Water-Data Report 2013

11253115 San Joaquin River below Chowchilla Canal Intake, near Mendota, CA

San Joaquin River Basin

LOCATION.--Lat 36°46'25.5", long 120°17'09.6" referenced to North American Datum of 1983, in SW ¼ NE ¼ sec.25, T.13 S., R.15 E., Madera County, CA, Hydrologic Unit 18040001, below the Chowchilla Canal Bifurcation, 2.7 mi north of Whitesbridge Avenue, and 5.4 mi northeast of Mendota.

DRAINAGE AREA.--1,822 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 2009 to current year.

GAGE.--Datum of gage is 170 ft above NGVD of 1929, from topographical map.

COOPERATION.--Records provided by U.S. Bureau of Reclamation (USBR), under the general supervision of the U.S. Geological Survey.

REMARKS.--Records rated fair. Flow regulated by Millerton Lake (station 11250100) and by nine powerplants and eight reservoirs with combined capacity of about 609,300 acre-ft. USBR may divert water to Chowchilla Bypass Canal at structure located 50 ft upstream of gage. See schematic diagram of lower San Joaquin River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1,530 ft^3/s, July 13, 2011, gage height, 7.35 ft; no flow at times in most years.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 11253115, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/11253115.2013.pdf

11253115 San Joaquin River below Chowchilla Canal Intake, near Mendota, CA—Continued

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	109	149	142	174	182	319	731	100	63	33	36
2	0.00	110	164	140	173	183	323	728	86	69	35	35
3	0.00	128	163	136	175	178	322	714	79	69	36	37
4	0.00	207	161	134	178	173	318	630	76	66	31	44
5	0.00	273	154	135	180	169	314	501	72	57	29	49
6	0.00	323	145	152	180	165	321	365	69	50	31	51
7	0.00	360	138	163	182	164	343	251	68	46	28	51
8	13	384	134	166	187	165	356	183	69	43	28	53
9	24	408	131	163	189	168	366	139	70	40	26	55
10	29	420	130	158	190	171	370	112	74	40	26	57
11	33	430	131	150	189	172	375	92	75	40	27	57
12	38	446	133	146	190	170	375	79	71	38	30	59
13	49	427	132	145	193	161	375	71	70	38	34	62
14	61	333	133	143	193	155	393	66	66	35	34	62
15	73	266	132	148	188	149	475	61	63	36	37	64
16	82	232	130	153	186	148	570	54	62	39	38	64
17	86	233	130	157	189	150	630	48	61	39	38	62
18	86	237	130	157	189	154	665	47	61	40	38	62
19	83	244	130	154	194	155	683	50	60	37	36	63
20	82	240	129	155	198	153	698	72	61	35	38	60
21	83	200	129	159	200	145	708	91	61	34	34	61
22	88	166	135	164	201	141	721	102	64	34	35	61
23	95	151	142	167	192	138	732	111	67	35	33	65
24	101	152	145	167	187	152	736	116	66	35	31	67
25	105	160	152	170	184	212	734	120	67	32	29	67
26	108	165	155	171	181	257	730	121	67	29	34	66
27	107	163	152	171	182	285	731	124	70	28	40	62
28	105	154	154	171	181	305	734	126	66	27	39	60
29	104	146	157	170	---	319	737	129	62	26	39	59
30	106	146	152	171	---	314	734	133	61	27	35	67
31	107	---	145	174	---	315	---	122	---	30	34	---
Total	1,848.00	7,413	4,397	4,852	5,225	5,868	15,888	6,289	2,064	1,257	1,036	1,718
Mean	59.6	247	142	157	187	189	530	203	68.8	40.5	33.4	57.3
Max	108	446	164	174	201	319	737	731	100	69	40	67
Min	0.00	109	129	134	173	138	314	47	60	26	26	35
Ac-ft	3,670	14,700	8,720	9,620	10,360	11,640	31,510	12,470	4,090	2,490	2,050	3,410

