

11377100 Sacramento River above Bend Bridge, near Red Bluff, CA

Sacramento River Basin

LOCATION.--Lat 40°17'19", long 122°11'08" referenced to North American Datum of 1927, in NW ¼ NE ¼ sec.15, T.28 N., R.3 W., Tehama County, CA, Hydrologic Unit 18020103, on left bank, 2.7 mi upstream from Bend Bridge, 7.7 mi upstream from Paynes Creek, and 8.1 mi northeast of Red Bluff.

DRAINAGE AREA.--8,900 mi², excluding Goose Lake Basin.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--1879-88 annual observed maximums only, published in WSP 1315-A. October 1891 to current year. Monthly discharges only for some periods and yearly estimates for some incomplete years, published in WSP 1315-A. Published as "at Red Bluff" 1894-96, as "at Jellys Ferry" 1895-1902, and as "near Red Bluff" 1903-68 (station 11378000).

CHEMICAL DATA: Water years 1955-81, 1996-98.

SPECIFIC CONDUCTANCE: Water years 1955-63.

WATER TEMPERATURE: Water years 1955-80.

SEDIMENT DATA: Water years 1958-70, 1977-80, 1996-98.

REVISED RECORDS.--WSP 861: 1904, 1907, 1909, 1914-15, 1927-28. WSP 1315-A: 1916 (instantaneous maximum discharge), 1918 (instantaneous maximum discharge), 1941 (instantaneous maximum discharge). WSP 1931: Drainage area. WDR CA-69-2: 1965.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 285.77 ft above NGVD of 1929. See WSP 2131 for history of changes prior to September 1968.

REMARKS.--Records good. Flow completely regulated by Shasta Lake (station 11370000), 52 mi upstream, since Dec. 30, 1943. Diversions, in addition to those on tributaries, for irrigation of about 22,000 acres between stations at Keswick and above Bend Bridge. Transbasin diversion from Trinity River to Whiskeytown Lake (station 11371700) via Judge Francis Carr Powerplant (station 11525430) started in April 1963. See schematic diagrams of upper Sacramento River and Battle Creek and Cow Creek Basins available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 291,000 ft³/s, Feb. 28, 1940, gage height, 38.9 ft, site and datum then in use, from rating curve extended above 170,000 ft³/s, on basis of velocity-area studies.

Since regulation by Shasta Lake in 1943, maximum discharge, 170,000 ft³/s, Dec. 22, 1964, gage height, 28.15 ft, site and datum then in use, maximum gage height, 36.60 ft, Jan. 24, 1970; minimum (since water year 1892), 2,000 ft³/s, Mar. 29, 1944.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9,320	8,360	7,470	6,240	5,710	5,900	13,500	8,030	10,400	14,900	15,000	10,600
2	9,220	8,370	7,510	6,200	5,560	5,640	9,770	7,890	10,300	14,900	15,100	10,600
3	8,950	8,410	7,240	6,180	5,320	5,270	8,390	7,890	10,900	14,900	15,100	10,300
4	9,070	8,480	7,010	6,200	5,170	5,260	8,250	8,820	11,500	14,800	15,100	10,100
5	9,910	8,450	7,020	6,210	5,030	5,250	7,460	8,800	12,400	15,000	15,100	9,860
6	10,100	8,530	6,920	6,210	4,880	5,250	6,810	8,550	12,400	15,000	15,000	9,500
7	9,880	8,520	6,710	6,210	4,760	5,230	6,480	8,360	12,200	15,200	14,900	9,500
8	9,780	8,480	6,520	6,180	4,760	5,230	6,260	9,460	11,900	15,100	14,400	9,500
9	9,740	8,480	6,390	6,140	5,380	5,200	6,000	10,300	11,600	15,300	14,000	9,250
10	9,880	8,470	6,400	6,060	5,350	5,200	6,010	10,400	11,400	15,400	13,700	8,940
11	10,100	8,480	6,340	5,980	5,420	5,230	9,730	10,600	11,300	15,200	13,200	8,520
12	9,790	8,470	6,280	5,890	5,440	5,230	10,800	10,900	11,200	15,000	13,100	8,270
13	9,840	8,480	6,280	5,760	6,250	5,500	11,400	10,800	11,500	14,800	12,400	8,040
14	9,770	8,470	6,370	5,700	5,910	11,900	11,500	10,900	12,000	14,900	12,300	8,050
15	9,370	8,470	6,350	5,670	5,600	11,600	8,380	10,900	12,100	15,100	12,300	8,090
16	8,350	8,480	6,330	5,640	5,470	14,500	7,460	10,900	12,700	15,300	12,100	8,080
17	7,820	8,460	6,300	5,590	5,380	12,300	7,890	11,300	13,000	15,000	11,800	8,060
18	7,730	8,480	6,270	5,520	5,260	8,610	7,920	11,600	13,300	15,000	12,200	8,070
19	7,630	8,510	6,250	5,530	5,220	7,040	7,770	11,600	13,000	15,000	12,200	8,020
20	8,010	8,540	6,230	6,910	5,260	6,250	7,740	11,400	13,000	15,000	12,000	8,040
21	8,420	8,440	6,220	17,600	5,270	5,900	8,170	11,500	13,000	15,100	11,900	7,810
22	8,440	8,630	6,260	8,250	5,790	6,000	8,410	11,900	12,800	15,100	12,000	7,610
23	8,430	8,660	6,240	18,100	6,120	7,960	8,310	11,800	13,100	15,100	11,400	7,610
24	8,420	9,440	6,240	8,360	6,110	6,420	8,800	11,400	14,200	14,900	11,200	7,660
25	8,400	9,160	6,250	6,920	6,060	7,920	8,720	10,900	15,000	14,900	11,100	7,660
26	8,410	8,880	6,260	7,270	5,930	8,340	9,650	10,900	15,000	15,000	10,900	7,470
27	8,460	8,290	6,250	7,410	5,810	8,060	9,610	11,000	15,000	15,000	10,900	7,260
28	8,400	7,690	6,240	6,550	5,790	25,100	8,650	10,800	14,900	15,000	10,900	7,260
29	8,400	7,610	6,230	6,140	6,000	12,100	8,320	10,500	14,900	15,100	10,800	7,290
30	8,390	7,620	6,250	5,950	---	13,300	8,140	10,400	14,900	15,100	10,600	7,280
31	8,400	---	6,270	5,820	---	15,000	---	10,400	---	15,000	10,500	---
Total	276,830	253,810	200,900	218,390	160,010	257,690	256,300	320,900	380,900	466,100	393,200	254,300
Mean	8,930	8,460	6,481	7,045	5,518	8,313	8,543	10,350	12,700	15,040	12,680	8,477
Max	10,100	9,440	7,510	18,100	6,250	25,100	13,500	11,900	15,000	15,400	15,100	10,600
Min	7,630	7,610	6,220	5,520	4,760	5,200	6,000	7,890	10,300	14,800	10,500	7,260
Ac-ft	549,100	503,400	398,500	433,200	317,400	511,100	508,400	636,500	755,500	924,500	779,900	504,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1892 - 1943, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,853	7,538	11,940	18,960	24,760	22,210	18,280	12,310	7,635	5,127	4,381	4,404
Max	10,910	21,420	42,780	72,340	69,240	73,280	38,810	27,910	17,640	10,170	9,050	8,481
(WY)	(1905)	(1904)	(1893)	(1909)	(1902)	(1904)	(1904)	(1896)	(1906)	(1893)	(1893)	(1893)
Min	2,847	3,300	3,618	4,142	4,778	4,434	4,014	3,253	2,969	2,622	2,505	2,551
(WY)	(1933)	(1937)	(1937)	(1937)	(1920)	(1924)	(1924)	(1924)	(1924)	(1931)	(1931)	(1934)

