

STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES

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EDMUND G. BROWN, Governor  
HARVEY O. BANKS, Director of Water Resources  
RALPH M. BRODY, Deputy Director of Water Resources

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REPORT ON  
WATERMASTER SERVICE  
IN  
SOUTH FORK PIT RIVER WATERMASTER SERVICE AREA  
MODOC AND LASSEN COUNTIES, CALIFORNIA  
1958 SEASON

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Sacramento, California

August, 1959

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SUBMISSION TO, AND ADOPTION BY  
DEPARTMENT OF WATER RESOURCES

I, Orville L. Abbott, Senior Hydraulic Engineer, Department of Water Resources of the State of California, approve this "Report on Watermaster Service in South Fork Pit River Watermaster Service Area, Modoc and Lassen Counties, California, 1958 Season."

/s/ Orville L. Abbott

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Orville L. Abbott  
Senior Hydraulic Engineer

I, W. R. Gianelli, Principal Hydraulic Engineer, Department of Water Resources of the State of California, approve this "Report on Watermaster Service in South Fork Pit River Watermaster Service Area, Modoc and Lassen Counties, California, 1958 Season."

/s/ W. R. Gianelli

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W. R. Gianelli  
Principal Hydraulic Engineer

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 South Fork Pit River Watermaster Service Area, Modoc and Lassen Counties, California, 1958 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 31st day of August, 1959.

State of California  
Department of Water Resources

/s/ Harvey O. Banks

HARVEY O. BANKS  
Director

(SEAL)

ORGANIZATION  
STATE DEPARTMENT OF WATER RESOURCES

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

This is the twenty-third annual report on watermaster service in the South Fork Pit River Watermaster Service Area and covers the period of water distribution in 1958 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. E. 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.

### WATER SUPPLY

Above normal precipitation throughout the summer provided above normal water supply during the entire 1958 irrigation season. The winter runoff was sufficient to fill all major reservoirs in the area.

#### Precipitation

Data on precipitation, compiled from records of the United States Weather Bureau, for Alturas and Jess Valley are shown in Table A-1. The records at these stations for the 1957-1958 season indicate a seasonal precipitation of 145 per cent and 143 per cent of the mean, respectively.

Average water content of the snow pack at Eagle Peak, Blue Lake Ranch, Cedar Pass, and Adin Mountain snow courses, as published in the Division of Water Resources bulletin "Water Conditions in California, April 1, 1958," was 19.2 inches. The average of the 50-year means for the above courses is 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		Per cent of mean
		50-year computed mean	1958	
Cedar Pass	7,100	19.9	24.8	123
Eagle Peak	8,300	18.2	21.4	118
Blue Lake Ranch	7,300	13.6	14.0	103
Adin Mountain	6,500	13.8	16.7	121

## Stream Flow

South Fork of Pit River. The record of daily mean discharge of South Fork Pit River near Likely from April 1 to September 30, 1958, is presented in Table A-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 to storage in West Valley Reservoir. The record of daily mean discharge of South Fork Pit River near Jess Valley is presented in Table A-3. This table was prepared from preliminary records of the Basic Data Section of the Department of Water Resources.

A record of daily releases from West Valley Reservoir during the period between April 1 and September 30, 1958, is presented in Table A-4.

Data presented in Tables A-2 and A-4 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. Frequent observations were made of the flow in Fitzhugh Creek during the season. The flow was above normal throughout the snow melt period. From the latter part of July to the end of the season the flow remained nearly constant at about 3.0 second-feet.

Pine Creek near Alturas. A record of flow of Pine Creek above all diversions at the California-Oregon Power Company powerhouse is presented in Table A-5. Discharge at this point is obtained

from data taken from preliminary records of the Basic Data Section of the Department of Water Resources. The Pine Creek watershed is located mainly at high elevations in the Warner Mountains and the flow is often inadequate to meet the irrigation demands until the high snow begins to melt about May 1. However, during the 1958 season, the flow was adequate to supply the demands throughout all but the last part of the season. There was a surplus during May and June.

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.

A record of the daily mean discharge of Pit River near Alturas, below the confluence of Rattlesnake Creek and Pit River, taken from preliminary records of the Basic Data Section of the Department of Water Resources, is presented in Table A-6.

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 1958 the flow from these sources continued well into the summer.

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 the flow there,

compared with the flow below Alturas, is indicative of water use in the Hot Springs Valley area. Table A-7 is a record of the flow of Pit River near Canby, as taken from preliminary records compiled by the United States Geological Survey.

Hydrographs prepared from the data in Tables A-6 and A-7 are presented on Plate 2. Superimposed is a hydrograph of the releases from Big Sage Reservoir.

