	38	86	59
21	322	133	49	38	68	62
22	303	115	53	38	62	76
23	280	107	68	38	66	63
24	266	73	169	40	77	53
25	262	60	143	38	74	58
26	245	70	101	37	69	63
27	303	110	78	29	59	83
28	342	121	99	31	49	52
29	421	104	83	42	39	36
30	454	80	76	31	36	40
31	——	78	——	28	37	——
Mean	334	153	151	84	54	79
Runoff in acre-feet	19,890	9,400	8,970	5,160	3,340	4,710

Total for period - 51,470 acre-feet

TABLE 8

DAILY MEAN RELEASES FROM BIG SAGE RESERVOIR

May 1 to September 30, 1954

In Cubic Feet per Second

Day	April	May	June	July	August	September
1			29	29	41	76
2		No	29	29	41	76
3	N	Release	29	29	41	76
4			29	29	41	76
5	O		29	29	41	76
6		29	29	28	41	76
7	R	29	29	28	41	76
8		29	29	28	41	75
9	E	29	29	28	41	75
10		29	29	28	41	75
	L					
11		29	29	28	41	75
12	E	29	29	28	41	11
13		29	29	28	41	11
14	A	29	29	28	41	11
15		29	29	28	41	11
	S					
16		29	29	28	41	11
17	E	29	29	28	27	11
18		29	29	28	27	11
19		29	29	28	27	11
20		29	29	28	27	11
21		29	29	28	27	11
22		29	29	28	27	11
23		29	29	28	27	11
24		29	29	28	27	11
25		29	29	28	27	11
26		29	29	28	27	10
27		29	29	28	27	10
28		29	20	28	27	10
29		29	29	28	27	10
30		29	29	28	27	10
31		29	---	28	76	
Mean		24	29	28	36	35
Release in acre-feet		1,495	1,725	1,731	2,201	2,054

Total for period - 9,206 acre-feet.

