

## 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 mi<sup>2</sup>.

### 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).

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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Mar. 19, 1907, elevation, 167.5 ft above NGVD of 1929, site and datum then in use, minimum, 300 ft<sup>3</sup>/s, estimated, Nov. 9, 1931.  
Since completion of Oroville Dam: Maximum daily discharge, 132,000 ft<sup>3</sup>/s, Feb. 18, 1986; minimum daily, 222 ft<sup>3</sup>/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).

## 11407000 Feather River at Oroville, CA—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	745	691	686	722	723	715	5,460	706	703	704	704	708
2	714	742	684	716	729	716	5,520	703	702	704	701	705
3	700	715	700	718	736	724	5,520	706	702	706	703	703
4	704	691	695	726	738	726	3,400	707	704	705	704	704
5	698	693	705	733	737	726	819	703	704	703	705	706
6	705	692	700	739	738	728	816	706	707	704	705	706
7	705	696	690	739	749	720	783	709	707	734	705	705
8	701	682	702	738	749	724	783	712	703	703	704	708
9	696	683	732	738	741	725	783	710	705	704	706	710
10	702	694	746	739	732	723	783	711	703	704	698	713
11	703	694	746	739	722	725	783	714	704	900	694	714
12	704	692	734	747	724	725	785	711	706	712	695	714
13	705	694	745	738	717	724	781	713	705	710	693	715
14	689	693	730	738	709	726	779	713	704	727	693	731
15	684	690	727	737	719	1,480	783	720	704	700	694	715
16	683	682	718	738	730	4,880	784	715	703	694	700	714
17	683	701	713	738	730	8,120	783	717	704	694	740	716
18	683	665	705	740	725	10,900	783	718	714	694	744	712
19	683	661	705	739	731	18,100	782	706	715	697	702	711
20	684	658	707	735	719	17,900	792	700	758	693	704	780
21	683	659	754	732	717	17,600	831	702	2,510	693	704	703
22	684	657	729	730	719	17,000	764	700	2,620	695	702	709
23	683	658	715	731	722	16,800	714	701	2,600	694	701	707
24	689	661	709	729	715	16,600	714	702	2,510	703	702	708
25	684	672	723	729	734	13,300	714	696	1,630	704	700	714
26	681	685	719	734	710	7,800	718	699	816	703	703	717
27	683	677	714	732	712	7,970	715	701	724	705	701	722
28	683	672	731	727	726	7,990	715	705	701	704	703	722
29	694	683	727	726	---	6,760	709	701	707	704	705	721
30	694	687	726	729	---	5,560	705	696	707	704	706	730
31	693	---	723	727	---	5,520	---	702	---	704	707	---
<b>Total</b>	21,522	20,520	22,240	22,723	20,353	194,407	39,801	21,905	29,682	22,005	21,828	21,443
<b>Mean</b>	694	684	717	733	727	6,271	1,327	707	989	710	704	715
<b>Max</b>	745	742	754	747	749	18,100	5,520	720	2,620	900	744	780
<b>Min</b>	681	657	684	716	709	715	705	696	701	693	693	703
<b>Ac-ft</b>	42,690	40,700	44,110	45,070	40,370	385,600	78,950	43,450	58,870	43,650	43,300	42,530
<b>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)</b>												
	2,826	3,060	11,736	6,892	6,235	16,551	17,626	14,586	12,859	5,844	2,761	2,608
<b>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)</b>												
	173,800	182,100	721,600	423,800	346,300	1,017,700	1,048,800	896,800	765,200	359,300	169,700	155,200

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

## SUMMARY STATISTICS

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	586	729	1,196	2,622	1,904	1,955	1,044	739	563	564	552	543
<b>Max</b>	1,580	3,313	7,728	26,750	25,180	18,870	7,064	7,916	998	779	819	768
<b>(WY)</b>	(1996)	(1982)	(1997)	(1997)	(1986)	(1995)	(1982)	(1995)	(1989)	(2007)	(2008)	(2008)
<b>Min</b>	399	397	392	401	399	404	401	387	405	404	393	389
<b>(WY)</b>	(1969)	(1979)	(1979)	(1976)	(1978)	(1978)	(1977)	(1969)	(1974)	(1981)	(1979)	(1972)

## SUMMARY STATISTICS

	Calendar Year 2010	Water Year 2011	Water Years 1969 - 2011	
<b>Annual total</b>	253,577	458,429		
<b>Annual mean</b>	695	1,256	1,081	
<b>Highest annual mean</b>			3,936	1997
<b>Lowest annual mean</b>			404	1976
<b>Highest daily mean</b>	965	Jun 24	18,100	Mar 19
<b>Lowest daily mean</b>	657	Nov 22	657	Nov 22
<b>Annual seven-day minimum</b>	660	Nov 18	660	Nov 18
<b>Maximum peak flow</b>			18,100	Mar 18
<b>Maximum peak stage</b>			7.32	Mar 18
<b>Annual runoff (ac-ft)</b>	503,000	909,300	783,100	
<b>Annual runoff (ac-ft)<sup>a</sup></b>	4,059,000	6,260,000	<sup>b</sup> 4,371,000	
<b>10 percent exceeds</b>	728	783	714	
<b>50 percent exceeds</b>	688	710	619	
<b>90 percent exceeds</b>	672	691	403	

<sup>a</sup> 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).

<sup>b</sup> Includes water year 1968.

11407000 Feather River at Oroville, CA—Continued