#### DISTRIBUTION OF WATER

Distribution of water during the 1958 season was in accordance with the decrees and agreements, which set forth water rights throughout the service area. The above normal water supply simplified distribution problems during the early part of the season, but caused additional work in distribution on Pine Creek later in the summer.

#### South Fork of Pit River

Regulation of diversions of the natural flow from South Fork 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 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 headgates downstream. This separation of commingled 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 was performed in accordance with the by-laws of the South Fork Irrigation District. Headgates and river dams are 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 as follows:

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.	Stepp, Ray	1.07	1.07
Doty, Frank E.	Armstrong, W. E.	2.18	2.18
Derner, Anna C.	Gaustad, R. O.	1.79	1.79
Flournoy Bros.	Flournoy, J. D.	3.98	16.51
	McGarva, Douglas	0.24	
	Stinson, A. L.	0.03	
	Van Loan, D. E.	5.98	
	Coffman, A. T.	0.73	
	Christensen, V. F.	5.55	
H. C. Cattle Co.	Christensen, V. F.	14.91	14.91

Name of present owner	Name of original owner	Per cent of stored water	Total per cent of stored water presently owned
McGarva, Peter and McGarva, Phyllis	McGarva, John and McGarva, Peter Gaustad, R. J.	2.63 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, Masten and Ramsey, Addie M.	Hughes, Jesse	2.23	2.23
Van Loan, Kenneth D. & Van Loan, Bernadine	Hughes, W. H. Van Loan, D. E.	2.51 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

The natural flow of South Fork Pit River was sufficient to supply the irrigation demand from April 1 to July 29. At all other times, the deficiency was met by reservoir releases. No reservoir releases were made for pre-irrigation of grain land after April 1 because of the high natural flow of the river. The reservoir filled by the first part of April and water flowed over the spillway until the reservoir was opened on July 29. The spill on that date was about 15 second-feet. Some of the hay fields were ready for irrigation of fall pasture at this time and reservoir releases were started. Releases were increased and reached a peak for the season of 133 cubic feet per second on August 8. After August 14, releases were gradually reduced until the reservoir was closed on September 24.

Daily mean releases for the 1958 season from West Valley Reservoir are given in Table A-4.

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:

Month	Per cent of allotments available	
	First priority	Second priority
April	100	68
May	100	100
June	100	93
July	100	30
August	85	1
September	1	0

#### Fitzhugh Creek

Distribution of water on Fitzhugh Creek was made in accordance with the provisions of the decree. The distribution on North Fork Fitzhugh Creek was given particular attention. On June 30 the North Fork was observed to have 4.27 second-feet above the Bowman Ditch with 1.46 second-feet in the Bowman Ditch. On July 3 the Payne Ditch from Mill Creek was opened and measured 3.1 second-feet at the weir at the mid-point of the ditch. The Bowman Ditch was regulated to 4.0 second-feet leaving 3.0 second-feet in the Creek. Recorders were installed on this date on the Payne Ditch just above its junction with North Fork Fitzhugh Creek; at the head of the

Bowman Ditch; and on North Fork Fitzhugh Creek just below the Bowman Ditch. The records obtained by these recorders are presented in Tables A-9, A-10, and A-11, respectively, and are shown on Plate 3. These records show the distribution after that date. Plate 4 shows the typical daily fluctuation of North Fork Fitzhugh Creek and the Payne Ditch, which indicates that both the natural flow of the Creek and the imported water fluctuate in a similar manner.

Pine Creek Near Alturas

Distribution of Pine Creek was made in accordance with the allotments set forth in Schedule 2 of the Pine Creek Agreement, except in cases where users did not want their allotments.

Considerable regulation was necessary throughout the season to secure proper distribution. Regulation of the unwanted water took much additional time. Substantial flows were diverted to Dorris Reservoir during much of the period prior to July 28. Supplemental water was available to the Dorris Ranch from North Fork Pit River through the Parker Creek diversion until August 3. Availability of surplus water so late in the season is unprecedented on these streams.

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

Month	Percent of allotments delivered or available	
	First priority	Second priority
April	95	16
May	100	89
June	100	93

Month	Percent of allotments delivered or available	
	First priority	Second priority
July	100	30
August	91	0
September	76	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 1958.

Storage in Big Sage Reservoir was about 63,000 acre-feet on October 1, 1957. The winter storms were sufficient to fill the reservoir and a significant amount of water spilled during the spring of 1958. Capacity of the reservoir is 77,000 acre-feet. Reservoir releases from May 20 to July 29, were mainly for use on lands adjacent to Rattlesnake Creek and lands irrigated from the Kelly Ditch. Increased releases were necessary for the main portion of Hot Springs Valley on two occasions as shown in Table A-8 and on Plate 2. On September 8 releases were reduced to an amount sufficient to supply irrigation and stockwater for the Kelly Ditch only.

