gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This new downstream order and system of indention show which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

The order of listing used before the publication of the 1951 report listed first all stations on the main stem from headwaters toward mouth, then all stations on the uppermost tributary to the main stem from the tributary's source to mouth, and then all stations from source to mouth of the uppermost tributary to the tributary.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information is used to supplement base data in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of fluctuations. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge. Typical structures in use at gaging stations are shown in figure 1.

Rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs, and by other methods), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is essentially the shifting-control method.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage. If so, the rate of change of stage is used as a factor in the determination of discharge.

A. FISH CREEK NEAR DUARTE, CALIF.

B. SACRAMENTO RIVER AT DELTA, CALIF.

C. NORTH FORK CACHE CREEK NEAR LOWER LAKE, CALIF.

FIGURE 1.—GAGING-STATION STRUCTURES.

Santa Ynez River above Gibraltar Dam, near Santa Barbara, Calif.

Location.--Lat 34°31'37", long. 119°41'10", on upstream side of Gibraltar Dam, 7 miles north of Santa Barbara, Santa Barbara County.

Drainage area.--219 sq mi.

Records available.--April 1920 to September 1951. November 1903 to April 1907, October 1907 to January 1908, February 1910 to November 1918, at river gaging station at dam site; records not equivalent as only figures of net runoff published since April 1920. Prior to October 1943, published as "near Santa Barbara."

Gage.--Water-stage recorder on reservoir and water-stage recorders and sharp-crested weirs on outlet and diversion channels below dam. Datum of reservoir gage is 21.53 ft above mean sea level (Bureau of Reclamation bench mark) and is datum used by city of Santa Barbara for works in this vicinity.

August 1916 to November 1918, water-stage recorder at Gibraltar dam site at different datum. Prior to August 1916, staff gage 900 ft downstream at different datum.

Average runoff.--31 years (1920-51), 30,350 acre-ft per year (41.9 cfs), computed from figures of net runoff; median of yearly net runoff, 12,300 acre-ft (17 cfs).

Remarks.--Records of total inflow represent all water reaching Gibraltar Reservoir, including rainfall on reservoir, computed on basis of records of storage, diversion to city of Santa Barbara (draft), spill and release to river, and evaporation. Records of net runoff exclude rainfall on water surface, computed on basis of area and records of precipitation. Reservoir capacity and area tables are based on surveys made in 1948. Reservoir capacity at spillway level (gage height, 1,378.82 ft), 16,000 acre-ft. Dead storage, 863 acre-ft, below lowest outlet at gage height, 1,312.04 ft, included in these records. Records are computed as of 6 p.m. on last day of each month. Flow regulated at Jameson Lake, where water is also diverted out of basin to city of Montecito (see preceding page).

Cooperation.--Reservoir-operation records and related data furnished by city of Santa Barbara.

Revisions (water years).--W 706: 1921, 1922. W 1041: 1944.

Monthly runoff, October 1949 to September 1951

Month	Gibraltar Reservoir		Change in contents (acre-feet)	Draft (acre-feet)	Spill and release (acre-feet)	Evaporation (acre-feet)	Total inflow (acre-feet)	Rain on reservoir (acre-feet)	Net runoff (acre-feet)
	Gage height (feet)†	Contents (acre-feet)†							
September 1949	1,319.28	1,670	-	-	-	-	-	-	-
October.....	1,318.54	1,579	-91	31	3	42	-15	0	-15
November.....	1,318.48	1,572	-7	4	3	25	25	26	-1
December.....	1,318.94	1,628	+56	0	4	12	72	47	25
Calendar year 1949.	-	-	-37	837	23	565	1,388	186	1,202
January 1950..	1,321.10	1,899	+271	0	3	12	286	43	243
February.....	1,331.09	3,310	+1,411	0	2	22	1,435	28	1,407
March.....	1,333.53	3,685	+375	2	3	47	427	18	409
April.....	1,335.86	4,052	+367	0	3	63	433	18	415
May.....	1,335.21	3,948	-104	135	4	76	111	0	111
June.....	1,333.83	3,731	-217	117	3	86	-11	0	-11
July.....	1,332.53	3,530	-201	100	3	99	1	0	1
August.....	1,330.96	3,290	-240	117	3	99	-21	0	-21
September.....	1,330.19	3,174	-116	44	4	70	2	4	-2
Water year 1949-50.	-	-	+1,504	550	38	653	2,745	184	2,561
October 1950..	1,329.11	3,012	-162	92	4	51	-15	18	-33
November.....	1,329.09	3,009	-3	0	3	24	24	28	-4
December.....	1,328.81	2,968	-41	16	4	14	-7	8	-15
Calendar year 1950.	-	-	+1,340	623	39	663	2,665	165	2,500
January 1951..	1,328.73	2,956	-12	18	4	14	24	28	-4
February.....	1,328.74	2,958	+2	0	3	23	28	16	12
March.....	1,328.11	2,865	-93	84	4	46	41	19	22
April.....	1,326.94	2,695	-170	169	3	47	49	18	31
May.....	1,325.46	2,466	-209	126	3	73	-7	0	-7
June.....	1,323.61	2,231	-255	172	3	77	-3	0	-3
July.....	1,320.99	1,885	-346	255	3	93	5	0	5
August.....	1,319.78	1,732	-153	63	3	83	-4	0	-4
September.....	1,319.19	1,659	-73	0	4	69	0	0	0
Water year 1950-51.	-	-	-1,515	995	41	614	135	135	0

