Water-Data Report 2008

11381500 Mill Creek near Los Molinos, CA

Sacramento River Basin

LOCATION.--Lat 40°03′17″, long 122°01′23″ referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.6, T.25 N., R.1 W., Tehama County, CA, Hydrologic Unit 18020103, on right bank, 4.5 mi northeast of Los Molinos, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--131 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1909 to August 1913 (fragmentary), October 1928 to current year.

REVISED RECORDS.--WSP 1315-A: 1929 (instantaneous maximum discharge). WSP 1931: Drainage area. WSP 2131: 1938 (instantaneous maximum discharge).

GAGE.--Water-stage recorder. Elevation of gage is 385 ft above NGVD of 1929, from topographic map. Prior to September 1913, nonrecording gage at site 0.3 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharge, which is poor. No storage or large diversion upstream from station. See schematic diagram of upper Sacramento River Basin available from the California Water Science Center.

EXTREMES FOR PERIOD OF RECORD.--(Since water year 1929) Maximum discharge, 36,400 ft^3/s, Dec. 11, 1937, gage height, 23.4 ft, from floodmarks, from rating curve extended above 14,000 ft^3/s, on basis of step-backwater computation and slope-area measurement of peak flow; minimum daily, 52 ft^3/s, Dec. 12, 1932.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 4	1445	*3,430	*7.45
No other peak greater than base discharge			

11381500 Mill Creek near Los Molinos, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	98	109	104	143	492	302	230	321	238	140	100	91
2	99	107	102	143	335	283	222	316	238	137	99	91
3	98	106	106	150	388	253	226	311	239	134	99	91
4	98	98	266	1,260	300	238	237	337	237	131	98	91
5	103	98	183	608	247	227	235	348	227	129	97	90
6	106	98	149	387	225	216	241	399	227	128	98	90
7	103	98	195	279	213	206	250	443	220	124	99	89
8	102	96	141	287	206	201	246	416	213	121	98	89
9	100	96	127	346	199	198	232	396	212	120	97	89
10	112	97	121	325	207	203	231	384	219	118	96	90
11	124	125	117	303	208	220	243	397	209	116	96	89
12	113	116	114	275	215	248	271	397	202	115	95	89
13	112	111	116	251	225	285	316	357	196	115	94	89
14	109	114	114	223	212	323	373	368	194	114	94	89
15	109	111	116	206	194	282	364	441	195	112	92	88
16	110	109	117	192	184	248	319	523	193	111	92	88
17	113	109	126	181	180	225	313	535	188	110	93	88
18	113	107	241	174	180	219	340	541	184	109	93	89
19	117	109	212	169	181	235	365	511	179	109	93	90
20	197	e122	305	167	188	281	332	486	174	108	94	93
21	128	111	181	199	195	262	295	401	172	107	95	93
22	115	108	150	196	380	252	277	345	174	107	94	93
23	111	106	142	181	368	251	282	312	167	106	93	91
24	109	105	148	214	1,270	260	259	309	163	106	92	90
25	108	105	147	594	712	284	250	290	160	105	91	90
26	106	105	141	1,310	429	309	258	277	158	104	91	89
27	106	105	137	811	347	290	296	264	152	103	91	89
28	104	104	138	942	311	263	361	255	149	102	90	89
29	104	104	147	457	299	260	425	249	146	102	89	89
30	112	104	154	338	---	254	356	240	143	102	90	89
31	118	---	150	369	---	239	---	240	---	100	90	---
Total	3,457	3,193	4,707	11,680	9,090	7,817	8,645	11,409	5,768	3,545	2,923	2,695
Mean	112	106	152	377	313	252	288	368	192	114	94.3	89.8
Max	197	125	305	1,310	1,270	323	425	541	239	140	100	93
Min	98	96	102	143	180	198	222	240	143	100	89	88
Ac-ft	6,860	6,330	9,340	23,170	18,030	15,510	17,150	22,630	11,440	7,030	5,800	5,350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	124	195	357	448	480	452	435	445	329	180	119	107
Max	684	1,039	1,365	1,837	1,744	1,278	1,107	923	790	510	230	168
(WY)	(1963)	(1974)	(1965)	(1970)	(1986)	(1983)	(2006)	(1938)	(1998)	(1998)	(1983)	(1983)
Min	76.0	75.1	87.4	96.8	98.6	107	112	122	94.9	67.8	61.4	65.4
(WY)	(1930)	(1930)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1931)	(1931)	(1931)	(1931)