CHANGES IN OWNERSHIP OF LANDS AND WATER RIGHTS

Changes in ownership of lands and water rights subsequent to filing "Statement for South Fork Pit River Watermaster Service Area, Counties of Modoc and Lassen, State of California, for 1958," are listed in the following tabulation:

Tract number	Name of water right owner appearing in 1958 Statement	Name of water right owner to appear in 1959 Statement	Amount of water per second ft.
7-35, 7-38	Winema Farms	Collins, John P.	75.50
7-26-2, 7-27-2, 7-24, 7-22-1, 7-18	Flournoy Brothers	Flournoy, Donald F. and Flournoy, Shirley Jean	20.23
7-22-2, 7-21, 7-23, 7-3-1, 7-6	Flournoy Brothers	Flournoy, Robert L. and Flournoy, Lizette	4.69
7-3-2	Flournoy Bothers	Flournoy, Warren J. and Flournoy, Beverly	27.60

APPENDIX A  
RECORDS OF WATER SUPPLY

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A-10	Daily Mean Discharge of Bowman Ditch . . . . .	A-10
A-11	Daily Mean Discharge of North Fork Fitzhugh Creek Below Bowman Ditch. . . . .	A-11

TABLE A-1

PRECIPITATION AT ALTURAS AND JESS VALLEY  
 MODOC COUNTY, CALIFORNIA  
 1957-1958

In Inches

Month	Alturas		Jess Valley	
	Mean precipitation	1957-1958 precipitation	Mean precipitation	1958-1959 precipitation
October	0.99	2.40	1.31	3.36
November	1.23	2.43	1.62	3.42
December	1.51	1.76	1.84	1.67
January	1.79	1.85	1.91	1.63
February	1.37	2.39	1.90	2.14
March	1.40	1.35	1.89	1.83
April	1.11	0.47	1.66	0.77
May	1.19	1.05	1.93	1.68
June	0.79	2.75	1.52	4.14
July	0.40	0.85	0.34	1.56
August	0.22	0.40	0.25	0.56
September	0.53	0.49	0.69	0.73
<b>TOTALS</b>	<b>12.53</b>	<b>18.19</b>	<b>16.86</b>	<b>23.49</b>

TABLE A-2

DAILY MEAN DISCHARGE OF SOUTH FORK PIT RIVER NEAR LIKELY  
April 1 to September 30, 1958

In Cubic Feet Per Second

Day	April	May	June	July	August	Sept.
1	95	254	282	131	134	96
2	90	288	280	142	134	85
3	85	323	355	127	136	67
4	85	346	352	108	133	67
5	80	370	301	99	131	69
6	80	410	272	93	127	68
7	80	429	244	87	125	67
8	85	452	239	77	142	67
9	90	463	262	75	180	68
10	95	477	244	73	178	68
11	105	538	254	74	172	68
12	115	614	394	74	172	68
13	125	596	340	73	174	71
14	138	527	272	74	157	72
15	154	488	242	78	134	71
16	167	470	224	83	134	68
17	201	484	212	99	138	66
18	222	502	205	100	140	64
19	242	531	234	100	134	63
20	267	538	304	82	140	63
21	307	531	259	77	138	64
22	340	516	227	78	118	67
23	293	509	215	82	116	82
24	259	477	203	92	116	64
25	244	452	178	87	115	35
26	236	426	157	74	115	34
27	229	406	148	69	111	33
28	232	373	129	66	110	32
29	224	340	134	82	108	32
30	227	318	134	113	108	31
31	-	298	-	127	104	-
Mean	173	443	243	90.2	135	62.3
Runoff in acre-feet	10,300	27,260	14,470	5,550	8,280	3,710

Total for period - 69,570 acre-feet.

TABLE A-3

DAILY MEAN DISCHARGE OF SOUTH FORK PIT RIVER  
NEAR JESS VALLEY  
April 1 to September 30, 1958  
In Cubic Feet Per Second

Day	April	May	June	July	August	Sept.
1	67	149	229	121	41	20
2	62	183	233	133	41	18
3	60	217	320	116	43	18
4	57	240	309	97	39	20
5	53	266	249	87	38	23
6	50	306	220	81	37	20
7	44	322	194	77	36	20
8	44	347	196	63	34	19
9	44	366	213	62	30	20
10	46	389	196	62	28	20
11	53	466	209	64	22	20
12	58	570	361	64	23	20
13	69	485	299	62	24	22
14	81	395	222	63	20	24
15	91	358	190	68	20	22
16	99	347	183	76	20	19
17	124	364	171	90	23	18
18	136	392	168	91	25	16
19	150	422	198	88	22	15
20	173	444	278	72	27	16
21	206	441	224	64	33	16
22	231	425	194	67	27	21
23	169	416	186	72	25	36
24	136	398	175	81	24	34
25	121	378	158	76	24	31
26	114	352	145	62	23	30
27	108	336	134	56	22	30
28	113	304	116	55	22	28
29	109	278	124	55	20	28
30	119	256	121	47	20	28
31	-	242	-	42	18	-
Mean	99.6	350	207	74.6	27.5	22.4
Runoff in acre-feet	5925	21530	12330	4590	1688	1333

Total for period = 47,396 acre-feet.