† On last day of month.

Note.--For months when inflow to the reservoir was small and other elements were relatively large, negative or discordant figures of inflow or runoff may appear. To the extent that such discrepancies may be attributed to inaccuracies in the capacity rating, quantities too small for periods of falling stage in the reservoir are compensated by quantities too large for periods of corresponding rising stage. Inaccuracies in figures of draft or evaporation, which may be within reasonable limits in these figures, may result in disproportionately large inaccuracies in small figures of inflow or runoff computed as residuals.

Santa Ynez River below Gibraltar Dam, near Santa Barbara, Calif.

Location (revised).--Lat 34°31'28", long. 119°41'11", on left bank 700 ft above Gibraltar Dam, 7 miles north of Santa Barbara, Santa Barbara County.

Drainage area.--219 sq mi.

Records available.--April 1920 to September 1951 (monthly discharge only prior to October 1941).

Gage.--Water-stage recorder and sharp-crested weir on outlet channel below dam, and water-stage recorder on Gibraltar Reservoir (formerly considered principal gage). Datum of reservoir gage is 21.53 ft above mean sea level (Bureau of Reclamation bench mark).

Average discharge.--31 years, 36.7 cfs (unadjusted); median of yearly mean discharges, 12 cfs.

Extremes.--1949-50: Maximum daily discharge during water year, 0.10 cfs Apr. 29; no flow Feb. 2-12.
1950-51: Maximum daily discharge during water year, 0.11 cfs Oct. 6; minimum daily, 0.03 cfs Nov. 2, Feb. 4, 5, May 1, Aug. 13-15.
1920-51: Maximum discharge, 35,500 cfs Mar. 2, 1938, computed from spillway rating; no flow at times during most years.

Remarks.--Records good. Discharge represents flow in Santa Ynez River passing Gibraltar Dam, computed on basis of records of spillway discharge and controlled release. There was no flow over spillway during 1949-50 or 1950-51 water years. Flow regulated by Gibraltar Reservoir and Jameson Lake. Figures of daily discharge computed on basis of 24-hour interval ending at 6 p.m. on day for which they are shown. City of Santa Barbara diverted 550 acre-ft during 1949-50 water year and 995 acre-ft during 1950-51 water year from Gibraltar Reservoir; Montecito County Water District diverted 505 acre-ft during 1949-50 water year and 424 acre-ft during 1950-51 water year from Jameson Lake.

Cooperation.--Records of gage height furnished by city of Santa Barbara.

Revisions (water years).--W 706: 1921-22. W 1041: 1944.

