

Water-Data Report CA-2005

11530500 KLAMATH RIVER NEAR KLAMATH, CA

Klamath River Basin

LOCATION.--Lat 41°30'40", long 123°58'42" referenced to North American Datum of 1927, in SE ¼ SE ¼ sec.18, T.13 N., R.2 E., Del Norte County, Hydrologic Unit 18010209, on right bank, 2.8 mi upstream from Turwar Creek, and 3.3 mi southeast of Klamath.

DRAINAGE AREA.--12,100 mi², approximately (not including Lost River or Lower Klamath Lake Basins).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to December 1926 (published as "near Requa"), October 1950 to September 1994, October 1995 to September 1997 (stage only), and October 1997 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1285: 1951(P). WSP 1445: 1918-20. WDR CA-81-2: 1980.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929. Prior to June 1926, nonrecording gage at site 2.6 mi upstream at different datum. Oct. 1, 1950, to Oct. 2, 1975, water-stage recorder at site 2.6 mi upstream at datum 5.60 ft above NGVD of 1929. Oct. 2, 1975, to Sept. 30, 2003, water-stage recorder at site 2.6 mi downstream.

REMARKS.--Records fair. Medium and low flows considerably regulated by reservoirs and powerplants upstream from station and by transbasin diversion (from Trinity River) to Judge Francis Carr Powerplant (station 11525430) since April 1963. Large diversions for irrigation upstream from station. See schematic diagram of Klamath River and Trinity River Basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 557,000 ft³/s, Dec. 23, 1964, gage height, 55.3 ft, current datum, from floodmarks, from rating curve extended above 230,000 ft³/s, on basis of flood-routing study; minimum daily, 1,310 ft³/s, Sept. 4, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1861 reached a stage of 60 ft, site and datum then in use, discharge 450,000 ft³/s; flood of February 1881 reached a discharge of 360,000 ft³/s; flood of February 1890 reached a stage of 63 ft, site and datum then in use, discharge 425,000 ft³/s. Maximum discharges for 1927 and 1932-50, determined from upstream stations, are published in WSP 1686, Part 11, Volume 2.

