

Water-Data Report 2011

11453000 Yolo Bypass near Woodland, CA

Sacramento River Basin

LOCATION.--Lat 38°40'40", long 121°38'35" referenced to North American Datum of 1927, Yolo County, CA, Hydrologic Unit 18020109, unsurveyed, on left bank, 300 ft upstream from Sacramento and Woodland Railroad Bridge, 6 mi upstream from Sacramento Bypass, 6 mi downstream from Fremont Weir, and 7 mi east of Woodland.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1939 to current year (since October 1977, high flows only). Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.--WDR CA-96-4: 1995 (instantaneous maximum discharge).

GAGE.--Water-stage recorder. Datum of gage is 3.41 ft below NGVD of 1929. Prior to Dec. 17, 1941, nonrecording gage, and Dec. 18-31, 1941, water-stage recorder, at datum 0.73 ft higher. Prior to Sept. 30, 1977, a supplementary water-stage recorder 6 mi downstream at different datum recorded low flow.

REMARKS.--Records not computed below 1,000 ft³/s. Flow is from Cache Creek and Knights Landing Ridge Cut plus floodwater passing over Fremont Weir. Published discharges reflect rated flows at this site minus the flows released at the Sacramento Weir Spill to Yolo Bypass, near Woodland (station 11426000), when it is in operation, which are provided by California Department of Water Resources. Beginning October 1977, only flows above 1,000 ft³/s are computed. See schematic diagrams of lower Sacramento River Basin and Sacramento-San Joaquin Delta available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 374,000 ft³/s, Feb. 20, 1986, gage height, 34.87 ft; no flow at times in several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 95,900 ft³/s, Mar. 25, gage height, 28.69 ft.

11453000 Yolo Bypass near Woodland, 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	---	---	---	3,050	---	1,320	33,300	---	---	---	---	---
2	---	---	---	3,020	---	1,110	29,600	---	---	---	---	---
3	---	---	---	3,010	---	1,080	27,700	---	---	---	---	---
4	---	---	---	3,140	---	1,290	26,000	---	---	---	---	---
5	---	---	---	3,080	---	1,310	22,700	---	---	---	---	---
6	---	---	---	2,970	---	1,310	17,500	---	---	---	---	---
7	---	---	---	2,870	---	1,380	13,700	---	1,430	---	---	---
8	---	---	---	2,740	---	1,860	9,990	---	1,640	---	---	---
9	---	---	---	2,560	---	2,290	6,030	---	1,780	---	---	---
10	---	---	---	2,340	---	2,400	4,180	---	1,600	---	---	---
11	---	---	---	2,060	---	2,480	3,700	---	1,160	---	---	---
12	---	---	---	1,660	---	2,520	3,500	---	---	---	---	---
13	---	---	---	1,260	---	2,540	3,320	---	---	---	---	---
14	---	---	---	1,020	---	2,600	3,060	---	---	---	---	---
15	---	---	---	---	---	2,460	2,720	---	---	---	---	---
16	---	---	---	---	---	2,540	2,330	---	---	---	---	---
17	---	---	1,000	---	---	2,810	1,920	---	---	---	---	---
18	---	---	1,330	---	1,150	6,850	1,540	---	---	---	---	---
19	---	---	1,630	---	1,830	29,000	1,280	---	---	---	---	---
20	---	---	1,960	---	2,350	53,800	1,150	---	---	---	---	---
21	---	---	2,570	---	2,380	69,200	1,100	---	---	---	---	---
22	---	---	3,830	---	2,300	69,700	1,050	---	---	---	---	---
23	---	---	3,690	---	1,870	70,200	1,020	---	---	---	---	---
24	---	---	3,080	---	1,300	75,300	---	---	---	---	---	---
25	---	---	2,800	---	1,320	90,700	---	---	---	---	---	---
26	---	---	2,740	---	1,440	92,800	---	---	---	---	---	---
27	---	---	2,660	---	1,780	86,100	---	---	---	---	---	---
28	---	---	2,620	---	1,640	70,900	---	---	---	---	---	---
29	---	---	2,680	---	---	58,300	---	---	---	---	---	---
30	---	---	2,830	---	---	48,100	---	---	---	---	---	---
31	---	---	3,050	---	---	38,600	---	---	---	---	---	---
Total	---	---	---	---	---	892,850	---	---	---	---	---	---
Mean	---	---	---	---	---	28,800	---	---	---	---	---	---
Max	---	---	---	---	---	92,800	---	---	---	---	---	---
Min	---	---	---	---	---	1,080	---	---	---	---	---	---
Ac-ft	---	---	---	---	---	1,771,000	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1977, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	441	738	5,638	13,230	11,240	3,398	3,849	430	144	20.7	26.1	51.0
Max	13,420	10,890	48,790	86,470	92,890	27,910	37,310	4,546	1,420	107	84.9	155
(WY)	(1963)	(1951)	(1956)	(1970)	(1958)	(1958)	(1958)	(1952)	(1967)	(1958)	(1958)	(1954)
Min	1.01	2.19	0.92	2.43	0.88	3.55	0.08	0.55	0.53	0.00	0.00	0.63
(WY)	(1977)	(1960)	(1977)	(1977)	(1977)	(1977)	(1976)	(1977)	(1977)	(1966)	(1966)	(1977)