Discharge, in cubic feet per second, 1949-51

1949-50

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.05	0.05	0.05	0.05	0.06	0.06	0.05	0.06	0.06	0.05	0.05	0.05
2	.04	.05	.08	.04	0	.05	.05	.07	.06	.05	.05	.05
3	.05	.04	.06	.04	0	.04	.05	.06	.04	.05	.05	.07
4	.05	.04	.08	.04	0	.05	.05	.09	.05	.05	.05	.05
5	.05	.04	.07	.04	0	.05	.05	.08	.05	.05	.05	.05
6	.05	.05	.07	.04	0	.05	.05	.08	a.05	.05	a.05	.05
7	.05	.06	.07	.05	0	.04	.04	.07	a.05	.05	.06	.05
8	.05	.07	.08	.06	0	.04	.07	.08	a.05	.05	.06	.04
9	.05	.06	a.08	.04	0	.04	.06	.06	a.05	.05	.05	.05
10	.06	.05	a.08	.05	0	.06	.06	.06	a.04	.05	.05	.05
11	.06	.05	a.07	.04	0	.06	.06	.06	a.04	.05	.05	.05
12	.06	.04	a.07	.03	0	.06	.04	.07	a.04	.05	.05	.07
13	.06	.05	a.07	.03	.03	.06	.05	.07	.04	.05	.05	.07
14	.06	.04	a.07	.04	.04	.06	.05	.05	.07	.05	.05	.06
15	.05	.05	a.06	.05	.04	.06	.06	.03	.05	.05	.05	.06
16	.05	.04	a.06	.04	.05	.06	.04	.06	.05	.06	.05	.07
17	.05	.04	a.06	.04	.05	.06	.04	.06	.05	.05	.05	.09
18	.05	.04	.06	.04	.05	.06	.04	.06	.05	.05	.07	.08
19	.05	.05	.06	.05	.05	.06	.04	.06	.05	.05	.05	.07
20	.05	.05	.06	.06	.05	.06	.04	.05	.05	.05	.05	.07
21	.05	.04	.06	.06	.06	.06	.06	.05	.05	.05	.07	.06
22	.06	.04	.06	.06	.06	.05	.06	.06	.06	.05	.08	.06
23	.04	.05	.06	.06	.04	.06	.06	.06	.05	.06	.07	.07
24	.05	.05	.06	.05	.06	.06	.08	.06	.05	.05	.06	.07
25	.06	.05	.05	.06	.06	.06	.07	.05	.05	.05	.06	.06
26	.05	.05	.05	.06	.07	.06	.05	.05	.05	.05	.06	.06
27	.05	.05	.05	.06	.05	.05	.05	.07	.07	.05	.05	.06
28	.05	.05	.05	.06	.06	.06	.04	.06	.06	.05	.05	.08
29	.05	.05	.05	.06	-	.06	.10	.09	.06	.05	.05	.07
30	.05	.05	.05	.06	-	.05	.05	.05	.07	.06	.07	.04
31	.05	-	.05	.06	-	.05	-	.05	-	.05	.05	-
Total	1.60	1.44	1.93	1.52	.88	1.70	1.61	1.93	1.56	1.58	1.71	1.83
Mean	0.052	0.048	0.062	0.049	0.031	0.055	0.054	0.062	0.052	0.051	0.055	0.061
Ac-ft	3.2	2.9	3.8	3.0	1.7	3.4	3.2	3.8	3.1	3.1	3.4	3.6

Calendar year 1949: Max 0.08 Min 0 Mean 0.032 Ac-ft 23
Water year 1949-50: Max 0.10 Min 0 Mean 0.053 Ac-ft 38

a No gage-height record; discharge interpolated.
Note.--Computed from once-daily hook gage readings Mar. 6 to Sept. 30.

Salinas River near Bradley, Calif.

Location.--Lat 35°55'40", long. 120°52'00", in NE¼ sec. 15, T. 23 S., R. 10 E., on left bank 6 miles northwest of town of Bradley and 7 miles downstream from San Antonio River.

Drainage area.--2,522 sq mi.

Records available.--December 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 450 ft (from topographic map).

