Water-Data Report 2012

11254000 San Joaquin River near Mendota, CA

San Joaquin River Basin

LOCATION.--Lat 36°48′38″, long 120°22′38″ referenced to North American Datum of 1927, in SE ¼ SW ¼ sec.7, T.13 S., R.15 E., Fresno County, CA, Hydrologic Unit 18040001, 2.5 mi below Mendota Dam, and 3.5 mi north of Mendota.

DRAINAGE AREA.--3,940 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1939 to September 1954, December 1999 to current year.

REVISED RECORDS.--WDR CA-00-3: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 138.8 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). Prior to Nov. 3, 1947, at site 200 ft downstream. Prior to Nov. 4, 1953, at datum 2.00 ft higher.

REMARKS.--Records fair. Flow regulated at Mendota Dam by storage and diversions from Mendota pool of residue of waters released at Friant Dam and imported through Delta-Mendota Canal. Many diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft^3/s, June 20, 1941, gage height, 13.75 ft, site and datum then in use, maximum gage height, 16.60 ft, Apr. 22, 2006; no flow at times during most years.

11254000 San Joaquin River near Mendota, CA—Continued

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	336	239	10	0.00	346	238	86	210	574	550	483	196
2	352	241	9.8	0.00	351	241	124	209	602	591	382	216
3	330	237	8.2	0.00	382	233	161	216	653	603	437	252
4	311	251	7.1	0.00	417	232	197	231	667	571	613	287
5	274	278	6.3	0.00	469	224	200	240	592	541	625	304
6	232	288	5.9	0.00	529	197	172	244	563	483	583	304
7	217	292	5.3	0.00	531	181	140	222	563	438	573	287
8	217	294	4.5	0.00	513	176	133	210	550	474	575	262
9	219	300	4.0	0.00	514	185	139	257	503	611	523	279
10	223	283	3.6	0.00	483	184	149	334	481	657	491	296
11	213	282	2.8	0.00	440	168	184	383	450	668	479	314
12	213	271	2.7	0.00	424	159	196	389	436	667	437	335
13	210	263	2.5	46	411	145	139	397	487	603	420	342
14	209	263	2.1	120	403	134	109	416	523	547	472	344
15	214	379	2.0	138	398	124	144	423	502	573	571	349
16	205	500	1.9	168	369	117	186	435	467	589	656	368
17	209	221	1.9	164	362	111	215	431	454	601	700	393
18	227	48	1.7	170	378	94	223	373	455	559	655	405
19	245	38	1.7	165	379	80	265	315	496	524	575	419
20	240	32	1.5	151	372	70	319	271	520	532	513	437
21	243	31	1.4	115	360	64	315	264	519	549	495	425
22	253	28	1.3	126	335	63	275	307	509	570	523	394
23	258	25	1.0	151	302	69	215	393	522	558	502	374
24	243	22	0.11	182	277	73	180	433	582	541	412	386
25	231	20	0.00	183	267	83	177	414	621	568	325	411
26	230	18	0.00	213	267	95	177	362	631	612	270	438
27	267	16	0.00	242	261	85	176	324	622	634	226	457
28	303	15	0.60	257	273	67	195	334	583	653	255	460
29	291	13	0.00	280	256	65	215	376	558	630	296	460
30	273	12	0.00	311	---	72	214	449	545	562	267	462
31	256	---	0.00	340	---	76	---	517	---	503	222	---
Total	7,744	5,200	89.91	3,522.00	11,069	4,105	5,620	10,379	16,230	17,762	14,556	10,656
Mean	250	173	2.90	114	382	132	187	335	541	573	470	355
Max	352	500	10	340	531	241	319	517	667	668	700	462
Min	205	12	0.00	0.00	256	63	86	209	436	438	222	196
Ac-ft	15,360	10,310	178	6,990	21,960	8,140	11,150	20,590	32,190	35,230	28,870	21,140