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SUMMARY STATISTICS

Water Years 1892 - 1943		
Annual mean	11,800	
Highest annual mean	22,180	1904
Lowest annual mean	4,096	1924
Highest daily mean	261,000	Feb 28, 1940
Lowest daily mean	2,400	Aug 13, 1931
Annual seven-day minimum	2,470	Aug 7, 1931
Maximum peak flow	291,000	Feb 28, 1940
Maximum peak stage	38.9	Feb 28, 1940
Annual runoff (ac-ft)	8,545,000	
10 percent exceeds	24,000	
50 percent exceeds	6,500	
90 percent exceeds	3,520	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1962, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	6,501	6,932	11,440	16,840	19,340	11,950	10,210	10,260	9,469	10,030	10,030	7,510
Max	10,490	11,180	29,530	52,620	76,870	24,840	32,420	17,830	12,930	11,630	11,800	10,230
(WY)	(1958)	(1958)	(1956)	(1956)	(1958)	(1958)	(1958)	(1948)	(1948)	(1951)	(1958)	(1958)
Min	5,468	4,681	4,336	5,104	4,579	4,727	5,335	6,788	7,253	7,476	7,080	5,289
(WY)	(1960)	(1960)	(1960)	(1957)	(1948)	(1955)	(1950)	(1947)	(1947)	(1947)	(1947)	(1947)

SUMMARY STATISTICS

Water Years 1946 - 1962		
Annual mean	10,840	
Highest annual mean	20,330	1958
Lowest annual mean	6,690	1947
Highest daily mean	125,000	Feb 19, 1958
Lowest daily mean	3,640	Jan 31, 1949
Annual seven-day minimum	3,830	Feb 27, 1948
Maximum peak flow	139,000	Feb 19, 1958
Maximum peak stage	24.98	Feb 19, 1958
Annual runoff (ac-ft)	7,852,000	
10 percent exceeds	16,900	
50 percent exceeds	8,430	
90 percent exceeds	5,190	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	6,982	8,614	13,250	17,630	18,990	17,290	12,360	12,560	12,660	13,300	11,670	8,546
Max	10,600	29,690	43,350	61,060	68,400	75,830	44,230	22,920	21,150	16,760	15,790	11,900
(WY)	(1984)	(1974)	(1984)	(1970)	(1998)	(1983)	(2006)	(1995)	(1998)	(1998)	(1998)	(1998)
Min	3,935	4,068	4,296	4,339	4,700	5,476	4,804	7,322	7,431	7,811	7,998	5,323
(WY)	(1978)	(1993)	(1977)	(2009)	(1990)	(1994)	(1991)	(1992)	(1992)	(1992)	(1992)	(1977)

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SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1964 - 2012	
Annual total	4,799,960		3,439,330			
Annual mean	13,150		9,397		12,800	
Highest annual mean					25,450 1983	
Lowest annual mean					6,494 1991	
Highest daily mean	77,700	Mar 20	25,100	Mar 28	127,000	Jan 27, 1970
Lowest daily mean	5,190	Feb 13	4,760	Feb 7	3,200	Oct 11, 1977
Annual seven-day minimum	5,280	Feb 8	5,040	Feb 3	3,210	Oct 10, 1977
Maximum peak flow			35,400	Mar 28	170,000	Dec 22, 1964
Maximum peak stage			14.31	Mar 28	36.60	Jan 24, 1970
Annual runoff (ac-ft)	9,521,000		6,822,000		9,273,000	
10 percent exceeds	17,800		14,900		19,500	
50 percent exceeds	10,300		8,480		9,900	
90 percent exceeds	6,340		5,710		5,700	