11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued

**DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2,590	4,340	3,740	15,900	18,900	13,200	29,800	21,800	19,600	10,100	4,320	3,370
2	2,610	4,120	3,680	15,500	17,100	13,400	26,500	21,500	18,500	9,770	4,280	3,020
3	2,590	4,370	3,630	13,300	16,000	13,400	25,100	20,500	17,200	9,260	4,260	3,160
4	2,720	4,900	3,580	11,700	15,400	12,800	25,900	21,100	16,300	8,930	4,220	3,160
5	2,690	4,540	3,550	10,400	15,100	12,200	23,000	24,600	15,600	8,670	4,160	3,160
6	2,600	4,210	3,770	9,570	14,500	11,600	21,100	29,800	15,300	8,530	4,090	3,150
7	2,580	4,010	9,170	9,700	14,000	11,400	23,400	31,800	14,900	8,420	4,030	3,150
8	2,620	3,870	42,100	11,700	13,000	11,400	32,500	34,500	14,100	8,140	3,980	3,150
9	2,840	3,770	88,400	14,100	12,200	11,600	42,800	44,500	14,500	7,910	3,930	3,170
10	2,930	3,780	53,700	13,500	11,500	11,800	36,000	45,800	14,400	7,780	3,870	3,160
11	2,800	3,830	32,600	12,600	11,000	11,800	33,000	41,700	13,800	7,390	3,780	3,190
12	2,720	3,840	22,400	12,100	10,600	11,800	32,200	38,300	13,200	7,040	3,740	3,220
13	2,690	3,870	17,800	11,100	10,400	11,900	30,000	36,300	12,700	6,660	3,690	3,190
14	2,670	3,810	16,200	10,300	11,600	11,400	27,700	35,400	12,300	6,410	3,640	3,120
15	2,660	3,730	15,000	9,770	12,500	10,500	24,900	35,100	12,000	6,230	3,580	3,110
16	2,650	3,680	12,800	9,640	11,900	9,800	23,500	38,100	11,700	6,080	3,540	3,100
17	2,760	3,670	11,100	10,600	11,500	9,310	24,600	36,700	13,400	5,910	3,490	3,170
18	3,230	3,650	9,900	12,700	11,300	8,890	24,300	43,600	17,400	5,690	3,460	3,210
19	3,920	3,610	9,160	15,400	11,300	9,440	22,300	71,500	21,400	5,490	3,420	3,190
20	6,380	3,550	8,620	17,800	11,900	17,300	20,600	58,400	19,400	5,310	3,400	3,160
21	5,160	3,500	8,030	18,900	13,600	26,300	19,300	48,700	16,200	5,110	3,350	3,130
22	4,010	3,460	7,510	18,500	13,200	29,800	18,800	42,800	14,600	5,030	3,320	3,090
23	5,840	3,410	7,080	18,000	12,500	33,500	19,800	39,200	13,600	4,940	3,280	3,000
24	8,600	3,390	6,710	18,100	11,800	26,400	21,400	35,900	13,000	4,790	3,230	2,980
25	6,070	3,470	6,460	18,800	11,300	21,400	20,400	32,800	12,400	4,690	3,200	3,000
26	6,770	3,810	6,780	21,700	10,900	18,500	19,500	30,700	11,900	4,610	3,170	3,020
27	6,770	4,120	7,510	29,100	10,600	18,400	19,400	28,700	11,500	4,550	3,100	3,020
28	5,540	4,110	8,530	27,800	11,600	37,500	21,100	27,400	11,200	4,490	3,070	3,040
29	4,850	3,950	12,300	31,200	---	46,000	21,700	25,200	10,800	4,430	3,020	3,040
30	4,600	3,820	12,600	25,800	---	42,500	21,500	22,500	10,400	4,390	3,450	3,050
31	4,510	---	15,000	21,500	---	35,000	---	20,700	---	4,360	4,110	---
Total	121,970	116,190	469,410	496,780	357,200	570,240	752,100	1,085,600	433,300	201,110	113,180	93,680
Mean	3,935	3,873	15,140	16,030	12,760	18,390	25,070	35,020	14,440	6,487	3,651	3,123
Max	8,600	4,900	88,400	31,200	18,900	46,000	42,800	71,500	21,400	10,100	4,320	3,370
Min	2,580	3,390	3,550	9,570	10,400	8,890	18,800	20,500	10,400	4,360	3,020	2,980
Ac-ft	241,900	230,500	931,100	985,400	708,500	1,131,000	1,492,000	2,153,000	859,500	398,900	224,500	185,800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1962, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,987	11,130	19,480	27,730	37,540	27,340	27,710	23,170	13,830	5,921	3,383	3,339
Max	18,950	30,460	72,580	83,550	123,200	53,280	48,860	37,250	29,580	12,370	5,871	5,107
(WY)	(1951)	(1921)	(1956)	(1953)	(1958)	(1957)	(1952)	(1952)	(1953)	(1953)	(1953)	(1912)
Min	2,700	3,502	4,138	7,454	6,263	6,916	6,270	3,975	2,106	1,731	1,567	1,860
(WY)	(1920)	(1960)	(1960)	(1924)	(1920)	(1924)	(1924)	(1924)	(1924)	(1924)	(1918)	(1918)

11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued

SUMMARY STATISTICS

	Water Years 1911 - 1962	
Annual mean	17,010	
Highest annual mean	33,360	1958
Lowest annual mean	5,156	1924
Highest daily mean	378,000	Dec 22, 1955
Lowest daily mean	1,340	Jul 31, 1924
Annual seven-day minimum	1,440	Jul 30, 1924
Maximum peak flow	^a 425,000	Dec 22, 1955
Maximum peak stage	^b 49.7	Dec 22, 1955
Annual runoff (ac-ft)	12,320,000	
10 percent exceeds	37,300	
50 percent exceeds	10,200	
90 percent exceeds	2,860	

^a From rating curve extended above 140,000 ft³/s on basis of flood-routing study.

^b From floodmarks, site and datum then in use.