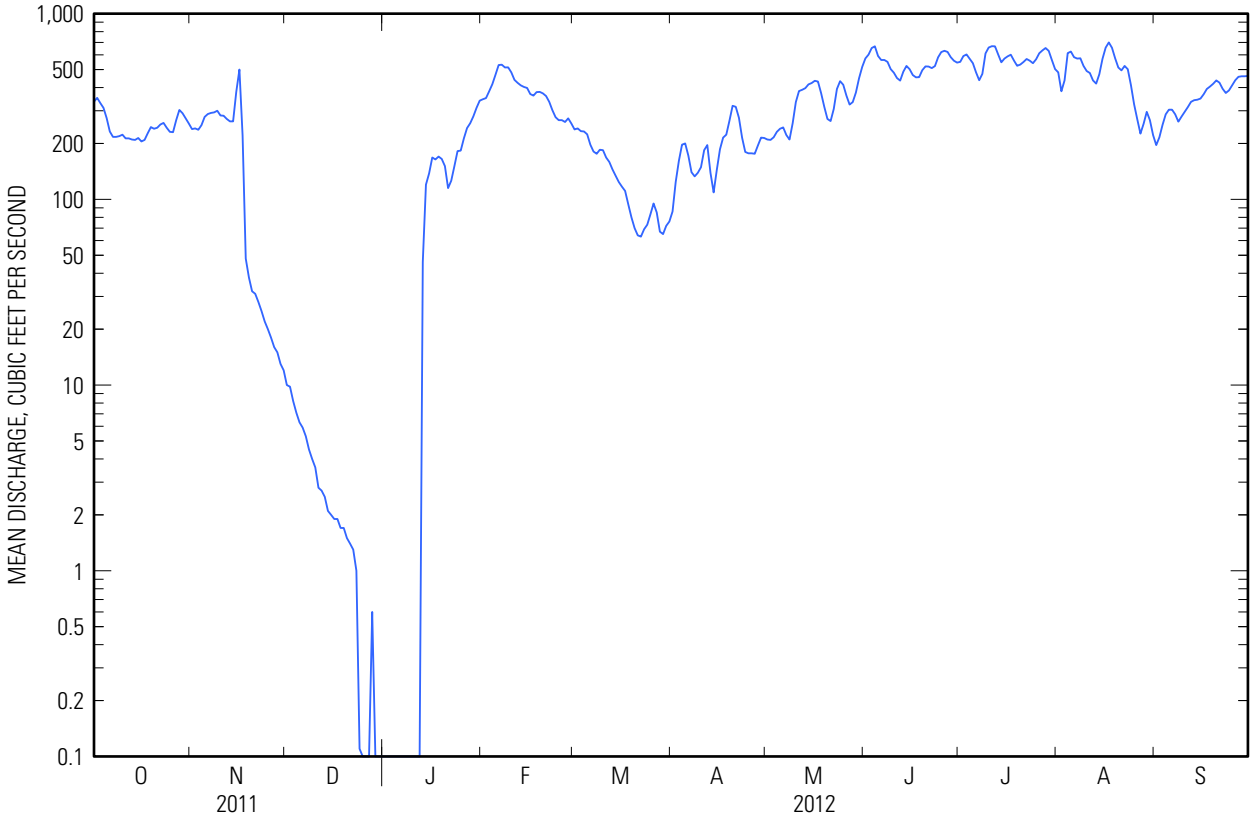
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	213	251	437	774	1,123	1,036	1,360	1,785	1,773	705	367	250
Max	637	1,144	2,548	3,531	5,188	6,187	6,158	8,680	10,340	3,446	562	394
(WY)	(1946)	(1946)	(1951)	(1942)	(1941)	(1943)	(1952)	(1941)	(1941)	(1941)	(1945)	(1945)
Min	29.9	45.6	2.61	14.3	52.7	73.8	162	200	244	327	12.1	9.87
(WY)	(1941)	(1950)	(2004)	(2000)	(1950)	(1948)	(1948)	(1951)	(1948)	(1949)	(1940)	(1940)

