

## 11418000 Yuba River below Englebright Dam, near Smartsville, CA

Sacramento River Basin

LOCATION.--Lat 39°14'07", long 121°16'23" referenced to North American Datum of 1927, in NW ¼ NW ¼ sec.23, T.16 N., R.6 E., Yuba County, CA, Hydrologic Unit 18020125, on right bank, 2,000 ft downstream from Englebright Dam, 0.5 mi upstream from Deer Creek, and 2.3 mi northeast of Smartsville.

DRAINAGE AREA.--1,108 mi<sup>2</sup>.

### SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1941 to September 2006, and October 2007 to current year. Prior to October 1953, published as "at Narrows Dam." October 1953 to September 1969, published as "at Englebright Dam." If records for Deer Creek near Smartsville (station 11418500) since 1941 are added to records at this station, records equivalent to those published from 1903 to 1941 as "Yuba River at Smartsville" (station 11419000) can be obtained.

WATER TEMPERATURE: Water years 1973-78, 2002-05.

SEDIMENT DATA: Water years 2001 (daily), 2002-04 (storm season only).

REVISED RECORDS.--WSP 1931: Drainage area. WDR CA-97-4: 1999 (instantaneous maximum discharge).

GAGE.--Water-stage recorder. Datum of gage is 278.68 ft above NGVD of 1929 (levels by International Engineering Co.). Prior to Sept. 19, 1958, at site 2,000 ft upstream at datum 248.31 ft higher, and Sept. 19, 1958, to Sept. 30, 1969, at datum 278.68 ft lower. Supplementary gage 2,000 ft upstream since Oct. 1, 1969, at Englebright Dam at datum 248.31 ft higher.

COOPERATION.--Records, including combined flow from Browns Valley Irrigation Ditch (station 11420750), Brophy-South Canal (station 11420760), and Hallwood-Cordua Irrigation District Canal (station 11420770), were provided by Pacific Gas and Electric Company, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1403.

REMARKS.--Diversions up to 1,800 ft<sup>3</sup>/s (see stations 11413250, 11414190, and 11414200) out of basin for power and irrigation upstream from station. Flow regulation by Lake Spaulding (station 11414140), Jackson Meadows and New Bullards Bar Reservoirs (stations 11407800 and 11413515), Englebright Reservoir beginning in 1941, capacity, 54,339.8 acre-ft (revised), Bowman and Fordyce Lakes (stations 11415500 and 11414090), and many smaller reservoirs. See schematic diagram of South Yuba River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 171,000 ft<sup>3</sup>/s, Dec. 22, 1964, gage height, 546.14 ft, site and datum then in use, from rating curve extended above 25,000 ft<sup>3</sup>/s, on basis of computation of peak flow over spillway of dam at gage heights 544.72 and 546.14 ft; no flow at times in 1942, 1949, 1956, 1958-61, 1968-69.

