

11407000 Feather River at Oroville, CA

Sacramento River Basin

LOCATION.--Lat 39°31'18", long 121°32'48" referenced to North American Datum of 1927, Butte County, CA, Hydrologic Unit 18020106, in Boga Fernandez Grant, on right bank, 300 ft upstream from Fish Barrier Dam on Feather River, 0.4 mi downstream from Thermalito Diversion Dam, 0.8 mi northeast of Oroville Post Office, and 4.8 mi downstream from Oroville Dam.

DRAINAGE AREA.--3,624 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1901 to current year. Monthly discharge only for some periods, published in WSP 1315-A. October 1934 to September 1961 published as "near Oroville."

CHEMICAL DATA: Water years 1906-07, 1951-77.

SPECIFIC CONDUCTANCE: Water years 1972-78.

WATER TEMPERATURE: Water years 1954-92.

SEDIMENT DATA: Water years 1957-79.

REVISED RECORDS.--WSP 843: 1907 (instantaneous maximum discharge), 1909 (instantaneous maximum discharge), 1914-15 (instantaneous maximum discharge), 1919 (instantaneous maximum discharge), 1927-28 (instantaneous maximum discharge). WSP 881: 1913-28 (yearly summaries). WSP 1515: 1906-8. WSP 1931: Drainage area. WDR CA-74-2: 1968-70 (adjusted monthly discharge), WDR US-2007: 2006 (adjusted monthly discharge), WDR US-2008: 2007 (adjusted monthly discharge), WDR US-2013: 2012 (adjusted monthly discharge).

GAGE.--Water-stage recorder. Datum of gage is 148.97 ft above NGVD of 1929 (levels by California Department of Water Resources). See WSP 1931 for history of changes prior to Oct. 1, 1964.

COOPERATION.--Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2100.

REMARKS.--Flow completely regulated by Lake Oroville (station 11406800), beginning November 1967, and Thermalito Diversion Pool (station 11406825), capacity 13,500 acre-ft. Diversions upstream from station for power and irrigation. Feather River Fish Hatchery (station 11406930) diverts up to 120 ft³/s at Thermalito Diversion Dam 0.4 mi upstream from gage. Daily figures shown are combined figures of river flow and diversion to fish hatchery. Beginning with the 1968 Water Year, daily mean values of flow are the combined flows of the river and the diversion to the fish hatchery. Maximum peak flows are river-only flows. See schematic diagram showing diversions and storage from Feather River at Lake Oroville available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Prior to completion of Oroville Dam: Maximum discharge observed, 230,000 ft³/s, Mar. 19, 1907, elevation, 167.5 ft above NGVD of 1929, site and datum then in use, minimum, 300 ft³/s, estimated, Nov. 9, 1931.
Since completion of Oroville Dam: Maximum daily discharge, 132,000 ft³/s, Feb. 18, 1986; minimum daily, 222 ft³/s, Sept. 19, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood on Feb. 12, 1879, reached a stage of 11.7 ft; discharge not determined; flood in February 1881, reached a stage of 25.0 ft; discharge not determined; flood on Mar. 9, 1884, reached a stage of 13.0 ft, discharge not determined; flood on Dec. 23, 1884, reached a stage of 13.8 ft; discharge not determined; flood on Dec. 25, 1885, reached a stage of 15.7 ft, discharge not determined; information supplied from Magnitude and Frequency of Floods in the United States, Part 11, Vol. 2 (USGS Water-Supply Paper 1686).

REVISIONS.--Revised monthly mean, adjusted and acre-ft, adjusted, for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (11406970) for October 2011 to September 2012, given below. These figures supersede those published in the report for water year 2012.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
(REVISED)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean, adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870)	2,824	2,824	2,080	2,595	1,854	9,031	9,822	5,587	2,636	2,105	1,337	1,793
Ac-ft, adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870)	173,700	168,100	127,900	159,600	106,600	555,300	584,400	343,600	156,800	129,400	82,200	106,700

SUMMARY STATISTICS
(REVISED)

	Calendar Year 2011	Water Year 2012	Water Years 1969 - 2012
Annual mean^a	7,807	3,711	
Annual runoff (ac-ft)^a	5,652,000	2,694,000	^b 4,333,000

^a Adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870).