11254000 San Joaquin River near Mendota, CA—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1940 - 2012	
Annual total	288,411.91		106,932.91			
Annual mean	790		292		856	
Highest annual mean					3,546	1941
Lowest annual mean					188	1950
Highest daily mean	3,570	Apr 10	700	Aug 17	11,700	Jun 20, 1941
Lowest daily mean	0.00	Dec 25	0.00	Dec 25	0.00	Dec 20, 1999
Annual seven-day minimum	0.09	Dec 25	0.00	Dec 29	0.00	Dec 24, 1999
Maximum peak flow			722	Aug 18	11,700	Jun 20, 1941
Maximum peak stage			5.81	Aug 18	16.60	Apr 22, 2006
Annual runoff (ac-ft)	572,100		212,100		620,400	
10 percent exceeds	2,660		569		2,630	
50 percent exceeds	384		270		297	
90 percent exceeds	19		5.1		79	



11254000 San Joaquin River near Mendota, CA—Continued

WATER-QUALITY RECORDS

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

REMARKS.--Sediment data collected for the San Joaquin River Restoration Project.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 3

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

Sample date-time	Discharge, instantaneous, ft³/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)
03-08-2012 1232	175	11.0	13	6.1	95
03-08-2012 1234	175	11.0	13	6.1	93
03-08-2012 1236	175	11.0	13	6.1	100
03-08-2012 1238	175	11.0	13	6.1	98
03-08-2012 1240	175	11.0	12	5.7	93
03-08-2012 1241	175	11.0	A 12	A 5.7	A 95
03-08-2012 1242	175	11.0	11	5.2	94
03-08-2012 1243	175	11.0	A 12	A 5.7	A 97
03-08-2012 1244	175	11.0	12	5.7	97
03-08-2012 1245	175	11.0	A 12	A 5.7	A 96
03-08-2012 1246	175	11.0	11	5.2	100
03-08-2012 1248	175	11.0	12	5.7	91
03-08-2012 1250	175	11.0	10	4.7	100
03-21-2012 1025	64	13.6	16	2.8	91
03-21-2012 1026	64	13.6	14	2.4	95
03-21-2012 1027	64	13.6	13	2.2	79
03-21-2012 1028	64	13.6	5	.86	100
03-21-2012 1029	64	13.6	15	2.6	90
03-21-2012 1030	64	13.6	10	1.7	100
03-21-2012 1031	64	13.6	15	2.6	94
03-21-2012 1032	64	13.6	8	1.4	100
03-21-2012 1033	64	13.6	16	2.8	87
03-21-2012 1034	64	13.6	11	1.9	100
03-21-2012 1035	64	13.6	A 15	A 2.6	A 88
03-21-2012 1036	64	13.6	A 10	A 1.7	A 99
03-21-2012 1037	64	13.6	A 12	A 2.1	A 94
04-03-2012 1105	161	16.5	21	9.1	87
04-03-2012 1107	161	16.5	24	10	91
04-03-2012 1109	161	16.5	24	10	92
04-03-2012 1111	161	16.5	24	10	90
04-03-2012 1113	161	16.5	24	10	94
04-03-2012 1114	161	16.5	A 26	A 11	A 89
04-03-2012 1115	161	16.5	24	10	90
04-03-2012 1116	161	16.5	A 27	A 12	A 84
04-03-2012 1117	161	16.5	33	14	85
04-03-2012 1118	161	16.5	A 26	A 11	A 87
04-03-2012 1121	161	16.5	27	12	89
04-03-2012 1123	161	16.5	33	14	74