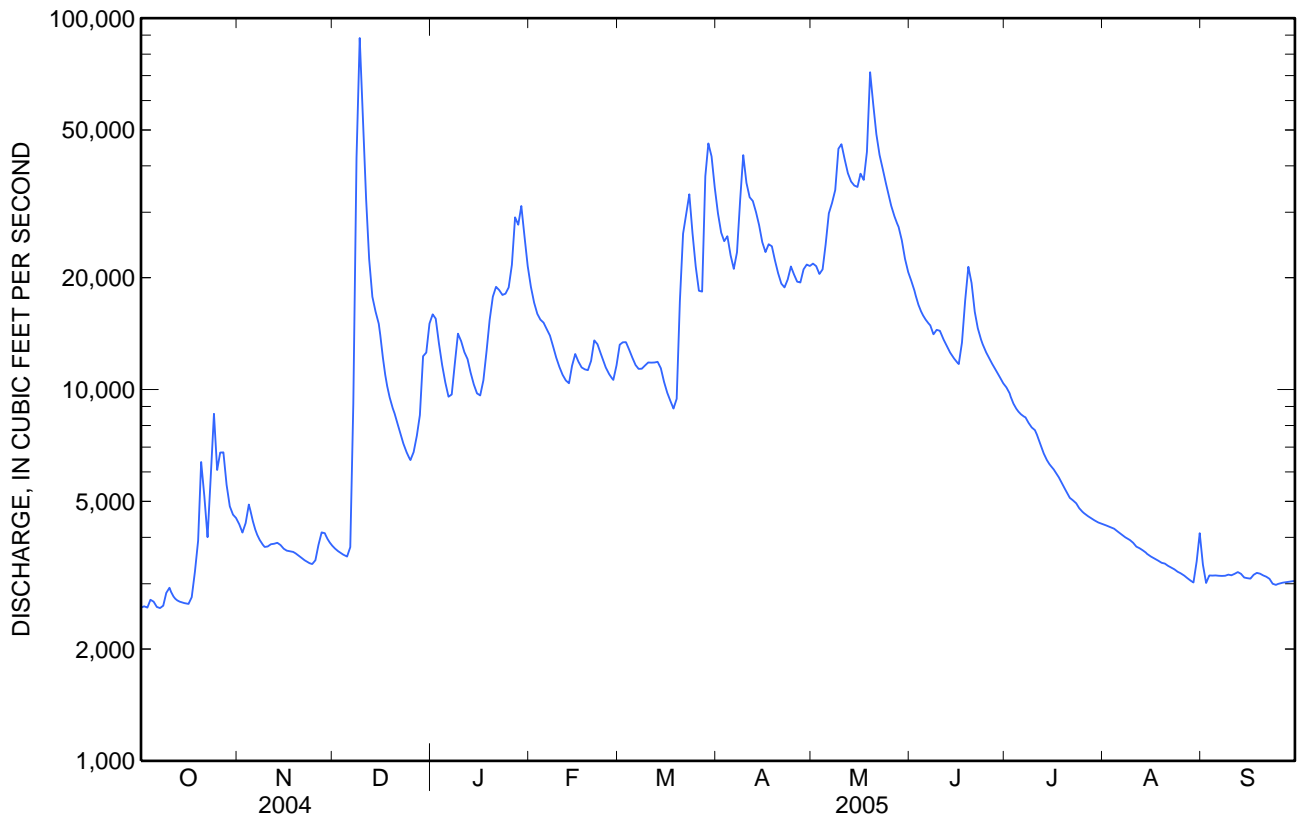
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2005, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,730	13,710	25,700	33,130	32,850	33,160	25,700	19,830	11,240	4,712	3,138	3,216
Max	17,830	55,620	87,770	97,760	102,700	82,410	60,400	40,080	30,060	12,220	6,599	5,923
(WY)	(1963)	(1974)	(1965)	(1970)	(1986)	(1983)	(1974)	(1983)	(1998)	(1983)	(1983)	(1983)
Min	2,134	3,236	3,942	4,212	4,231	6,954	5,448	5,638	3,630	1,782	1,441	1,977
(WY)	(1995)	(1988)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1991)

SUMMARY STATISTICS

	Calendar Year 2004	Water Year 2005	Water Years 1963 - 2005
Annual total	5,382,370	4,803,600	
Annual mean	14,710	13,160	17,360
Highest annual mean			36,100
Lowest annual mean			4,036
Highest daily mean	174,000	Feb 18	88,400
Lowest daily mean	2,440	Aug 22	2,580
Annual seven-day minimum	2,500	Aug 12	2,630
Maximum peak flow			100,000
Maximum peak stage			26.17
Annual runoff (ac-ft)	10,680,000	9,528,000	12,580,000
10 percent exceeds	30,300	29,900	39,000
50 percent exceeds	8,760	10,400	9,560
90 percent exceeds	2,730	3,150	2,840

11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued



11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-95, 2002 to current year.