Extremes.--Maximum discharge during year, 12,800 cfs Nov. 19 (gage height, 10.18 ft); no flow Aug. 15-23, Sept. 16-21.
1949-51: Maximum discharge, 15,500 cfs Feb. 6, 1950 (gage height, 10.66 ft); no flow Aug. 15-23, Sept. 16-21, 1951.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	5.0	333	297	456	364	116	105	14	3.8	0.4	0.9
2	2.8	5.0	315	268	423	475	116	100	14	3.8	.6	1.1
3	2.8	5.0	297	263	378	456	113	92	14	3.1	.8	1.1
4	2.5	4.6	*2,850	236	345	397	113	102	13	3.4	1.1	*1.4
5	2.8	4.6	2,470	220	*315	378	100	192	13	3.1	1.1	1.4
6	2.8	4.6	1,500	206	309	496	*92	154	12	2.8	.9	1.4
7	2.5	5.0	1,160	201	309	580	92	123	12	2.5	.7	1.4
8	2.5	5.0	1,620	*192	297	545	84	110	12	2.0	.8	1.1
9	2.5	5.4	1,800	182	291	510	80	102	12	1.8	.9	.9
10	2.5	5.0	1,330	201	268	468	78	87	12	1.8	.9	.5
11	2.5	5.0	*1,040	241	258	416	80	78	12	2.5	1.1	.2
12	2.5	5.9	876	769	252	384	76	70	9.7	2.8	.7	.3
13	*2.5	7.4	754	722	230	358	76	62	8.5	2.0	.4	.4
14	2.5	7.9	682	580	230	327	74	59	7.9	2.0	.2	.3
15	2.5	6.9	1,010	510	236	297	76	51	7.4	1.6	0	.3
16	3.1	6.9	892	475	230	*280	74	50	6.9	1.4	0	0
17	3.4	7.4	770	456	225	252	74	46	6.9	1.1	0	0
18	3.8	49	698	*530	216	206	72	43	*6.9	.8	0	0
19	3.8	6,730	638	1,500	216	196	76	40	7.9	.6	0	0
20	4.2	*4,830	580	1,590	206	182	76	38	7.9	.5	0	0
21	4.6	3,430	531	1,250	196	178	78	35	6.9	.4	0	0
22	4.6	1,820	496	*1,020	196	158	76	30	6.9	.5	0	.2
23	5.0	1,220	468	892	201	158	80	29	5.9	.7	0	.5
24	5.4	926	436	794	258	154	82	26	5.4	.8	.1	.7
25	5.4	746	404	714	297	150	87	25	5.0	.8	.2	.8
26	7.7	622	404	638	297	139	87	25	4.6	*.8	.2	*1.2
27	12	531	442	594	303	136	84	22	*4.6	.9	.1	1.6
28	6.4	462	384	552	*321	132	89	22	3.8	.8	.2	1.8
29	5.4	416	352	552	-	129	100	19	3.4	.8	.6	2.0
30	*5.9	378	345	552	-	120	*120	18	3.8	.5	.8	2.0
31	5.9	-	327	510	-	116	-	*17	-	.4	.8	-
Total	125.3	22,256.6	26,204	17,707	7,759	9,137	2,621	1,972	260.3	50.8	13.6	23.5
Mean	4.04	742	845	571	277	295	87.4	63.6	8.68	1.64	0.44	0.78
Ac-ft	249	44,150	51,970	35,120	15,390	18,120	5,200	3,910	516	101	27	47

Calendar year 1950: Max 9,770 Min 1.1 Mean 337 Ac-ft 244,000
Water year 1950-51: Max 6,730 Min 0 Mean 241 Ac-ft 174,800

Peak discharge (base, 4,000 cfs).--Nov. 19 (5 p.m.) 12,800 cfs (10.18 ft); Dec. 4 (2 p.m.) 4,720 cfs (7.88 ft).

* Discharge measurement made on this day.

Arroyo Seco near Soledad, Calif.

Location.--Lat 36°16'50", long. 121°19'20", in sec. 16, T. 19 S., R. 6 E., on left bank just downstream from bridge, 1.5 miles downstream from Vaquero Creek and 10 miles south of Soledad.

Drainage area.--241 sq mi.

Records available.--November 1901 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 344.20 ft above mean sea level (Corps of Engineers bench mark). Prior to Dec. 3, 1941, at site 1 mile upstream, different datum. Staff gage Nov. 6, 1901, to June 15, 1929; water-stage recorder June 16, 1929, to Dec. 2, 1941.

Average discharge.--49 years (1902-51), 169 cfs; median of yearly mean discharges, 124 cfs.

Extremes.--Maximum discharge during year, 20,600 cfs Nov. 19 (gage height, 12.46 ft); no flow Oct. 1-26, Aug. 12 to Sept. 30.