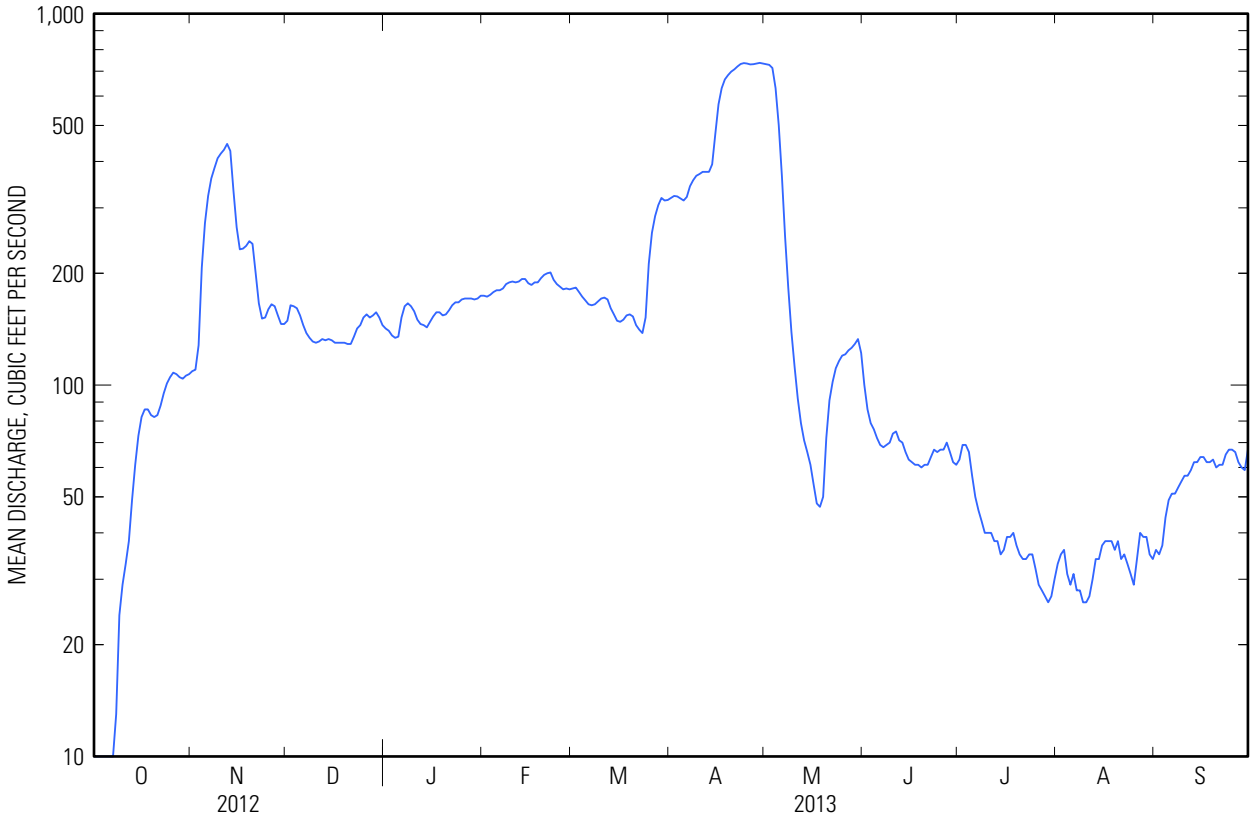
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2011 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	126	161	66.6	295	181	305	484	587	364	274	75.8	62.5
Max	237	247	142	728	231	566	716	905	907	717	143	119
(WY)	(2012)	(2013)	(2013)	(2011)	(2011)	(2011)	(2011)	(2011)	(2011)	(2011)	(2011)	(2011)
Min	59.6	57.5	0.00	0.58	126	159	207	203	68.8	40.5	33.4	10.8
(WY)	(2013)	(2012)	(2012)	(2012)	(2012)	(2012)	(2012)	(2013)	(2013)	(2013)	(2013)	(2012)