^b Includes water year 1968.

1140700 Feather River at Oroville, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	688	661	2,530	1,810	1,870	1,900	1,840	1,310	989	1,580	2,630	1,010
2	682	659	2,530	1,810	1,870	1,870	1,830	1,320	991	1,580	2,670	1,010
3	679	659	2,340	1,820	1,860	1,860	1,830	1,320	991	1,980	2,610	1,020
4	675	657	2,150	1,830	1,860	1,850	1,840	1,320	994	2,620	2,670	1,020
5	676	657	2,180	1,830	1,860	1,840	1,840	1,320	997	2,640	2,670	1,030
6	675	655	2,220	1,840	1,850	1,850	1,850	1,320	1,170	2,620	2,640	1,030
7	674	652	2,230	1,840	1,830	1,860	1,840	1,320	1,310	2,610	2,650	1,030
8	672	652	2,270	1,830	1,800	1,850	1,850	1,320	1,310	2,630	2,650	1,030
9	671	653	2,270	1,830	1,760	1,860	1,860	1,320	1,310	2,630	2,650	1,020
10	672	662	2,290	1,830	1,730	1,850	1,560	1,120	1,320	2,630	2,620	1,030
11	672	675	2,300	1,830	1,460	1,850	1,310	975	1,310	2,610	2,610	1,020
12	671	682	2,280	1,840	1,350	1,840	1,310	969	1,320	2,620	2,610	1,010
13	671	685	2,250	1,840	1,360	1,840	1,320	968	1,320	2,610	2,610	1,020
14	667	681	2,230	1,840	1,350	1,840	1,340	953	1,320	2,610	2,630	1,030
15	667	680	2,220	1,840	1,360	1,840	1,350	947	1,320	2,630	2,620	1,020
16	667	663	2,210	1,830	1,360	1,840	1,330	973	1,320	2,670	2,610	1,020
17	665	663	2,220	1,830	1,350	1,840	1,320	968	1,340	2,670	2,630	1,030
18	663	659	2,020	1,820	1,330	1,860	1,320	972	1,360	2,610	2,630	1,020
19	664	658	1,820	1,830	1,330	1,860	1,330	978	1,390	2,610	2,640	1,000
20	668	665	1,800	1,870	1,330	1,850	1,330	980	1,310	2,630	2,640	1,010
21	669	666	1,820	1,890	1,330	1,850	1,320	984	1,450	2,650	2,500	1,020
22	671	1,250	1,830	1,890	1,330	1,840	1,310	984	1,630	2,650	2,190	1,020
23	669	2,510	1,850	1,880	1,320	1,830	1,310	985	1,580	2,670	1,920	1,020
24	663	2,500	1,820	1,880	1,320	1,830	1,310	985	1,580	2,690	1,700	1,030
25	660	2,500	1,830	1,880	1,590	1,840	1,310	987	1,580	2,680	1,440	1,030
26	660	2,500	1,820	1,880	1,880	1,840	1,310	987	1,560	2,670	1,170	1,030
27	660	2,510	1,810	1,880	1,890	1,830	1,320	987	1,550	2,660	1,030	1,030
28	660	2,510	1,820	1,890	1,890	1,830	1,310	990	1,550	2,640	1,010	1,030
29	660	2,510	1,820	1,880	---	1,830	1,310	989	1,560	2,680	1,010	1,020
30	659	2,550	1,820	1,860	---	1,840	1,310	989	1,570	2,680	1,010	1,030
31	662	---	1,810	1,870	---	1,840	---	989	---	2,640	1,000	---
Total	20,732	35,284	64,410	57,320	44,420	57,250	44,520	33,529	40,302	79,100	68,670	30,670
Mean	669	1,176	2,078	1,849	1,586	1,847	1,484	1,082	1,343	2,552	2,215	1,022
Max	688	2,550	2,530	1,890	1,890	1,900	1,860	1,320	1,630	2,690	2,670	1,030
Min	659	652	1,800	1,810	1,320	1,830	1,310	947	989	1,580	1,000	1,000
Ac-ft	41,120	69,990	127,800	113,700	88,110	113,600	88,310	66,500	79,940	156,900	136,200	60,830
Mean, adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870)												
	2,289	5,043	13,984	5,275	4,512	5,601	4,934	2,556	2,186	2,224	2,147	1,612
Ac-ft, adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870)												
	140,700	300,100	859,900	324,300	250,600	344,400	293,600	157,200	130,100	136,700	132,000	95,900