1901-51: Maximum discharge observed, about 22,000 cfs Feb. 21, 1917, Nov. 25, 1926 (gage height, 16.5 ft, site and datum then in use), from rating curve extended above 7,500 cfs; no flow at times during several years.

Remarks.--Records good. No storage or large diversion above station.

Revisions (water years).--W 881: 1902-9 (yearly summary only).

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 27 to Nov. 19

0.95	0	1.7	24	7.0	2,540
1.0	.2	1.9	40	8.0	4,180
1.1	.8	2.4	103	9.0	6,500
1.2	2.1	3.0	202	11.0	13,700
1.3	4.1	4.0	438	12.5	20,800
1.4	7.2	5.0	790		
1.5	11	6.0	1,420		

Nov. 20 to Aug. 11

0.60	0	1.0	2.2	1.8	38
.7	.2	1.1	4.0	2.1	66
.8	.5	1.3	9.9	2.5	122
.9	1.1	1.5	19	3.0	202

Note.--Same as preceding table above 3.0 ft.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	21	137	125	138	107	66	50	24	8.2	0.5	
2	0	12	122	119	134	108	64	47	23	7.9	.4	
3	0	9.6	678	114	128	100	64	47	23	7.3	.3	
4	0	8.4	1,640	*112	124	97	64	161	22	7.3	.3	
5	0	7.6	717	108	131	172	*63	108	22	7.0	.2	
6	0	7.2	527	104	124	236	62	79	22	6.7	.2	(*)
7	0	6.8	*483	100	116	216	59	66	22	6.1	.2	
8	0	6.5	746	97	112	204	58	58	21	5.8	.1	
9	0	6.8	621	94	107	187	53	54	21	5.2	.1	
10	0	6.5	486	131	103	170	54	50	21	5.2	.1	
11	0	6.2	402	205	103	154	53	47	20	5.0	.1	
12	0	6.2	348	266	116	142	52	45	18	*4.4	0	
13	0	6.5	310	182	106	134	50	46	17	4.2	0	
14	0	6.8	488	157	*100	126	49	45	16	3.7	0	
15	0	8.8	*407	148	97	*119	48	43	15	3.4	0	
16	*0	18	341	171	93	113	49	41	14	3.0	0	
17	0	*390	303	*152	89	107	48	40	13	2.7	0	
18	0	1,850	273	342	89	103	47	37	13	2.4	0	
19	0	9,060	246	661	86	97	47	36	13	1.7	0	
20	0	2,280	226	413	83	94	48	34	13	1.5	0	
21	0	*1,120	208	327	82	90	45	34	13	1.5	0	
22	0	656	194	*275	80	87	44	34	*14	1.1	0	
23	0	438	182	242	86	83	44	34	13	1.0	0	
24	0	322	170	218	87	82	43	33	13	1.0	0	
25	0	253	165	200	82	78	47	32	12	1.2	0	
26	0	208	192	187	82	76	45	30	12	*1.0	0	(*)
27	139	182	160	175	93	74	44	29	12	.9	0	
28	34	162	149	165	94	71	48	28	10	.8	0	
29	13	144	140	166	-	70	84	27	9.5	.8	0	
30	8.8	144	134	155	-	69	*59	27	8.8	.6	0	
31	*31	-	130	146	-	69	-	*25	-	.6	0	
Total	225.8	17,353.9	11,325	6,057	2,865	3,635	1,604	1,467	490.3	109.2	2.5	0
Mean	7.28	578	365	195	102	117	53.5	47.3	16.3	3.52	.08	0
Ac-ft	448	34,420	22,460	12,010	5,680	7,210	3,180	2,910	972	217	5.0	0

Calendar year 1950: Max 9,060 Min 0 Mean 145 Ac-ft 105,200
Water year 1950-51: Max 9,060 Min 0 Mean 124 Ac-ft 89,510

Peak discharge (base, 1,380 cfs).--Nov. 19 (3 a.m.) 20,600 cfs (12.46 ft); Dec. 3 (12 p.m.) 4,540 cfs (8.18 ft).

* Discharge measurement made on this day.

Salinas River near Spreckels, Calif.

Location.--Lat 36° 37' 50", long. 121°40'40", in El Toro Grant, on right bank 80 ft upstream from bridge on Salinas-Monterey highway, 0.5 mile upstream from Toro Creek, 2 miles west of Spreckels, Monterey County, and 4 miles south of Salinas.