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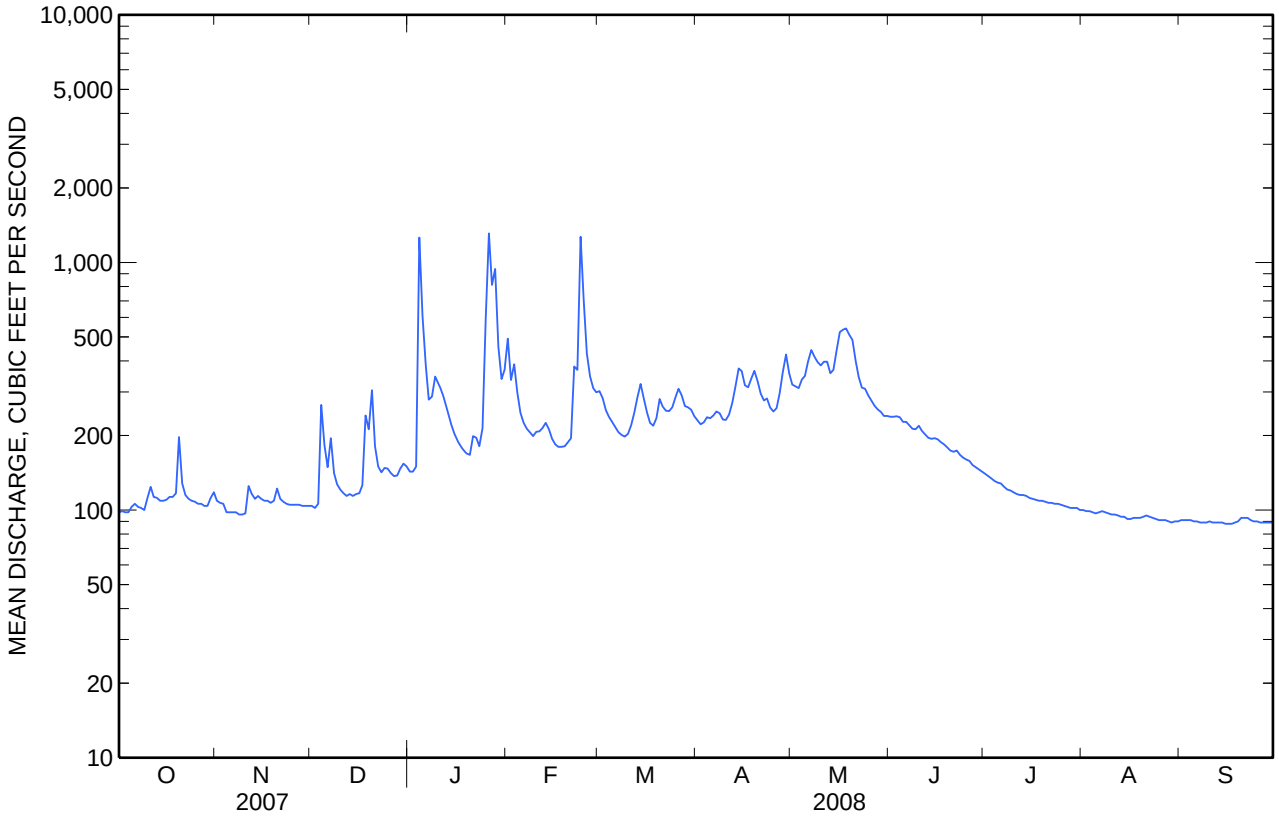
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1929 - 2008	
Annual total	67,532		74,929			
Annual mean	185		205		305	
Highest annual mean					576	1974
Lowest annual mean					93.6	1977
Highest daily mean	2,370	Feb 10	1,310	Jan 26	14,400	Jan 1, 1997
Lowest daily mean	89	Sep 11	88	Sep 15	52	Dec 12, 1932
Annual seven-day minimum	90	Sep 9	89	Sep 11	60	Jul 28, 1931
Maximum peak flow			3,430	Jan 4	36,400	Dec 11, 1937
Maximum peak stage			7.45	Jan 4	23.40	Dec 11, 1937
Annual runoff (ac-ft)	133,900		148,600		221,000	
10 percent exceeds	286		358		583	
50 percent exceeds	145		156		182	
90 percent exceeds	95		92		92	



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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--October 1998 to current year.
WATER TEMPERATURE: October 1998 to current year.

INSTRUMENTATION.--Temperature recorder since Oct. 5, 1998.