CHEMICAL DATA: Water years 1951-95, 2002-03 (seasonal only).

BIOLOGICAL DATA: Water years 1975-81.

DISSOLVED OXYGEN: Water years 2002-04 (seasonal only).

pH: Water years 2002-04 (seasonal only).

SPECIFIC CONDUCTANCE: Water years 1975-81, 2002-04 (seasonal only).

WATER TEMPERATURE: Water years 1966-81, 2002-03 (seasonal only), 2004 to current year.

SEDIMENT DATA: Water years 1955-56, 1975-95.

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: July 2002 to November 2003 (seasonal only).

pH: July 2002 to November 2003 (seasonal only).

SPECIFIC CONDUCTANCE: October 1974 to September 1981 (once daily), July 2002 to November 2003 (seasonal only).

WATER TEMPERATURE: November 1965 to September 1981 (daily), July 2002 to September 2003 (seasonal only), October 2003 to current year (daily).

INSTRUMENTATION.--Temperature recorder since October 2003. Electronic data logger with 60 minute interval.

REMARKS.--Water temperature records rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: Maximum recorded, 13.6 mg/L, Nov. 24, 26, 2003; minimum recorded, 6.7 mg/L, July 12, Aug. 29, Sept. 14, 2002.

pH: Maximum recorded, 9.0 standard units, Nov. 5, 11, 2003; minimum recorded, 7.7 standard units, June 27-30, 2003.

SPECIFIC CONDUCTANCE: Maximum recorded, 211 microsiemens, Oct. 23, 25, 2002; minimum recorded, 87 microsiemens, June 9, 2003.

WATER TEMPERATURE: Maximum recorded, 27.0°C, Sept. 12, 1979; minimum recorded, 2.5°C, Feb. 2, 1972.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 24.9°C, Aug. 8; minimum recorded, 5.0°C, Jan. 8, 9.

11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	October		November		December		January		February		March	
1	18.3	17.4	12.4	11.4	7.7	7.0	6.3	6.1	7.4	6.8	9.5	9.1
2	18.6	17.7	12.1	11.1	7.2	6.4	6.5	6.2	7.3	6.8	9.9	8.9
3	18.6	17.7	11.8	11.2	7.0	6.1	6.5	6.1	7.2	6.7	9.9	9.2
4	18.6	17.8	11.4	10.4	6.5	5.8	6.4	5.9	7.3	6.8	10.0	9.3
5	18.6	17.8	10.9	9.9	6.5	6.2	6.3	5.9	7.6	7.2	10.8	9.7
6	18.5	18.0	10.7	9.7	6.4	6.1	6.3	5.9	7.3	6.9	11.3	10.1
7	19.1	18.4	10.7	9.6	7.0	6.4	6.1	5.5	7.4	6.8	11.4	10.3
8	18.6	17.8	10.6	9.9	8.6	7.0	5.5	5.0	7.4	6.8	11.5	10.6
9	18.1	17.4	10.9	10.2	8.6	8.2	5.5	5.0	7.3	6.7	11.8	10.7
10	17.8	16.8	11.3	10.6	8.9	8.5	5.9	5.4	7.3	6.5	11.9	10.8
11	17.5	16.3	11.8	10.9	9.2	8.9	6.3	5.7	7.3	6.5	12.0	10.8
12	16.9	15.9	11.8	10.9	9.2	8.9	6.4	6.0	7.1	6.6	12.1	10.9
13	16.7	16.1	12.2	11.4	9.3	9.1	6.1	5.8	7.3	6.9	12.2	11.2
14	16.9	16.2	12.0	11.3	9.7	9.2	6.2	5.7	8.0	7.2	11.8	10.6
15	16.8	16.1	11.8	11.3	9.5	8.7	6.3	5.9	8.3	7.6	11.2	10.2
16	16.6	15.6	12.1	11.4	8.7	8.0	7.1	6.2	8.4	7.9	10.3	9.7
17	16.1	15.6	12.0	11.3	8.0	7.6	7.2	6.7	9.0	8.2	10.8	9.5
18	15.6	15.0	11.8	11.1	7.7	7.3	7.5	7.1	9.0	8.4	10.8	9.9
19	15.0	14.0	11.7	10.9	7.6	7.1	7.2	6.8	9.0	8.5	10.6	10.2
20	14.2	13.2	11.1	9.9	7.7	7.2	7.0	6.7	9.4	8.8	10.2	9.4
21	14.2	12.8	10.1	9.0	7.4	7.0	7.0	6.4	9.5	8.9	9.4	8.9
22	14.0	13.4	9.3	8.3	7.0	6.6	6.9	6.5	9.6	8.7	9.1	8.7
23	13.9	13.1	8.7	8.0	6.7	6.1	7.0	6.6	9.8	8.8	9.6	9.1
24	13.4	12.7	8.7	8.0	6.4	5.8	7.1	6.5	9.8	9.2	9.8	9.2
25	12.8	12.1	8.9	8.5	5.9	5.4	7.0	6.8	9.7	9.3	9.5	9.0
26	12.3	11.7	9.2	8.7	6.1	5.8	7.8	7.0	10.2	9.3	9.7	9.2
27	12.1	11.2	9.3	8.8	6.1	5.9	7.9	7.7	9.8	9.4	10.1	9.7
28	12.2	11.1	9.0	8.3	6.5	6.1	7.8	7.7	9.8	9.3	9.9	9.2
29	12.7	11.8	8.5	7.5	6.8	6.2	7.7	7.4	---	---	9.3	9.0
30	12.7	12.0	7.8	7.2	7.0	6.8	7.5	7.1	---	---	9.3	8.5
31	12.8	11.8	---	---	6.9	6.3	7.3	7.0	---	---	9.8	8.8
Month	19.1	11.1	12.4	7.2	9.7	5.4	7.9	5.0	10.2	6.5	12.2	8.5