PLATE 1

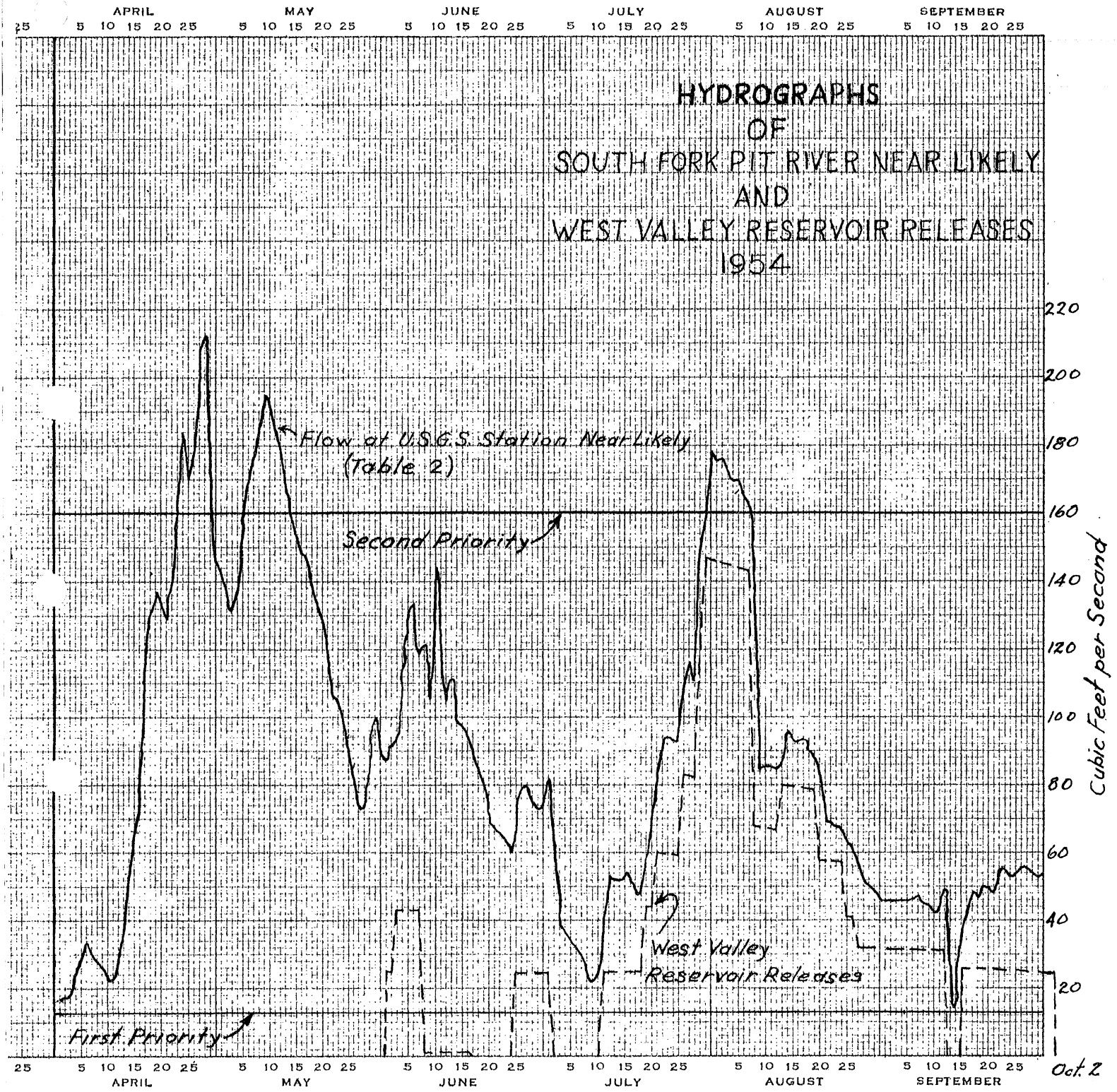

HYDROGRAPHS
OF
SOUTH FORK PIT RIVER NEAR LIKELY
AND
WEST VALLEY RESERVOIR RELEASES
1954
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
5 10 15 20 25
220
200
180
160
140
120
100
80
60
40
20
Cubic Feet per Second
Flow at U.S.G.S. Station Near Likely
(Table 2)
Second Priority
First Priority
West Valley
Reservoir Releases
Oct. 2