11453000 Yolo Bypass near Woodland, CA—Continued**SUMMARY STATISTICS**

	Water Years 1946 - 1977	
Annual mean	3,230	
Highest annual mean	13,020	1958
Lowest annual mean	1.53	1977
Highest daily mean	259,000	Dec 25, 1964
Lowest daily mean	0.00	Jul 11, 1963
Annual seven-day minimum	0.00	Jul 19, 1963
Maximum peak flow	265,000	Dec 25, 1964
Maximum peak stage	32.48	Dec 25, 1964
Annual runoff (ac-ft)	2,340,000	
10 percent exceeds	3,080	
50 percent exceeds	35	
90 percent exceeds	1.9	

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1980, December 2010 to March 2011 (storm season only).

SEDIMENT DATA: Water year 1980, December 2010 to March 2011 (storm season only)

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: December 1979 to March 1980.

SUSPENDED-SEDIMENT DISCHARGE: December 1979 to March 1980.

REMARKS.--Sample data collected for Delta sediment transport studies.

EXTREMES FOR PERIOD OF RECORD.--

SEDIMENT CONCENTRATION: Maximum daily mean, 1,000 mg/L, Jan. 13, 1980.

SEDIMENT DISCHARGE: Maximum daily, 124,000 tons, Feb. 21, 1980.

11453000 Yolo Bypass near Woodland, CA—Continued

**PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 2

[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters;
°C, degrees Celsius; A, average]

Sample date-time	Discharge, instantaneous, ft ³ /s (00061)	Temperature, water, °C (00010)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)
12-21-2010 1210	2,580	10.5	95	662	96
12-21-2010 1212	2,580	10.5	92	641	98
12-21-2010 1214	2,580	10.5	119	829	99
12-21-2010 1216	2,580	10.5	121	843	99
12-21-2010 1217	2,580	10.5	A 117	A 815	A 97
12-21-2010 1218	2,580	10.5	213	1,480	99
12-21-2010 1219	2,580	10.5	A 108	A 752	A 95
12-21-2010 1220	2,580	10.5	155	1,080	98
12-21-2010 1221	2,580	10.5	A 99	A 690	A 93
12-21-2010 1222	2,580	10.5	48	334	99
12-21-2010 1224	2,580	10.5	73	509	70
12-21-2010 1228	2,580	10.5	110	766	90
12-21-2010 1230	2,580	10.5	56	390	93
12-21-2010 1409	2,610	10.5	149	1,050	96
12-21-2010 1411	2,610	10.5	392	2,760	67
12-21-2010 1413	2,610	10.5	169	1,190	94
12-21-2010 1415	2,610	10.5	519	3,660	49
12-21-2010 1417	2,610	10.5	132	930	97
12-21-2010 1418	2,610	10.5	A 354	A 2,490	A 83
12-21-2010 1419	2,610	10.5	707	4,980	84
12-21-2010 1420	2,610	10.5	A 463	A 3,260	A 77
12-21-2010 1421	2,610	10.5	189	1,330	84
12-21-2010 1422	2,610	10.5	A 409	A 2,880	A 80
12-21-2010 1423	2,610	10.5	133	937	95
12-21-2010 1425	2,610	10.5	1,130	7,960	78
12-21-2010 1427	2,610	10.5	566	3,990	96
02-21-2011 1715	2,290	9.3	76	470	89
02-21-2011 1717	2,290	9.3	51	315	99
02-21-2011 1719	2,290	9.3	72	445	92
02-21-2011 1721	2,290	9.3	68	420	100
02-21-2011 1723	2,290	9.3	73	451	99
02-21-2011 1724	2,290	9.3	A 503	A 3,110	A 42
02-21-2011 1725	2,290	9.3	76	470	91
02-21-2011 1726	2,290	9.3	A 271	A 1,680	A 53
02-21-2011 1727	2,290	9.3	87	538	97
02-21-2011 1728	2,290	9.3	A 387	A 2,390	A 48
02-21-2011 1729	2,290	9.3	76	470	95
02-21-2011 1731	2,290	9.3	2,210	13,700	34
02-21-2011 1733	2,290	9.3	1,080	6,680	42
03-16-2011 1315	2,490	12.1	36	242	93

