Water-Data Report 2011

11376000 Cottonwood Creek near Cottonwood, CA

Sacramento River Basin

LOCATION.--Lat 40°23′14″, long 122°14′15″ referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.7, T.29 N., R.3 W., Shasta County, CA, Hydrologic Unit 18020102, on right bank, 0.3 mi upstream from unnamed tributary, 2.2 mi east of Cottonwood, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--927 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1940 to current year.
CHEMICAL DATA: Water years 1982-85.
WATER TEMPERATURE: Water years 1963-67, 1977-85.
SEDIMENT DATA: Water years 1957-67, 1977-85.

REVISED RECORDS.--WSP 1345: 1943, 1944 (instantaneous maximum discharge), 1946-47, 1949 (instantaneous maximum discharge), 1951-52. WSP 1931: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 363.80 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 26, 1963, on right bank at datum 3.59 ft higher. July 26, 1963, to Sept. 13, 1972, at site 250 ft downstream on right bank at present datum. Sept. 21, 1967, to Jan. 14, 1968, supplementary gage at a site 1,450 ft downstream on right bank at datum 2.35 ft higher. Since Dec. 7, 1998, auxiliary water-stage recorder on right bank from base gage at same datum.

REMARKS.--Records fair. Small diversions for irrigation upstream from station. At times during irrigation season, Cottonwood Creek receives water from the Sacramento River by way of Anderson-Cottonwood Irrigation District Canal. See schematic diagrams of upper Sacramento River Basin and Battle Creek and Cow Creek Basins available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 86,000 ft^3/s, Mar. 1, 1983, gage height, 21.59 ft, from rating curve extended above 34,000 ft^3/s, on basis of runoff comparisons with upstream stations then in use; minimum, 15 ft^3/s, several days during September 1945.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 29	0600	16,100	11.85
Mar 20	1045	*34,700	*14.96

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 11376000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/11376000.2011.pdf

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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	92	380	197	1,790	556	556	4,460	931	994	551	181	104
2	97	315	198	1,650	515	858	4,580	897	854	472	175	97
3	106	269	364	1,580	487	1,250	3,890	854	719	421	166	95
4	102	242	510	1,280	466	991	3,130	837	700	392	161	96
5	106	223	527	1,100	447	891	2,840	834	1,380	370	164	103
6	98	208	1,250	986	435	1,140	2,690	858	1,470	343	160	100
7	100	372	1,300	913	425	1,460	2,400	891	1,250	327	160	97
8	102	551	1,140	862	403	1,330	2,140	902	1,070	309	162	88
9	99	399	1,570	825	387	1,170	1,870	862	948	300	155	94
10	102	344	1,200	773	374	1,130	1,660	798	854	291	150	89
11	122	317	1,010	738	364	1,300	1,530	752	796	282	143	96
12	88	278	838	768	353	1,190	1,470	740	772	285	134	102
13	80	251	724	1,020	342	1,100	1,420	719	739	278	132	104
14	76	232	1,380	1,620	364	1,830	1,360	719	712	289	129	106
15	79	217	1,650	1,430	543	2,130	1,260	791	674	275	129	97
16	79	205	1,180	1,580	1,270	5,520	1,310	787	630	261	123	98
17	77	195	938	1,960	1,580	4,310	1,500	850	598	260	119	97
18	78	186	963	1,760	2,110	3,230	1,770	1,050	569	270	125	96
19	78	180	996	1,420	1,190	3,770	1,780	804	539	271	118	96
20	79	183	1,330	1,200	943	20,700	1,600	700	521	260	117	95
21	79	223	1,510	1,040	806	9,610	1,540	686	501	250	114	101
22	81	202	2,390	961	731	5,200	1,430	689	484	236	122	95
23	87	191	1,940	898	683	10,500	1,360	676	465	226	126	96
24	698	196	1,390	827	657	11,900	1,330	656	441	220	117	93
25	1,090	193	1,550	779	690	7,420	1,290	673	413	222	108	96
26	455	182	2,890	737	689	7,300	1,250	776	388	211	105	117
27	299	200	1,760	688	621	6,040	1,140	701	370	207	100	111
28	273	248	2,020	653	581	4,940	1,090	669	397	198	100	107
29	547	221	9,870	631	---	3,700	1,040	634	687	190	111	108
30	627	202	3,840	630	---	3,390	986	606	731	184	105	105
31	461	---	2,190	595	---	4,030	---	599	---	178	103	---
Total	6,537	7,605	50,615	33,694	19,012	129,886	57,116	23,941	21,666	8,829	4,114	2,979
Mean	211	254	1,633	1,087	679	4,190	1,904	772	722	285	133	99.3
Max	1,090	551	9,870	1,960	2,110	20,700	4,580	1,050	1,470	551	181	117
Min	76	180	197	595	342	556	986	599	370	178	100	88
Ac-ft	12,970	15,080	100,400	66,830	37,710	257,600	113,300	47,490	42,970	17,510	8,160	5,910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	124	326	1,264	2,125	2,415	1,957	1,224	693	330	123	72.5	76.4
Max	805	1,828	5,428	9,193	12,430	10,770	5,466	2,748	2,082	495	178	164
(WY)	(1958)	(1985)	(1984)	(1995)	(1998)	(1983)	(2006)	(2005)	(1998)	(1998)	(1998)	(1983)
Min	50.6	52.2	49.8	60.3	76.3	146	136	165	74.5	36.8	26.4	30.8
(WY)	(1995)	(1991)	(1991)	(1991)	(1977)	(1977)	(1977)	(1977)	(1977)	(1994)	(1945)	(1945)