PLATE 2

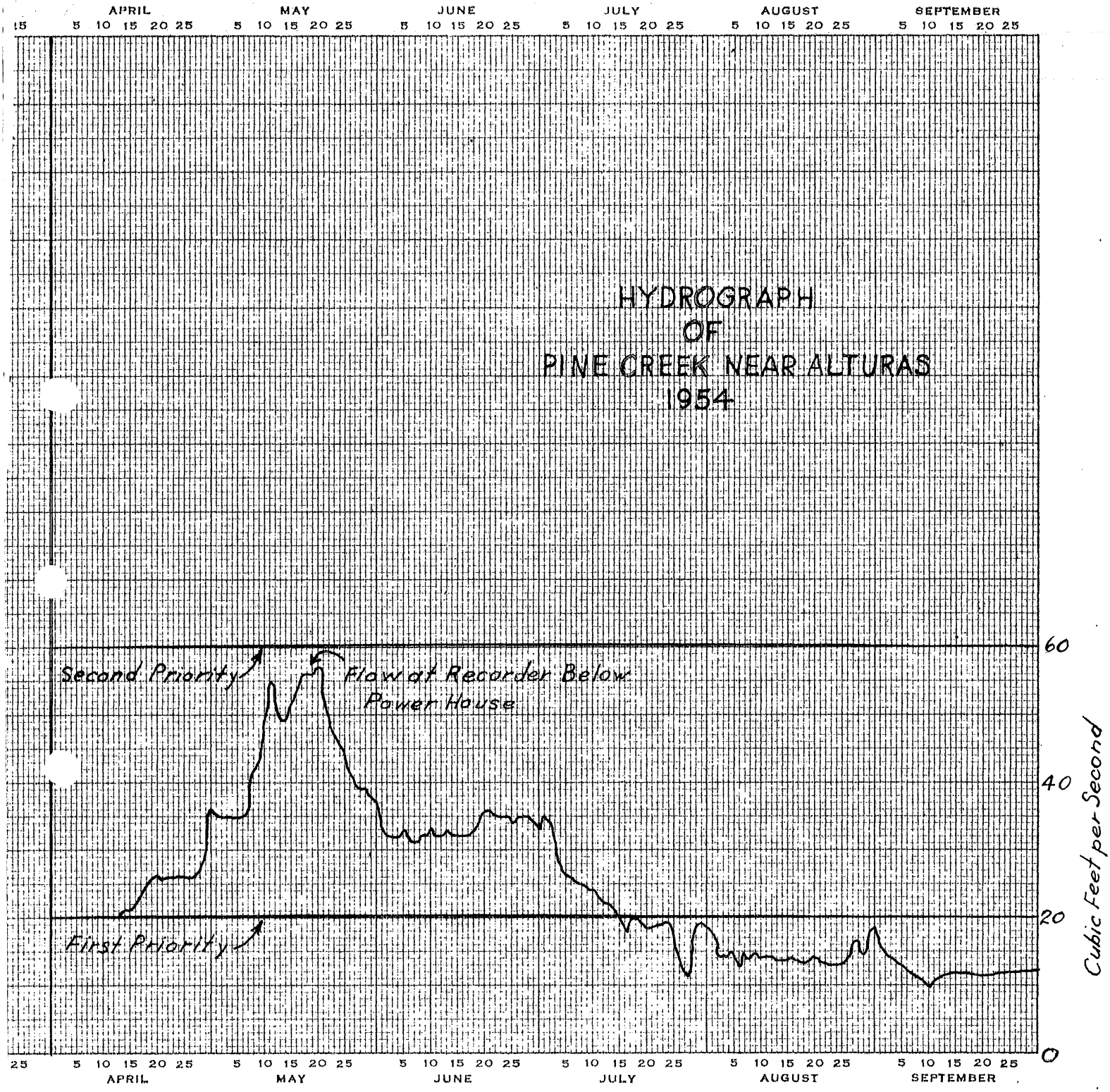
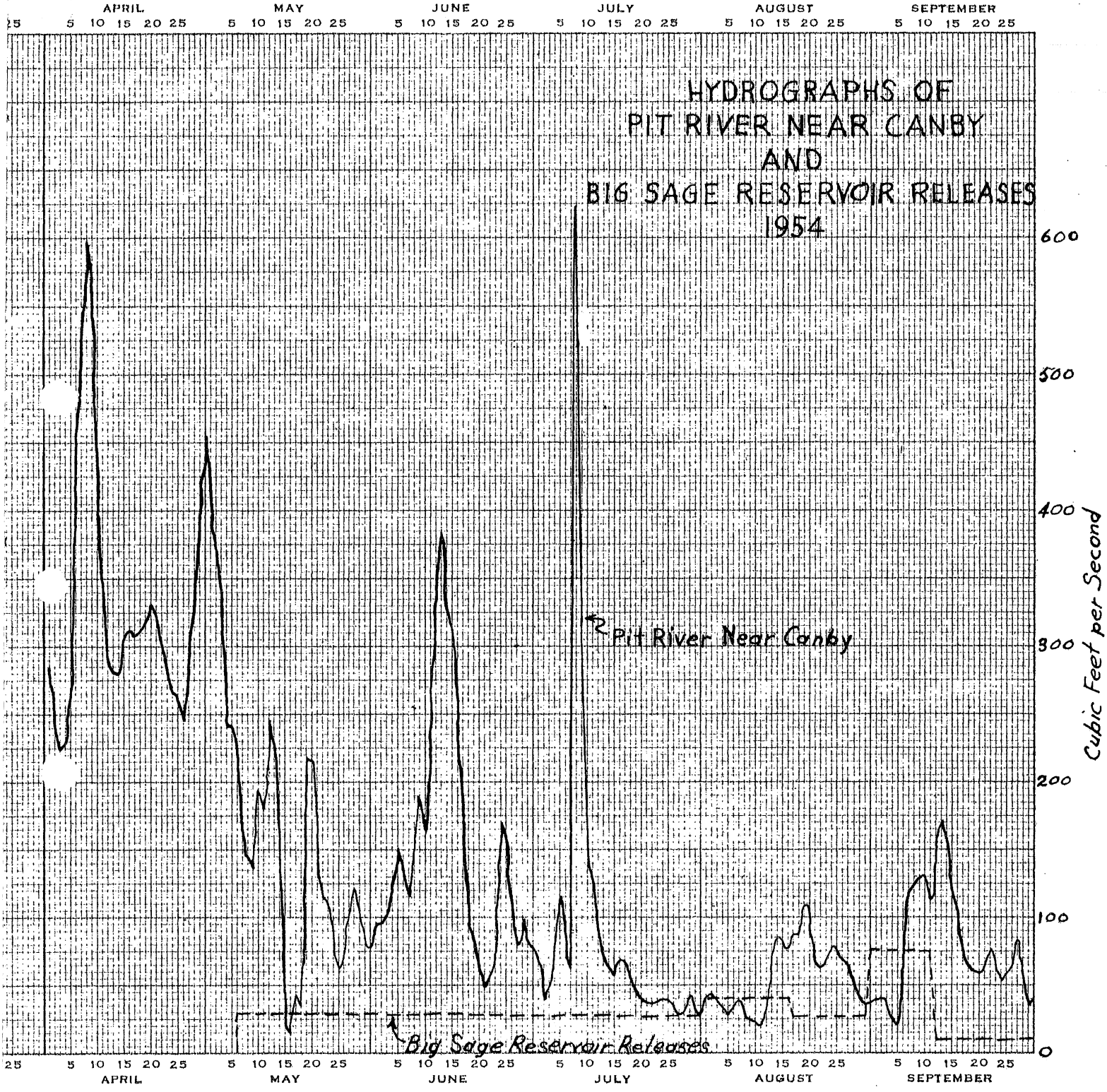

HYDROGRAPH
OF
PINE CREEK NEAR ALTURAS
1954
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
5 10 15 20 25
Second Priority
Flow at Recorder Below Power House
First Priority
60
40
20
0
Cubic Feet per Second

PLATE 3


HYDROGRAPHS OF
PIT RIVER NEAR CANBY
AND
BIG SAGE RESERVOIR RELEASES
1954
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
5 10 15 20 25
600
500
400
300
200
100
0
Cubic Feet per Second
Pit River Near Canby
Big Sage Reservoir Releases