Drainage area.--4,231 sq mi.

Records available.--January 1900 to August 1901, December 1929 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 22.64 ft above mean sea level, adjustment of 1912. 1900-1901, staff gage at same site, different datum. Subsequent to Mar. 17, 1941, wire-weight gage on highway bridge 80 ft downstream, at same datum. May 10 to July 29, 1940, staff gage at same site, left bank, different datum.

Average discharge.--21 years (1930-51), 516 cfs; median of yearly mean discharges, 330 cfs.

Extremes.--Maximum discharge during year, 1,300 cfs Nov. 20 (gage height, 11.49 ft); minimum observed, 0.6 cfs Apr. 26.

1929-51: Maximum discharge, 75,000 cfs Feb. 12, 1938 (gage height, 25.0 ft), from rating curve extended above 26,000 cfs on basis of velocity-area studies, verified by slope-area determination; no flow at times during period 1929-40.

Maximum stage known, 26.6 ft Mar. 7, 1911, as indicated at oil-pumping station opposite gage.

Remarks.--Records good except those below 10 cfs, which are poor. Small diversions above station for irrigation. Low flow represents waste water from Spreckels sugar refinery.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		5.7	13	10	215	6.3						
2		6.0	13	9.8	200	6.6						
3		6.0	14	9.8	179	6.6						
4		5.7	13	*9.2	158	6.4						
5		4.7	12	8.4	149	24						
6		5.7	11	8.2	132	123			(**)			
7		5.5	*286	8.2	*103	118						
8		6.0	350	8.0	81	95						
9		6.3	279	7.8	70	165						
10		6.4	318	8.4	59	217						
11		6.6	604	8.5	51	190						(**)
12		7.0	470	8.2	44	162	(**)			(**)		
13		7.8	320	7.8	32	144						
14		7.8	224	7.4	22	124						
15		8.0	*159	7.4	14	*94						
16	e3.5	8.4	199	7.8	13	66	e1	e1	e1	e1	e1	e3
17	(*)	9.4	143	*7.2	12	44						
18		10	269	11	11	26						
19		58	201	*34	10	19						
20		1,000	140	224	9.0	g9.2						
21		*742	96	*570	8.9	g7.0			(**)			
22		*744	65	*989	8.5	g5.4						
23		660	43	*840	7.7	g4.7						
24		242	25	*670	7.2	g4.2				(**)		
25		65	16	557	6.8	g3.6						
26		26	14	471	6.8	g3.7	(**)					(*)
27		*18	13	410	7.0	g3.5						
28		15	13	353	6.8	*g3.4						
29		14	12	310	-	g3.1						
30		14	11	285	-	g2.8						
31	(*)	-	11	252	-	g2.4	-		-		(**)	-
Total	108.5	3,721.0	4,357	6,118.1	1,623.7	1,689.9	30	31	30	31	31	90
Mean	3.5	124	141	197	58.0	54.5	1	1	1	1	1	3
Ac-ft	215	7,380	8,640	12,140	3,220	3,350	60	61	60	61	61	179

Calendar year 1950: Max 3,580 Min - Mean 61.8 Ac-ft 44,700
Water year 1950-51: Max 1,000 Min - Mean 48.9 Ac-ft 35,430

Peak discharge (base, 270 cfs).--Nov. 20 (6 to 7 a.m.) 1,300 cfs (11.49 ft); Dec. 11 (9 to 10 a.m.) 632 cfs (8.68 ft); Dec. 18 (6 to 7 a.m.) 289 cfs (6.42 ft); Jan. 22 (7 to 10 a.m.) 1,020 cfs (9.32 ft).

* Discharge measurement made on this day.

** Field estimate made on this day.

e Stage-discharge relation indefinite; discharge computed on basis of several field estimates and 5 discharge measurements.

g Computed from once-daily wire-weight gage readings.

Pacheco Creek near Dunneville, Calif.

Location.--Lat 36°58'50", long. 121°22'50", in Ausaymas Y San Felipe Grant, on pier of private road bridge near right bank, 3.3 miles northeast of Dunneville, Santa Clara County.

Drainage area.--146 sq mi.

Records available.--January 1940 to September 1951.