11254000 San Joaquin River near Mendota, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 3

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

Sample date-time	Discharge, instantaneous, ft³/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)
04-24-2012 1142	180	21.0	20	9.7	96
04-24-2012 1144	180	21.0	23	11	84
04-24-2012 1146	180	21.0	20	9.7	79
04-24-2012 1148	180	21.0	24	12	84
04-24-2012 1150	180	21.0	17	8.3	89
04-24-2012 1151	180	21.0	A 20	A 9.7	A 91
04-24-2012 1152	180	21.0	21	10	93
04-24-2012 1153	180	21.0	A 23	A 11	A 88
04-24-2012 1154	180	21.0	17	8.3	100
04-24-2012 1155	180	21.0	A 21	A 10	A 89
04-24-2012 1156	180	21.0	24	12	88
04-24-2012 1158	180	21.0	26	13	91
04-24-2012 1200	180	21.0	23	11	89
05-01-2012 1426	209	22.0	26	15	76
05-01-2012 1428	209	22.0	19	11	88
05-01-2012 1430	209	22.0	20	11	85
05-01-2012 1432	209	22.0	20	11	89
05-01-2012 1434	209	22.0	20	11	89
05-01-2012 1435	209	22.0	A 23	A 13	A 85
05-01-2012 1436	209	22.0	20	11	93
05-01-2012 1437	209	22.0	A 20	A 11	A 88
05-01-2012 1438	209	22.0	26	15	87
05-01-2012 1439	209	22.0	A 21	A 12	A 87
05-01-2012 1440	209	22.0	20	11	84
05-01-2012 1442	209	22.0	20	11	91
05-11-2012 1105	383	20.0	17	18	94
05-11-2012 1107	383	20.0	17	18	93
05-11-2012 1109	383	20.0	17	18	98
05-11-2012 1111	383	20.0	19	20	88
05-11-2012 1113	383	20.0	17	18	95
05-11-2012 1114	383	20.0	A 18	A 19	A 93
05-11-2012 1115	383	20.0	19	20	90
05-11-2012 1116	383	20.0	A 21	A 22	A 87
05-11-2012 1117	383	20.0	23	24	89
05-11-2012 1118	383	20.0	A 20	A 21	A 90
05-11-2012 1119	383	20.0	21	22	88
05-11-2012 1121	383	20.0	18	19	89
05-11-2012 1123	383	20.0	29	30	81
05-23-2012 1038	399	19.0	27	29	97
05-23-2012 1040	399	19.0	25	27	100
05-23-2012 1042	399	19.0	27	29	91
05-23-2012 1044	399	19.0	25	27	92

11254000 San Joaquin River near Mendota, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 3

[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)
05-23-2012 1046	399	19.0	26	28	97
05-23-2012 1047	399	19.0	A 27	A 29	A 95
05-23-2012 1048	399	19.0	25	27	97
05-23-2012 1049	399	19.0	A 27	A 29	A 94
05-23-2012 1050	399	19.0	30	32	97
05-23-2012 1051	399	19.0	A 27	A 29	A 94
05-23-2012 1052	399	19.0	27	29	90
05-23-2012 1054	399	19.0	27	29	93
05-23-2012 1056	399	19.0	31	33	92
05-30-2012 1005	448	19.0	23	28	95
05-30-2012 1007	448	19.0	25	30	89
05-30-2012 1009	448	19.0	24	29	93
05-30-2012 1011	448	19.0	23	28	96
05-30-2012 1013	448	19.0	26	31	88
05-30-2012 1014	448	19.0	A 25	A 30	A 91
05-30-2012 1015	448	19.0	24	29	95
05-30-2012 1016	448	19.0	A 25	A 30	A 94
05-30-2012 1017	448	19.0	26	31	92
05-30-2012 1018	448	19.0	A 25	A 30	A 93
05-30-2012 1019	448	19.0	28	34	95
05-30-2012 1021	448	19.0	28	34	90
05-30-2012 1023	448	19.0	28	34	94

11254000 San Joaquin River near Mendota, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BED MATERIAL
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