REMARKS.--Records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum recorded, 27.1°C, July 6, 2007; minimum recorded, 0.5°C, Dec. 23, 1998.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum recorded, 25.6°C, Aug. 15; minimum recorded, 3.2°C, Dec. 27.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	October		November		December		January		February		March	
1	15.4	13.1	13.5	12.4	5.1	4.2	4.8	4.1	5.8	4.8	10.2	9.0
2	15.6	13.5	12.9	11.6	5.8	4.3	5.1	4.3	5.8	5.2	9.0	7.3
3	15.8	13.7	12.6	11.2	8.1	5.8	5.9	4.7	6.2	5.3	8.6	7.2
4	15.0	13.4	12.1	11.0	9.9	8.1	8.1	5.9	5.9	4.4	9.2	8.2
5	13.9	12.3	11.8	10.7	9.7	8.9	7.3	6.2	5.1	4.0	8.8	7.7
6	12.6	11.0	11.6	10.3	9.6	9.0	6.3	5.7	6.3	5.1	8.4	7.7
7	13.1	10.7	11.4	10.2	9.1	7.8	6.1	5.7	7.1	5.9	8.6	7.7
8	13.9	11.6	11.7	10.6	7.8	5.4	6.1	5.8	7.3	6.5	9.9	8.2
9	13.7	12.1	11.7	10.8	5.4	4.7	6.4	5.9	7.6	6.4	10.4	8.7
10	14.1	12.8	11.2	10.7	5.4	4.6	7.3	6.4	8.2	7.2	10.9	9.7
11	13.1	12.1	11.5	10.7	4.9	4.1	8.0	7.3	8.6	7.6	11.7	10.2
12	12.8	11.7	10.8	10.1	5.2	4.2	8.3	7.9	8.9	7.9	11.2	10.7
13	13.3	11.5	11.7	10.4	5.2	4.6	7.9	6.7	8.6	7.1	11.5	10.2
14	13.9	11.9	12.1	10.9	5.0	4.1	7.0	6.3	7.1	5.5	10.2	8.1
15	13.8	12.6	12.6	11.4	6.1	4.8	6.8	5.9	6.8	5.3	8.7	7.7
16	13.2	12.5	12.9	11.9	6.9	6.0	5.9	4.7	7.7	6.4	7.8	6.0
17	13.2	12.0	13.0	12.3	7.4	6.7	4.9	4.1	8.1	6.6	8.8	7.1
18	12.6	12.2	12.4	11.9	7.8	7.3	5.4	4.3	8.4	6.9	10.6	8.7
19	13.3	12.2	12.1	11.1	7.9	7.3	6.1	4.9	8.1	7.3	10.6	9.4
20	13.2	11.2	---	---	7.8	6.4	5.7	5.2	9.1	7.6	9.8	8.4
21	11.2	10.2	8.6	7.6	6.4	4.3	5.2	4.6	8.1	7.3	9.7	8.3
22	12.1	10.1	7.6	6.7	4.7	3.9	4.7	4.2	8.1	7.4	10.6	8.7
23	13.1	11.2	6.8	6.0	6.4	4.7	4.9	4.1	7.6	6.7	10.9	9.6
24	13.9	12.1	6.7	5.8	6.9	6.3	5.1	4.4	7.9	7.0	11.1	10.0
25	13.8	12.4	7.7	6.4	6.3	4.9	6.5	5.1	8.7	7.3	11.8	10.3
26	13.7	12.3	7.7	6.7	4.9	3.9	7.8	6.4	9.2	7.3	11.4	9.7
27	13.7	12.2	8.3	7.2	3.9	3.2	8.2	7.3	9.2	8.4	9.8	7.6
28	13.7	12.3	7.6	6.9	4.2	3.6	7.3	5.0	10.1	8.6	8.4	7.6
29	14.0	12.7	7.1	6.4	4.6	4.2	5.9	5.3	10.1	9.3	9.6	7.9
30	14.6	13.3	6.4	5.1	5.4	4.6	5.3	4.5	---	---	9.8	8.3
31	13.9	12.9	---	---	4.8	4.3	5.7	5.1	---	---	9.3	7.9
Month	15.8	10.1	---	---	9.9	3.2	8.3	4.1	10.1	4.0	11.8	6.0