11453000 Yolo Bypass near Woodland, CA—Continued**PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 2

[ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters;
°C, degrees Celsius; A, average]

Sample date-time	Discharge, instanta- neous, ft³/s (00061)	Tempera- ture, water, °C (00010)	Suspended sediment concen- tration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)
03-16-2011 1317	2,490	12.1	38	255	91
03-16-2011 1320	2,490	12.1	31	208	99
03-16-2011 1322	2,490	12.1	36	242	96
03-16-2011 1325	2,490	12.1	39	262	99
03-16-2011 1326	2,490	12.1	A 40	A 269	A 90
03-16-2011 1327	2,490	12.1	37	249	96
03-16-2011 1328	2,490	12.1	A 39	A 262	A 94
03-16-2011 1329	2,490	12.1	A 39	A 262	A 92
03-16-2011 1330	2,490	12.1	55	370	71
03-16-2011 1333	2,490	12.1	39	262	92
03-16-2011 1338	2,490	12.1	40	269	99
03-16-2011 1340	2,490	12.1	42	282	95
03-21-2011 1358	68,400	9.8	242	44,700	82
03-21-2011 1404	68,400	9.8	125	23,100	93
03-21-2011 1410	68,400	9.8	174	32,100	99
03-21-2011 1418	68,400	9.8	85	15,700	99
03-21-2011 1426	68,400	9.8	252	46,500	95
03-21-2011 1438	68,400	9.8	72	13,300	94
03-21-2011 1445	68,400	9.8	A 165	A 30,500	A 93
03-21-2011 1447	68,400	9.8	48	8,860	99
03-21-2011 1455	68,400	9.8	53	9,790	99
03-21-2011 1503	68,400	9.8	828	153,000	100
03-21-2011 1520	68,400	9.8	56	10,300	98
03-21-2011 1524	68,400	9.8	70	12,900	99
03-21-2011 1528	68,400	9.8	56	10,300	91
03-21-2011 1532	68,400	9.8	83	15,300	56

11453000 Yolo Bypass near Woodland, CA—Continued

**PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 2

[ft³/s, cubic feet per second; mm, millimeters; °C, degrees Celsius; --, no data; <, less than]

Sample date-time	Number of sampling points, count (00063)	Discharge, instantaneous, ft ³ /s (00061)	Temperature, water, °C (00010)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.0625 mm (80164)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.125 mm (80165)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.25 mm (80166)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.5 mm (80167)	Bed sediment, dry sieved, sieve diameter, percent smaller than 1 mm (80168)	Bed sediment, dry sieved, sieve diameter, percent smaller than 2 mm (80169)
12-21-2010 1215	1	2,580	10.5	27	36	48	68	93	100
12-21-2010 1220	1	2,580	10.5	43	55	69	91	99	99
12-21-2010 1225	1	2,580	10.5	23	31	42	59	84	99
12-21-2010 1230	1	2,580	10.5	< 1	1	6	45	59	69
12-21-2010 1235	1	2,580	10.5	31	47	63	83	92	94

**PARTICLE-SIZE DISTRIBUTION OF
SURFACE BED MATERIAL
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 2

[ft³/s, cubic feet per second; mm, millimeters; °C, degrees Celsius; --, no data; <, less than]

Sample date-time	Bed sediment, dry sieved, sieve diameter, percent smaller than 4 mm (80170)	Bed sediment, dry sieved, sieve diameter, percent smaller than 8 mm (80171)	Bed sediment, dry sieved, sieve diameter, percent smaller than 16 mm (80172)
12-21-2010 1215	--	--	--
12-21-2010 1220	100	--	--
12-21-2010 1225	100	--	--
12-21-2010 1230	82	94	100
12-21-2010 1235	96	99	100