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

[e, Estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,030	988	11,900	2,700	1,400	1,320	1,170	2,050	1,410	1,550	1,720	761
2	1,010	990	19,500	2,300	1,400	1,310	1,030	2,030	1,320	1,660	1,710	759
3	1,010	992	10,400	2,050	1,400	1,310	1,030	1,950	1,290	1,680	1,700	759
4	1,010	992	5,480	1,980	1,400	1,310	1,020	1,930	1,310	1,700	1,680	761
5	1,010	952	6,760	1,980	1,410	1,310	1,020	1,870	1,340	1,700	1,650	763
6	1,010	920	6,030	1,970	1,410	1,310	1,020	1,820	1,340	1,700	1,640	765
7	1,010	923	4,210	1,970	1,410	1,320	1,020	1,770	1,340	1,700	1,580	767
8	1,000	925	4,000	1,960	1,410	1,320	1,020	1,750	1,370	1,730	1,560	762
9	1,000	925	3,350	1,970	1,410	1,310	1,020	1,760	1,380	1,740	1,590	756
10	1,000	920	2,690	1,970	1,410	1,310	1,020	1,760	1,380	1,720	1,600	756
11	1,000	923	2,210	1,970	1,410	1,320	1,030	1,710	1,350	1,720	1,590	758
12	1,000	978	1,600	1,970	1,410	1,320	1,020	1,650	1,310	1,720	1,600	747
13	1,000	1,000	1,300	1,980	1,410	1,310	1,020	1,650	1,300	1,720	1,600	746
14	999	1,000	1,300	1,980	1,400	1,310	1,020	1,620	1,320	1,720	1,600	750
15	998	1,000	1,300	1,970	1,420	1,310	1,020	1,570	1,340	1,710	1,600	750
16	1,000	1,000	1,290	1,970	1,420	1,310	1,020	1,540	1,300	1,710	1,600	751
17	1,000	1,010	1,300	1,980	1,420	1,310	1,020	1,510	1,290	1,690	1,600	751
18	1,000	1,000	2,540	1,970	1,410	1,310	1,020	1,480	1,300	1,670	1,580	750
19	1,000	1,000	2,950	1,980	1,410	1,300	1,060	1,470	1,350	1,670	1,580	749
20	999	998	2,990	1,980	1,420	1,300	1,140	1,460	1,370	1,670	1,550	750
21	998	979	2,980	1,980	1,370	1,300	1,250	1,450	1,370	1,660	1,520	750
22	998	971	3,550	1,980	1,320	1,300	1,360	1,450	1,330	1,650	1,490	748
23	996	970	4,640	1,970	1,310	1,300	1,490	1,480	1,310	1,660	1,470	747
24	994	962	5,170	1,810	1,310	1,290	1,530	1,510	1,310	1,680	1,440	753
25	993	949	4,120	1,690	1,310	1,300	1,560	1,510	1,300	1,670	1,360	774
26	994	948	4,360	1,690	1,320	1,290	1,630	1,510	1,280	1,650	1,240	792
27	992	1,010	4,130	1,690	1,320	1,290	1,710	1,520	1,240	1,640	1,140	794
28	993	1,100	4,090	1,690	1,320	1,290	1,800	1,500	1,240	1,630	1,040	795
29	995	1,660	3,640	1,690	---	1,300	1,850	1,490	1,270	1,640	946	793
30	993	8,220	3,020	1,690	---	1,300	2,010	1,490	1,360	1,660	859	788
31	988	---	2,960	1,540	---	1,300	---	1,480	---	1,680	793	---
<b>Total</b>	31,020	37,205	135,760	60,020	38,770	40,490	36,930	50,740	39,720	52,100	45,628	22,845
<b>Mean</b>	1,001	1,240	4,379	1,936	1,385	1,306	1,231	1,637	1,324	1,681	1,472	762
<b>Max</b>	1,030	8,220	19,500	2,700	1,420	1,320	2,010	2,050	1,410	1,740	1,720	795
<b>Min</b>	988	920	1,290	1,540	1,310	1,290	1,020	1,450	1,240	1,550	793	746
<b>Ac-ft</b>	61,530	73,800	269,300	119,000	76,900	80,310	73,250	100,600	78,780	103,300	90,500	45,310
<b>Combined flow, in acre-feet, from Browns Valley Irrigation Ditch, Brophy-South Canal, and Hallwood-Cordua Irrigation District Canal</b>												
	e21,980	26,080	9,090	10,810	421	1,740	21,920	40,380	33,890	37,180	28,650	8,880

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2013, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	960	1,186	2,590	3,342	3,612	3,445	3,622	3,979	2,742	1,553	1,396	977
<b>Max</b>	5,206	8,964	18,100	22,350	17,330	13,060	11,950	13,330	9,017	4,620	3,140	3,144
<b>(WY)</b>	(1963)	(1951)	(1965)	(1997)	(1986)	(1995)	(1982)	(1952)	(1983)	(2011)	(1980)	(1980)
<b>Min</b>	207	41.3	175	283	211	199	437	367	501	430	326	202
<b>(WY)</b>	(1960)	(1942)	(1960)	(1977)	(1977)	(1977)	(1976)	(1977)	(1977)	(1977)	(1944)	(1977)

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SUMMARY STATISTICS

[e, Estimated]

	Calendar Year 2012		Water Year 2013		Water Years 1942 - 2013	
<b>Annual total</b>	756,018		591,228			
<b>Annual mean</b>	2,066		1,620		2,445	
<b>Highest annual mean</b>					5,251	1982
<b>Lowest annual mean</b>					414	1977
<b>Highest daily mean</b>	19,500	Dec 2	19,500	Dec 2	134,000	Jan 2, 1997
<b>Lowest daily mean</b>	712	Feb 26	746	Sep 13	0.00	Nov 8, 1941
<b>Annual seven-day minimum</b>	713	Feb 21	749	Sep 12	0.00	Nov 8, 1941
<b>Maximum peak flow</b>			31,300	Dec 2	171,000	Dec 22, 1964
<b>Maximum peak stage</b>			22.33	Dec 2	546.14	Dec 22, 1964
<b>Annual runoff (ac-ft)</b>	1,500,000		1,173,000		1,771,000	
<b>Annual discharge (ac-ft)<sup>a</sup></b>	e297,000		243,000			
<b>10 percent exceeds</b>	4,000		1,980		5,020	
<b>50 percent exceeds</b>	1,780		1,360		1,340	
<b>90 percent exceeds</b>	724		924		490	

<sup>a</sup> Combined flow, in acre-feet, from Browns Valley Irrigation Ditch, Brophy-South Canal, and Hallwood-Cordua Irrigation District Canal.