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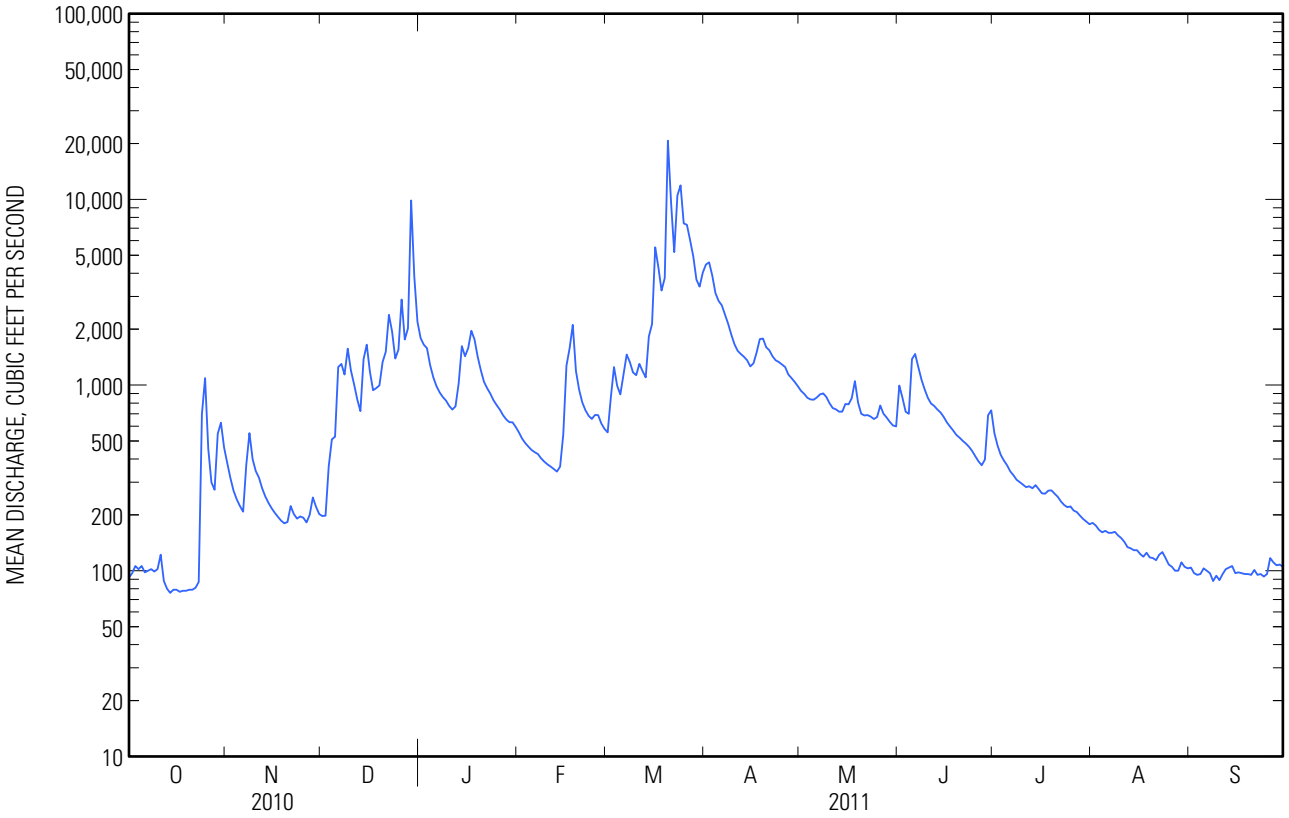
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1941 - 2011	
Annual total	399,142		365,994			
Annual mean	1,094		1,003		887	
Highest annual mean					2,714	1983
Lowest annual mean					94.4	1977
Highest daily mean	14,900	Jan 20	20,700	Mar 20	54,300	Jan 16, 1974
Lowest daily mean	76	Oct 14	76	Oct 14	15	Sep 7, 1945
Annual seven-day minimum	78	Oct 14	78	Oct 14	16	Sep 4, 1945
Maximum peak flow			34,700	Mar 20	86,000	Mar 1, 1983
Maximum peak stage			14.96	Mar 20	21.59	Mar 1, 1983
Annual runoff (ac-ft)	791,700		725,900		642,700	
10 percent exceeds	2,340		1,810		2,100	
50 percent exceeds	570		581		229	
90 percent exceeds	92		100		59