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, ft³/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)
03-08-2012 1252	1	175	11.0	1	2	5	14	42	79
03-08-2012 1254	1	175	11.0	< 1	1	2	11	50	87
03-08-2012 1256	1	175	11.0	< 1	1	3	37	88	96
03-08-2012 1258	1	175	11.0	1	3	12	57	84	94
03-08-2012 1300	1	175	11.0	1	3	24	59	78	89
03-21-2012 1050	1	64	13.6	1	4	19	61	87	96
03-21-2012 1052	1	64	13.6	< 1	1	5	27	65	92
03-21-2012 1054	1	64	13.6	< 1	1	5	29	62	88
03-21-2012 1056	1	64	13.6	< 1	< 1	< 1	5	50	92
03-21-2012 1058	1	64	13.6	< 1	1	2	5	25	79
04-03-2012 1140	1	162	16.5	1	3	6	17	50	87
04-03-2012 1143	1	162	16.5	< 1	1	4	23	55	84
04-03-2012 1146	1	162	16.5	< 1	1	2	16	48	85
04-03-2012 1149	1	162	16.5	1	2	10	56	84	94
04-03-2012 1152	1	162	16.5	< 1	2	20	65	85	93
04-24-2012 1205	1	180	21.0	< 1	1	14	46	74	92
04-24-2012 1208	1	180	21.0	1	2	12	44	78	93
04-24-2012 1211	1	180	21.0	< 1	1	4	28	72	91
04-24-2012 1214	1	180	21.0	< 1	1	2	14	45	83
04-24-2012 1217	1	180	21.0	< 1	1	5	21	48	81
05-01-2012 1448	1	210	22.0	2	4	16	64	88	96
05-01-2012 1450	1	210	22.0	< 1	1	4	20	63	91
05-01-2012 1452	1	210	22.0	< 1	1	5	28	65	86
05-01-2012 1454	1	210	22.0	< 1	1	4	14	42	79
05-01-2012 1456	1	210	22.0	< 1	3	25	65	83	91
05-11-2012 1130	1	384	20.0	1	2	5	19	46	77
05-11-2012 1133	1	384	20.0	< 1	1	3	26	67	92
05-11-2012 1136	1	384	20.0	1	2	7	34	71	92
05-11-2012 1139	1	384	20.0	1	2	9	53	83	91
05-11-2012 1142	1	384	20.0	4	13	35	80	95	99
05-23-2012 1100	1	405	19.0	< 1	1	3	13	41	83
05-23-2012 1103	1	405	19.0	< 1	1	3	20	50	85
05-23-2012 1106	1	405	19.0	< 1	1	6	30	64	88
05-23-2012 1109	1	405	19.0	1	3	14	55	81	93
05-23-2012 1112	1	405	19.0	1	5	25	70	86	92
05-30-2012 1025	1	450	19.0	< 1	1	4	14	43	83
05-30-2012 1028	1	450	19.0	1	2	5	24	61	88
05-30-2012 1031	1	450	19.0	1	2	10	47	79	94
05-30-2012 1034	1	450	19.0	1	3	14	58	83	93
05-30-2012 1037	1	450	19.0	2	6	27	64	82	92

11254000 San Joaquin River near Mendota, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BED MATERIAL
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
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)
03-08-2012 1252	95	99	100
03-08-2012 1254	97	100	--
03-08-2012 1256	98	100	--
03-08-2012 1258	99	100	--
03-08-2012 1300	98	100	--
03-21-2012 1050	99	100	--
03-21-2012 1052	98	100	--
03-21-2012 1054	97	100	--
03-21-2012 1056	100	--	--
03-21-2012 1058	100	--	--
04-03-2012 1140	98	99	100
04-03-2012 1143	94	99	100
04-03-2012 1146	99	100	--
04-03-2012 1149	98	99	100
04-03-2012 1152	98	100	--
04-24-2012 1205	98	100	--
04-24-2012 1208	98	100	--
04-24-2012 1211	96	100	--
04-24-2012 1214	96	100	--
04-24-2012 1217	97	100	--
05-01-2012 1448	99	100	--
05-01-2012 1450	97	99	100
05-01-2012 1452	95	100	--
05-01-2012 1454	96	100	--
05-01-2012 1456	97	100	--
05-11-2012 1130	91	99	100
05-11-2012 1133	98	100	--
05-11-2012 1136	98	100	--
05-11-2012 1139	96	99	100
05-11-2012 1142	100	--	--
05-23-2012 1100	97	100	--
05-23-2012 1103	97	100	--
05-23-2012 1106	96	100	--
05-23-2012 1109	99	100	--
05-23-2012 1112	97	100	--
05-30-2012 1025	97	100	--
05-30-2012 1028	97	100	--
05-30-2012 1031	99	100	--
05-30-2012 1034	97	100	--
05-30-2012 1037	98	100	--