TABLE A-4

DAILY MEAN RELEASES FROM WEST VALLEY RESERVOIR  
April 1 to September 30, 1958

In Cubic Feet Per Second

Day	April	May	June	July	August	Sept.
1	N	N	N	N	93	80
2	o	o	o	o	92	54
3					92	53
4	R	R	R	R	91	53
5	e	e	e	e	91	52
6	l	l	l	l	90	52
7	e	e	e	e	90	52
8	a	a	a	a	133	51
9	s	s	s	s	133	51
10	e	e	e	e	132	50
11					132	50
12					131	50
13					130	49
14					103	49
15					103	48
16					102	48
17					102	48
18					101	47
19					101	47
20					100	46
21					85	46
22					85	46
23					84	45
24					84	45
25					83	-
26					83	N
27					82	o
28					82	
29				45	81	R
30				72	81	e
31				93	80	l
						e
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						e
						e
Mean				70	98	50
Release						
Acre-feet			420	6,104	2,424	

Total for period - 8,948 acre-feet.  
A-4

TABLE A-5

DAILY MEAN DISCHARGE OF PINE CREEK NEAR ALTURAS BELOW POWER HOUSE  
April 1 to September 30, 1958

In Cubic Feet Per Second

Day	April	May	June	July	August	Sept.
1	22	34	68	49	20	16
2	20	38	67	48	21	15
3	21	41	73	44	21	15
4	22	*44	65	42	19	15
5	21	*45	61	40	18	15
6	18	48	59	38	18	15
7	15	47	59	38	18	15
8	15	51	58	37	18	16
9	14	55	57	36	18	16
10	15	60	56	36	18	16
11	16	83	54	35	18	15
12	17	86	62	34	18	15
13	18	77	56	33	18	17
14	21	75	54	33	17	16
15	23	73	54	33	17	15
16	25	72	52	32	18	15
17	30	73	54	32	18	15
18	31	75	55	30	19	15
19	33	83	60	29	18	15
20	37	93	61	27	20	15
21	40	100	60	*26	22	14
22	41	100	61	*26	21	16
23	36	98	64	*26	19	17
24	33	98	62	27	18	15
25	30	96	60	26	18	15
26	30	92	58	23	18	15
27	29	90	56	23	17	15
28	29	87	52	22	17	15
29	30	83	52	22	17	15
30	31	77	49	22	16	14
31	-	73	-	21	16	-
Mean	25	72	59	32	18	15
Runoff in acre-feet	1,513	4,457	3,457	1,964	1,129	908
				Total for period - 13,428 acre-feet.		

\* Estimated

TABLE A-6

## DAILY MEAN DISCHARGE OF PIT RIVER BELOW ALTURAS

April 1 to September 30, 1958  
In Cubic Feet Per Second

Day	April	May	June	July	August	Sept.
1	605	405	321	308	228	*122
2	623	459	303	310	264	*130
3	593	468	615	275	298	*138
4	703	509	764	236	300	134
5	705	583	674	215	203	137
6	591	577	536	203	137	127
7	553	561	430	182	122	129
8	521	546	378	167	133	137
9	507	534	385	150	129	108
10	528	577	416	140	155	94
11	515	674	430	132	217	99
12	498	962	479	133	169	99
13	483	1200	635	157	132	102
14	555	1190	643	170	134	96
15	597	1090	536	134	166	99
16	633	969	411	139	158	105
17	699	837	308	144	149	106
18	846	749	230	161	149	112
19	877	703	259	159	167	114
20	879	674	374	153	191	109
21	906	655	509	148	161	110
22	902	678	485	148	130	110
23	891	699	395	138	112	163
24	841	692	334	142	115	175
25	756	713	302	152	123	165
26	651	659	318	137	122	142
27	553	603	287	127	124	123
28	494	506	247	94	*107	116
29	479	405	270	61	*100	113
30	455	379	294	72	*107	104
31	-	374	-	189	*114	-
Mean	648	665	419	164	159	121
Runoff in acre-feet	38,560	40,920	24,930	10,070	9,751	7,176

\* Estimated

Total for period = 131,407 acre-feet.