11407000 Feather River at Oroville, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1967, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,085	3,069	5,296	6,790	9,463	10,080	12,120	9,930	5,176	2,505	1,980	1,792
Max	12,370	19,710	28,410	39,860	28,030	39,760	30,100	25,150	15,650	5,999	3,265	2,883
(WY)	(1963)	(1904)	(1956)	(1909)	(1904)	(1904)	(1911)	(1938)	(1911)	(1907)	(1967)	(1967)
Min	745	853	1,102	1,350	1,714	1,564	2,146	1,246	924	852	956	992
(WY)	(1933)	(1933)	(1950)	(1947)	(1933)	(1924)	(1924)	(1924)	(1924)	(1924)	(1924)	(1924)

SUMMARY STATISTICS

	Water Years 1902 - 1967	
Annual mean	5,834	
Highest annual mean	12,860	1907
Lowest annual mean	1,623	1924
Highest daily mean	187,000	Mar 19, 1907
Lowest daily mean	577	Oct 3, 1932
Annual seven-day minimum	652	Sep 30, 1932
Maximum peak flow	230,000	Mar 19, 1907
Maximum peak stage	167.5	Mar 19, 1907
Annual runoff (ac-ft)	4,226,000	
10 percent exceeds	13,300	
50 percent exceeds	2,870	
90 percent exceeds	1,470	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	591	739	1,206	2,562	1,869	1,924	1,046	746	616	623	599	557
Max	1,580	3,313	7,728	26,750	25,180	18,870	7,064	7,916	2,137	2,552	2,215	1,022
(WY)	(1996)	(1982)	(1997)	(1997)	(1986)	(1995)	(1982)	(1995)	(2012)	(2013)	(2013)	(2013)
Min	399	397	392	401	399	404	401	387	405	404	393	389
(WY)	(1969)	(1979)	(1979)	(1976)	(1978)	(1978)	(1977)	(1969)	(1974)	(1981)	(1979)	(1972)

SUMMARY STATISTICS

	Calendar Year 2012	Water Year 2013	Water Years 1969 - 2013
Annual total	381,399	576,207	
Annual mean	1,042	1,579	1,088
Annual mean^a	4,869	4,372	
Highest annual mean			3,936 1997
Lowest annual mean			404 1976
Highest daily mean	5,210 Jun 19	2,690 Jul 24	132,000 Feb 18, 1986
Lowest daily mean	637 Jul 31	652 Nov 7	222 Sep 19, 1972
Annual seven-day minimum	655 Nov 3	655 Nov 3	337 Sep 13, 1972
Maximum peak flow		3,200 Nov 30	161,000 Jan 2, 1997
Maximum peak stage		2.38 Nov 30	25.45 Jan 2, 1997
Annual runoff (ac-ft)	756,500	1,143,000	788,200
Annual runoff (ac-ft)^a	3,525,000	3,166,000	^b 4,308,000
10 percent exceeds	2,160	2,620	745
50 percent exceeds	691	1,580	621
90 percent exceeds	667	671	404

^a Adjusted for unreviewed evaporation, change in contents, and diversions in and out of Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay (station 11406870).

^b Includes water year 1968.

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