11253115 San Joaquin River below Chowchilla Canal Intake, near Mendota, CA—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 2011 - 2013	
Annual total	56,085.00		57,855.00			
Annual mean	153		159		249	
Highest annual mean					447	2011
Lowest annual mean					141	2012
Highest daily mean	790	May 27	737	Apr 29	1,430	May 31, 2011
Lowest daily mean	0.00	Jan 1	0.00	Oct 1	0.00	Dec 10, 2010
Annual seven-day minimum	0.00	Jan 1	0.00	Oct 1	0.00	Dec 10, 2010
Maximum peak flow			741	Apr 29	1,530	Jul 13, 2011
Maximum peak stage			5.63	Apr 24	7.35	Jul 13, 2011
Annual runoff (ac-ft)	111,200		114,800		180,200	
10 percent exceeds	385		348		725	
50 percent exceeds	110		130		138	
90 percent exceeds	0.00		34		0.00	



11253115 San Joaquin River below Chowchilla Canal Intake, near Mendota, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2010 to current year.
SEDIMENT DATA: March 2010 to current year.

REMARKS.--Sample and flow data collected for the San Joaquin River Restoration Project. Instantaneous discharges are from USGS flow measurements made concurrently with samples.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

[ft^3/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)
05-07-2013 1230	267	18.0	11	7.9	92
05-07-2013 1231	267	18.0	A 11	A 7.9	A 93
05-07-2013 1232	267	18.0	11	7.9	93

PARTICLE-SIZE DISTRIBUTION OF BED MATERIAL
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 1 of 2

[ft^3/s, cubic feet per second; mm, millimeters; °C, degrees Celsius; --, no data]

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)
05-07-2013 1254	1	267	18.0	1	3	6	18	48	84
05-07-2013 1256	1	267	18.0	1	4	8	30	65	89
05-07-2013 1258	1	267	18.0	1	3	10	42	77	93
05-07-2013 1300	1	267	18.0	1	4	17	60	81	93
05-07-2013 1302	1	267	18.0	3	10	30	81	93	96

11253115 San Joaquin River below Chowchilla Canal Intake, near Mendota, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BED MATERIAL
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 2 of 2
[ft³/s, cubic feet per second; mm, millimeters; °C, degrees Celsius; --, no data]

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)
05-07-2013 1254	97	99	100
05-07-2013 1256	97	100	--
05-07-2013 1258	99	100	--
05-07-2013 1300	99	100	--
05-07-2013 1302	99	100	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
[ft, feet; ft³/s, cubic feet per second; °C, degrees Celsius; --, no data]

Sample date-time	Sampling method (82398)	Sampler type (84164)	Number of sampling points, count (00063)	Location in cross section, distance from left bank looking downstream, ft (00009)	Stream width, ft (00004)	Discharge, instantaneous, ft³/s (00061)	Temperature, water, °C (00010)
05-07-2013 1230	Multi Verticals EWT	Sampler US DH-48	10	9.50	105	267	18.0
05-07-2013 1231	Multi Verticals EWT	Sampler US DH-48	10	--	105	267	18.0
05-07-2013 1232	Multi Verticals EWT	Sampler US DH-48	10	9.50	105	267	18.0
05-07-2013 1254	Point sample	Sampler US RBM-80	1	30.0	105	267	18.0
05-07-2013 1256	Point sample	Sampler US RBM-80	1	52.0	105	267	18.0
05-07-2013 1258	Point sample	Sampler US RBM-80	1	67.0	105	267	18.0
05-07-2013 1300	Point sample	Sampler US RBM-80	1	80.0	105	267	18.0
05-07-2013 1302	Point sample	Sampler US RBM-80	1	95.0	105	267	18.0