11254000 San Joaquin River near Mendota, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 1 of 3
[ft, feet; ft³/s, cubic feet per second; mm, millimeters; °C, degrees Celsius; --, no data; <, less than; A, average]

Sample date-time	Sampling method (82398)	Sampler type (84164)	Bag mesh size, bedload sampler, mm (30333)	Tether line used for collecting sample (yes=1) (04117)	Starting time, 24 hour clock, hour-minute (hhmm) (82073)	Ending time, 24 hour clock, hour-minute (hhmm) (82074)	Rest time on bed for bed load sample, seconds (04120)	Horizontal width of vertical, feet (04121)
03-21-2012 0927	Bedload (SEWI)	BL3X3 BLH-84	0.250	No	905	950	120	4.0
03-21-2012 1018	Bedload (SEWI)	BL3X3 BLH-84	.250	No	955	1040	120	4.0
04-03-2012 1005	Bedload (SEWI)	BL3X3 BLH-84	.250	No	940	1030	120	5.0
04-03-2012 1110	Bedload (SEWI)	BL3X3 BLH-84	.250	No	1045	1135	120	5.0
04-24-2012 1050	Bedload (SEWI)	BL3X3 BLH-84	.250	No	1040	1100	120	5.0
04-24-2012 1125	Bedload (SEWI)	BL3X3 BLH-84	.250	No	1115	1135	120	5.0

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 2 of 3
[ft, feet; ft³/s, cubic feet per second; mm, millimeters; °C, degrees Celsius; --, no data; <, less than; A, average]

Sample date-time	Composited samples in cross-sectional bedload measurement, number (04118)	Verticals in composite sample, number (04119)	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)	Bedload sediment discharge, daily average, per unit width of river, composite samples, tons per day per foot of width (04122)	Bedload sediment discharge, tons per day (80225)
03-21-2012 0927	2	20	20	2.00	78.5	64	13.6	< .01	A .45
03-21-2012 1018	2	20	20	2.00	78.5	64	13.6	.01	A .45
04-03-2012 1005	2	21	21	3.00	105	159	16.5	.03	A 3.1
04-03-2012 1110	2	21	21	3.00	105	159	16.5	.03	A 3.1
04-24-2012 1050	2	21	21	2.00	104	180	21.0	.01	A 1.3
04-24-2012 1125	2	21	21	2.00	104	180	21.0	.01	A 1.3

11254000 San Joaquin River near Mendota, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 3

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

Sample date-time	Bedload sediment, sieve diameter, percent smaller than 0.0625 mm (80226)	Bedload sediment, sieve diameter, percent smaller than 0.125 mm (80227)	Bedload sediment, sieve diameter, percent smaller than 0.25 mm (80228)	Bedload sediment, sieve diameter, percent smaller than 0.5 mm (80229)	Bedload sediment, sieve diameter, percent smaller than 1 mm (80230)	Bedload sediment, sieve diameter, percent smaller than 2 mm (80231)	Bedload sediment, sieve diameter, percent smaller than 4 mm (80232)	Bedload sediment, sieve diameter, percent smaller than 8 mm (80233)
03-21-2012 0927	< 1	1	2	7	42	91	100	--
03-21-2012 1018	< 1	< 1	1	10	58	94	100	--
04-03-2012 1005	< 1	< 1	6	50	79	96	100	--
04-03-2012 1110	< 1	< 1	4	51	80	94	99	100
04-24-2012 1050	< 1	< 1	1	26	61	87	96	100
04-24-2012 1125	< 1	< 1	1	24	55	86	97	100