TABLE A-7

## DAILY MEAN DISCHARGE OF PIT RIVER NEAR CANBY

April 1 to September 30, 1958

In Cubic Feet Per Second

Day	April	May	June	July	August	Sept.
1	726	534	346	191	39	50
2	804	492	444	204	82	72
3	930	534	389	280	108	144
4	912	546	492	300	90	105
5	930	582	636	250	155	90
6	950	630	660	204	163	78
7	846	630	570	179	88	96
8	792	624	468	155	96	200
9	750	600	378	148	99	179
10	720	594	400	130	130	148
11	708	654	412	120	114	93
12	678	726	450	114	159	82
13	594	834	462	90	179	85
14	636	951	552	80	120	85
15	672	1070	612	90	105	96
16	702	1010	576	75	120	96
17	732	995	450	72	130	93
18	798	894	356	96	114	93
19	876	810	270	127	90	102
20	924	750	260	148	85	102
21	930	708	305	134	85	99
22	943	648	428	148	124	99
23	956	618	265	213	130	111
24	943	624	231	236	114	120
25	906	552	444	167	96	163
26	846	588	444	159	105	167
27	756	618	351	179	99	151
28	660	594	295	141	96	127
29	594	516	167	111	90	111
30	570	245	167	68	63	102
31	-	195	-	34	54	-
Mean	793	657	409	150	107	111
Runoff in acre-feet	47,170	40,400	24,360	9,210	6,590	6,620

Total for period - 134,350 acre-feet.

TABLE A-8

DAILY MEAN RELEASES FROM BIG SAGE RESERVOIR  
May 1 to September 30, 1958

In Cubic Feet Per Second

Day	May	June	July	August	Sept.
1	N	30	29	82	70
2	o	30	29	82	70
3		30	29	82	70
4	R	30	29	28	70
5	e	30	29	28	70
6	l	30	29	28	70
7	e	30	29	28	70
8	a	30	29	28	28
9	s	30	29	28	28
10	e	30	29	28	28
11		30	29	28	28
12		30	29	28	28
13		30	29	28	28
14		30	29	28	27
15		30	29	28	27
16		29	29	28	27
17		29	29	28	27
18		29	29	28	27
19		29	29	28	27
20	11	29	29	28	27
21	11	29	29	28	27
22	11	29	29	28	27
23	30	29	29	28	26
24	30	29	29	28	26
25	30	29	29	28	26
26	30	29	29	27	26
27	30	29	29	27	26
28	30	29	28	27	26
29	30	29	28	27	26
30	30	29	82	70	25
31	30	-	82	70	-
Mean	25	30	32	36	37
Release Acre-feet	606	1,770	2,006	2,220	2,216

Total for period - 8,818 acre-feet.

TABLE A-9

DAILY MEAN DISCHARGE OF PAYNE DITCH ABOVE NORTH  
FORK FITZHUGH CREEK

July 3, to September 18, 1958

In Cubic Feet Per Second

Day	June	July	August	Sept.
1	N	0	3.0	2.6
2	O	0	3.0	2.5
3		3.1	2.9	2.7
4	F	3.0	2.8	2.7
5	I	2.9	3.0	2.8
6	O			
7	W	2.9	3.2	2.8
8		2.8	3.2	2.8
9		2.7	3.2	2.8
10		2.6	3.2	2.8
11		2.5		
12		2.4	3.0	2.8
13		2.3	3.0	2.8
14		2.3	3.0	2.8
15		2.3	3.0	2.7
16		2.3		
17		2.8	3.0	2.7
18		3.3	3.0	2.6
19		3.3	2.9	2.6
20		3.2	2.8	N
21		3.1	2.6	O
22		3.1		
23		3.1	2.3	R
24		3.2	2.2	e
25		3.2	2.2	c
26		3.2	2.4	o
27		3.1	2.8	r
28		3.1	2.8	d
29		3.1	2.7	
30		3.1	2.7	
31		3.1	2.6	
Mean		2.9	2.8	2.7
Discharge acre-feet		82	175	98

Total for period - 355 acre-feet.