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	April		May		June		July		August		September	
1	9.5	8.6	11.9	8.8	17.1	15.6	22.8	19.8	23.8	21.1	20.2	17.8
2	10.7	8.9	12.5	10.2	17.3	15.9	23.0	19.9	24.0	21.3	19.8	17.2
3	11.4	9.8	13.7	10.6	17.8	16.3	23.2	20.3	23.4	21.1	20.5	17.7
4	11.2	10.3	14.1	11.7	17.3	15.5	23.4	20.5	23.2	20.5	21.2	18.3
5	10.8	9.5	14.7	11.1	16.8	14.9	22.9	20.5	23.0	20.4	21.7	18.9
6	11.3	10.2	15.2	12.6	16.8	15.6	23.4	20.2	23.7	20.9	21.9	19.4
7	11.2	9.7	14.2	12.6	16.7	15.3	24.3	21.0	24.2	21.8	22.1	19.8
8	10.9	9.9	13.8	11.4	17.5	15.5	23.4	21.7	23.9	21.8	21.8	19.7
9	10.4	8.7	14.0	11.4	18.8	16.8	23.3	20.9	23.1	20.9	21.2	18.7
10	11.4	9.6	14.4	11.7	18.6	17.6	23.5	21.1	23.0	20.3	20.2	17.9
11	12.9	10.7	14.8	12.3	17.7	16.3	24.2	21.5	23.3	20.5	20.0	17.8
12	13.6	11.7	13.8	11.7	18.1	16.1	23.7	21.8	24.1	21.0	20.0	17.7
13	13.8	11.6	14.6	11.3	19.6	17.4	23.9	21.5	24.9	21.9	20.0	17.8
14	13.6	11.3	16.1	12.8	20.1	18.6	25.0	22.1	25.2	22.5	20.3	18.0
15	11.3	8.9	16.9	13.9	20.6	18.9	25.2	22.5	25.6	22.9	20.3	18.2
16	11.1	8.2	16.6	15.4	20.5	18.9	24.8	22.4	25.5	23.3	20.3	18.3
17	12.6	9.7	16.9	15.3	20.9	18.9	24.3	21.9	25.3	23.1	20.0	18.3
18	13.2	10.6	16.8	15.7	20.5	18.3	23.9	21.4	24.3	22.3	19.4	17.3
19	12.6	10.4	16.4	15.5	20.2	18.3	23.9	21.2	23.1	21.2	18.6	16.6
20	10.5	7.9	16.0	13.8	20.9	18.2	24.0	21.4	22.8	20.5	18.2	16.2
21	9.6	7.3	14.2	12.2	21.5	19.4	23.1	20.8	23.9	21.0	18.4	16.4
22	9.6	8.3	14.2	11.7	21.9	19.6	22.4	20.3	23.9	21.6	18.2	16.3
23	10.2	8.5	13.7	11.7	21.1	19.3	22.9	20.0	24.1	21.6	17.7	15.6
24	10.2	7.9	13.2	11.8	20.4	18.7	23.5	20.5	24.1	21.8	17.4	15.3
25	12.2	9.6	13.4	10.8	20.0	18.4	23.2	20.9	23.9	21.7	17.4	15.4
26	14.6	11.6	13.7	12.4	20.8	18.4	23.4	20.8	23.0	20.7	17.8	15.4
27	15.5	13.1	15.2	12.1	22.1	19.2	23.6	20.8	23.0	20.8	18.1	15.8
28	15.2	12.7	15.6	14.0	22.8	20.4	23.5	20.9	23.3	20.8	18.2	16.0
29	14.1	10.6	15.2	13.0	23.4	20.9	23.5	20.8	23.6	21.2	18.4	16.5
30	10.7	8.8	15.8	13.5	22.7	20.5	23.6	21.0	23.4	21.4	18.8	16.8
31	---	---	17.1	15.3	---	---	23.8	21.0	22.8	20.2	---	---
Month	15.5	7.3	17.1	8.8	23.4	14.9	25.2	19.8	25.6	20.2	22.1	15.3