Gage.--Staff gage read twice daily with additional readings during high water. Altitude of gage is 240 ft (from topographic map). Prior to Nov. 17, 1950, staff gage at same site, at datum 2.00 ft higher.

Average discharge.--11 years, 33.1 cfs; median of yearly mean discharges, 25 cfs.

Extremes.--Maximum discharge during year, 6,340 cfs Dec. 3 (gage height, 16.4 ft), from rating curve extended above 1,100 cfs on basis of 1945 high-water rating; no flow Oct. 1 to Nov. 17.

1940-51: Maximum discharge, 7,200 cfs Feb. 2, 1945 (gage height, 17.8 ft, present datum, from floodmarks), from rating curve extended above 4,000 cfs on basis of slope-area determination of peak flow; no flow at times in 1940, 1943-50.

Remarks.--Records fair. Detaining reservoir (capacity, about 6,000 acre-ft) several miles above station stores flood water for release during low flow. Small diversions above station for irrigation.

Cooperation.--Thirteen discharge measurements furnished by Bureau of Reclamation.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	14	12	26	113	10	3.2	12	11	4.1	8.2
2		0	12	12	23	101	9.3	3.2	10	8.9	6.7	7.8
3		0	1,210	12	21	77	8.9	3.2	12	8.5	7.8	7.8
4		0	1,330	14	21	67	8.2	3.6	13	8.5	8.9	7.4
5		0	407	13	*70	484	7.8	3.5	*10	8.5	8.9	6.3
6		0	*248	*12	79	398	7.0	3.3	11	8.5	8.2	6.3
7		0	653	11	*56	*250	6.7	3.3	13	8.5	6.7	5.8
8		0	*1,990	9.6	45	172	6.3	3.9	13	7.8	5.2	5.2
9		0	*508	8.9	39	*124	5.8	4.7	14	7.8	5.2	5.2
10		0	*292	11	34	97	5.2	5.2	15	8.5	5.2	5.2
11		0	183	129	36	77	4.4	5.8	15	8.2	5.2	5.0
12		0	130	128	40	64	*3.6	5.8	16	6.7	5.2	*5.0
13		0	*101	67	40	55	3.3	6.0	15	6.0	5.2	5.0
14		0	*155	46	33	49	3.0	6.7	15	5.5	4.7	4.4
15		0	124	36	*30	41	2.8	6.3	16	4.4	4.7	4.4
16		0	94	39	26	36	2.6	6.3	16	*3.9	4.7	3.9
17		0	76	34	23	32	2.6	6.3	15	*3.3	5.0	3.9
18		668	*62	212	22	30	2.5	6.7	15	2.9	10	3.9
19		1,960	49	325	19	28	2.3	6.7	14	2.8	13	3.9
20		2,470	*41	*147	*18	25	2.3	7.0	*14	2.8	14	4.7
21		1,000	*38	*99	*17	22	2.1	7.4	15	3.2	15	5.5
22		*336	34	86	18	20	2.0	9.6	14	3.9	14	6.3
23		124	31	72	19	19	2.0	18	14	4.7	12	7.0
24		86	28	*59	18	17	2.0	16	14	4.7	12	7.0
25		52	26	50	16	14	2.0	14	12	*5.0	12	7.0
26		39	23	43	22	14	*1.9	14	10	5.2	9.6	7.0
27		28	*21	38	94	14	1.9	14	10	4.7	8.5	*7.4
28		*21	19	35	74	*12	2.0	14	12	4.7	8.5	7.8
29		16	16	35	-	12	3.6	16	12	4.7	8.5	7.0
30		14	14	35	-	11	3.3	15	13	4.7	*7.8	7.0
31		-	12	30	-	11	-	14	-	4.1	7.8	-
Total	0	6,814	7,941	1,860.5	979	2,486	127.4	252.7	400	182.6	254.3	178.3
Mean	0	227	256	60.0	35.0	80.2	4.25	8.15	13.3	5.89	8.20	5.94
Ac-ft	0	13,520	15,750	3,690	1,940	4,930	253	501	793	362	504	354

Calendar year 1950: Max 2,470 Min 0 Mean 47.4 Ac-ft 34,340
Water year 1950-51: Max 2,470 Min 0 Mean 58.8 Ac-ft 42,600

* Discharge measurement made on this day.