TABLE A-10

## DAILY MEAN DISCHARGE OF BOWMAN DITCH

July 3, to September 18, 1958

In Cubic Feet Per Second

Day	June	July	August	Sept.
1	No	No	3.7	3.1
2	o	Record	3.7	3.1
3		4.0	3.6	3.1
4	R	3.9	3.5	3.3
5	e	3.7	3.5	3.2
6	c	3.6	3.7	3.2
7	r	3.4	3.8	3.2
8	d	3.4	3.9	3.2
9		3.3	3.8	3.2
10		3.2	3.8	3.2
11		3.0	3.7	3.3
12		3.0	3.7	3.3
13		2.9	3.6	3.4
14		3.1	3.6	3.4
15		3.0	3.3	3.3
16		3.3	3.3	3.2
17		3.8	3.4	3.2
18		3.8	3.3	3.2
19		3.9	3.3	No
20		3.9	3.6	R
21		3.9	3.1	e
22		4.0	2.8	c
23		4.0	2.7	o
24		3.9	2.7	r
25		3.8	2.8	d
26		3.8	3.0	
27		3.8	3.1	
28		3.8	3.1	
29		3.8	3.2	
30		3.8	3.1	
31		3.7	3.1	
Mean		3.6	3.4	3.2
Discharge Acre-feet		209	209	116

Total for period - 534 acre-feet.