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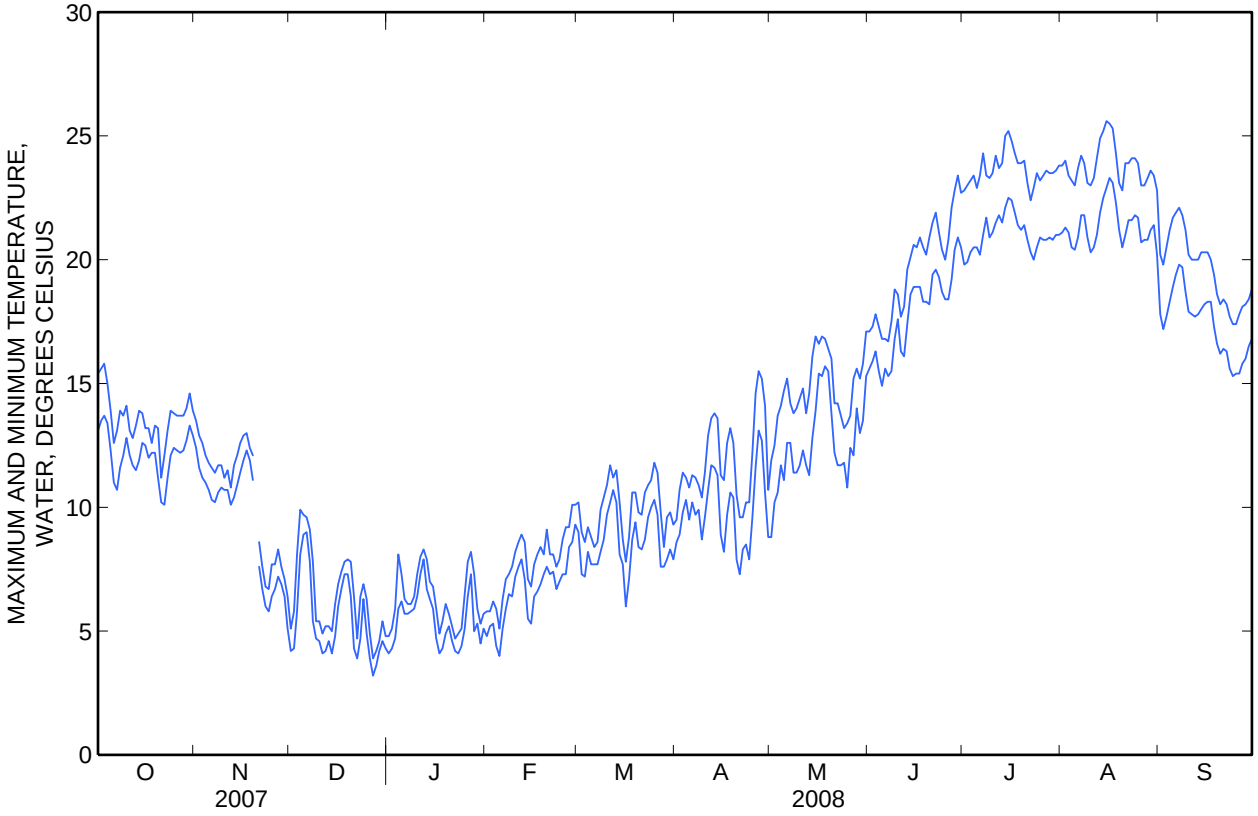

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CROSS SECTION ANALYSES
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Date	Time	DepthTo bottom at sample loca-tion, feet (81903)	Sam-pling depth, feet (00003)	Stream width, feet (00004)	Temper-ature, water, deg C (00010)	Loca-tion in X-sect. looking dwnstrm ft from l bank (00009)
Jun						
19...	1251	.40	.16	53.0	19.7	6.65
19...	1252	.80	.32	53.0	19.7	12.0
19...	1253	1.90	1.52	53.0	19.6	17.2
19...	1254	1.90	.38	53.0	19.6	17.2
19...	1255	1.90	1.52	53.0	19.6	22.6
19...	1256	1.90	.38	53.0	19.6	22.6
19...	1257	2.00	.40	53.0	19.6	27.8
19...	1258	2.00	1.60	53.0	19.6	27.8
19...	1259	1.70	1.36	53.0	19.6	33.2
19...	1300	1.70	.34	53.0	19.6	33.2
19...	1301	1.80	.36	53.0	19.6	38.4
19...	1302	1.80	1.44	53.0	19.6	38.4
19...	1303	1.50	.60	53.0	19.6	43.8
19...	1304	1.48	.59	53.0	19.6	49.0
19...	1305	1.00	.40	53.0	19.6	54.4
Aug						
14...	1036	.20	.10	50.0	23.4	2.50
14...	1037	.26	.13	50.0	23.0	7.50
14...	1038	.72	.36	50.0	22.9	12.5
14...	1039	1.20	.60	50.0	22.9	17.5
14...	1040	.70	.35	50.0	22.9	22.5
14...	1041	.85	.42	50.0	22.9	27.5
14...	1042	1.00	.50	50.0	22.9	32.5
14...	1043	.82	.41	50.0	22.9	37.5
14...	1044	1.12	.56	50.0	22.9	42.5
14...	1045	.50	.25	50.0	22.9	47.5

Note: Instantaneous discharges at the mean time of cross-sectional measurements: June 19, 180 ft^3/s; Aug. 14, 93.3 ft^3/s.