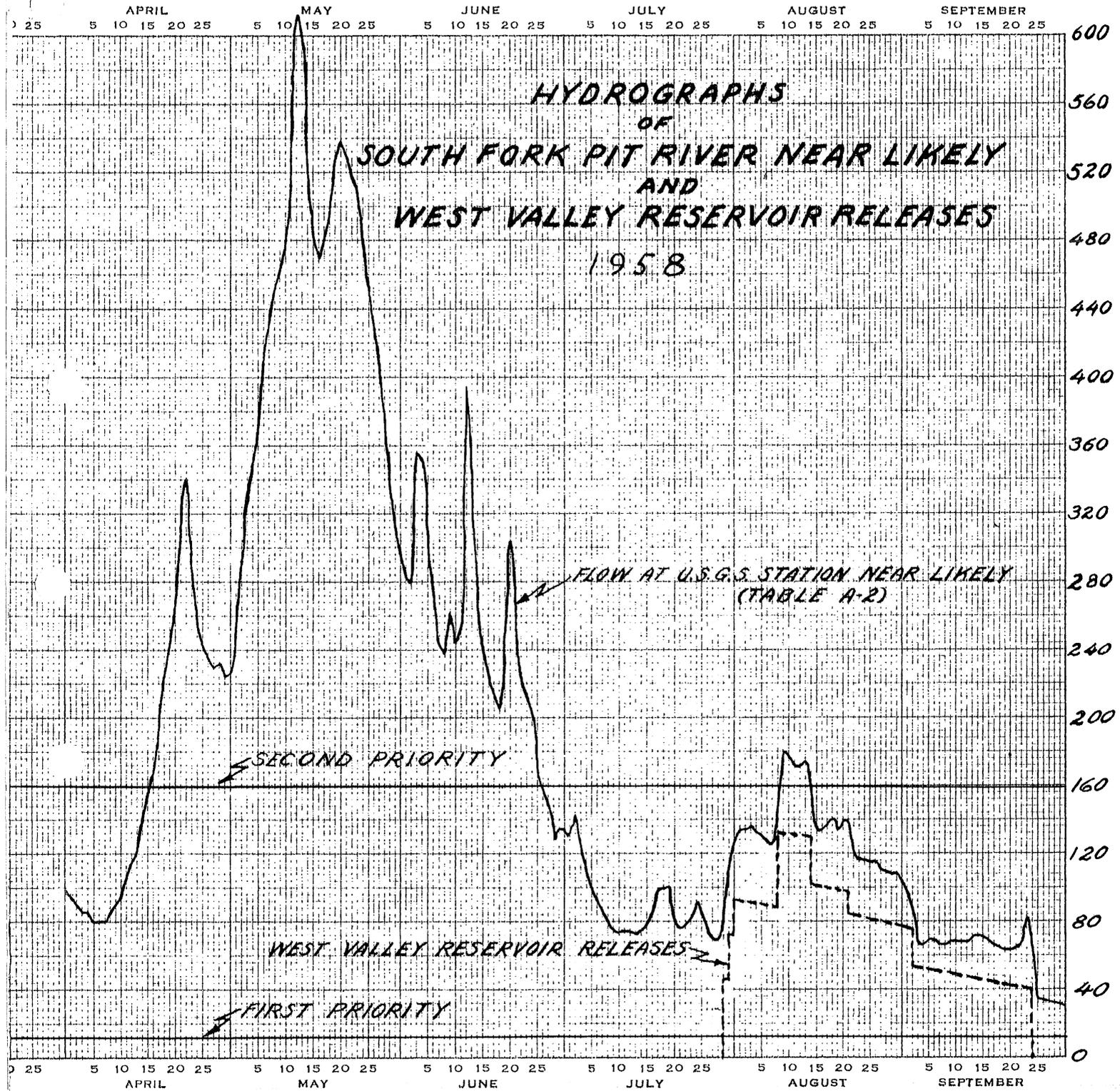
TABLE A-11

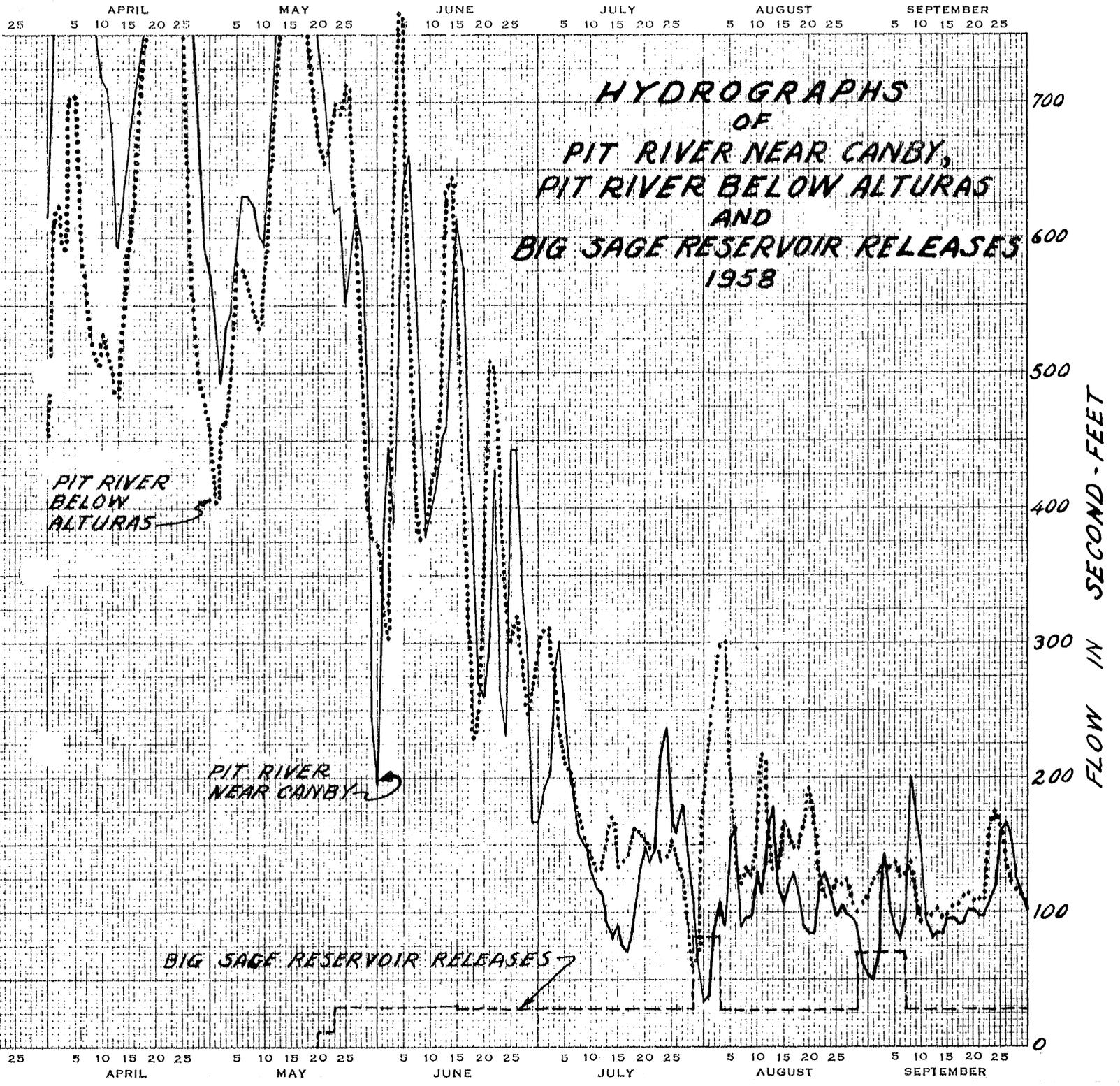
DAILY MEAN DISCHARGE OF NORTH FORK FITZHUGH  
CREEK BELOW BOWMAN DITCH  
July 1 to September 18, 1958

In Cubic Feet Per Second

Day	June	July	August	Sept.
1	N o R e c o r d	3.0	1.5	1.2
2		3.3	1.5	1.2
3		3.0	1.4	1.2
4		2.7	1.4	1.3
5		2.7	1.3	1.3
6		2.6	1.5	1.3
7		2.6	1.5	1.3
8		2.5	1.5	1.3
9		2.4	1.4	1.3
10		2.3	1.4	1.3
11		2.3	1.3	1.3
12		2.2	1.3	1.3
13		2.1	1.2	1.3
14		2.3	1.2	1.3
15		2.3	1.5	1.2
16	2.3	1.5	1.2	
17	2.5	1.5	1.1	
18	2.3	1.4	1.1	
19	1.9	1.4	N	
20	1.7	1.6	O	
21	1.6	1.3	R	
22	1.5	1.3	e	
23	1.5	1.2	c	
24	1.8	1.2	o	
25	1.8	1.3	r	
26	1.8	1.4	d	
27	1.7	1.4		
28	1.6	1.3		
29	1.6	1.2		
30	1.5	1.2		
31	1.5	1.2		
Mean		2.2	1.4	1.3
Runoff in acre-feet		134	85	45

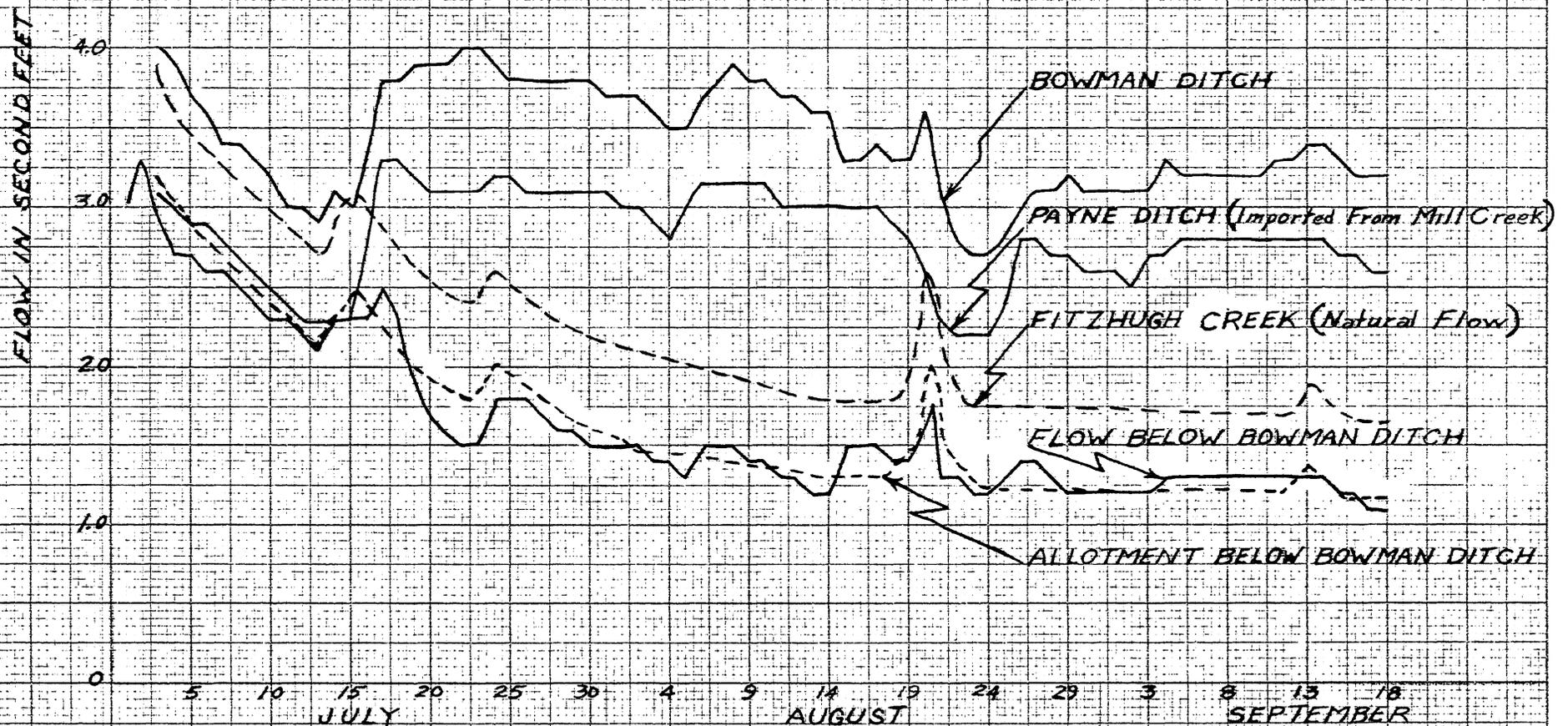
Total for period - 264 acre-feet.





# DISTRIBUTION OF WATER FROM NORTH FORK FITZHUGH CREEK 1958 SEASON

DAILY MEAN FLOWS FROM JULY 3 TO SEPTEMBER 18, 1958



1958  
TYPICAL DAILY FLUCTUATIONS ON UPPER N.F.K. FITZHUGH  
CREEK AND IMPORTED MILL CREEK WATER