11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Day	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
	April		May		June		July		August		September	
1	10.1	9.5	13.3	12.5	16.0	15.0	20.9	19.1	23.7	22.1	21.8	20.1
2	10.2	10.1	13.7	12.6	15.9	15.0	20.6	19.0	24.3	21.9	21.1	19.9
3	10.1	9.4	13.3	12.7	16.0	14.9	20.3	18.6	24.6	22.3	21.1	19.7
4	9.8	9.0	13.0	12.7	16.1	15.1	20.3	18.5	24.6	22.5	20.7	19.4
5	10.5	9.3	13.0	12.4	15.8	15.0	20.4	18.7	24.8	22.5	20.8	19.3
6	10.9	10.0	12.5	12.0	15.0	13.7	19.8	19.2	24.8	22.6	20.6	19.5
7	11.1	10.5	12.7	12.0	13.8	13.2	20.9	19.5	24.8	22.7	20.8	19.4
8	10.5	8.8	12.6	12.2	13.8	13.2	20.5	19.2	24.9	22.8	20.6	19.0
9	8.9	8.2	12.2	10.8	14.3	13.2	20.3	19.2	24.7	22.8	19.6	18.8
10	9.8	8.9	10.9	10.6	15.8	14.3	20.3	19.5	24.4	22.7	19.4	18.2
11	10.5	9.8	11.5	10.3	16.4	15.5	21.6	19.6	23.9	22.0	19.4	18.2
12	10.4	9.7	12.9	11.5	17.2	15.6	20.9	19.9	23.7	22.1	19.3	18.0
13	9.7	8.6	13.3	12.6	17.4	15.8	21.8	19.7	23.4	21.7	19.1	18.0
14	9.4	8.2	13.6	12.6	16.5	15.9	22.7	20.3	23.2	21.5	19.0	17.8
15	10.3	9.0	13.6	13.2	17.3	15.9	23.3	21.1	23.0	21.5	19.1	17.9
16	10.4	10.1	13.2	12.2	16.4	15.8	23.6	21.4	22.9	21.4	19.1	18.0
17	10.8	10.2	12.2	11.3	15.8	14.3	24.4	22.0	23.2	21.5	18.4	17.9
18	10.8	10.0	11.3	10.7	14.3	13.2	24.5	22.3	23.2	21.9	18.9	17.7
19	10.9	9.9	11.0	10.7	13.3	12.7	24.3	22.3	23.1	21.5	19.0	17.7
20	11.5	10.3	11.4	10.9	14.6	12.9	24.4	22.2	22.7	21.4	19.2	17.7
21	12.1	11.0	12.0	11.2	14.9	14.6	23.8	22.3	22.7	21.4	19.1	17.9
22	12.5	11.4	12.9	11.9	16.8	14.7	22.6	21.5	23.0	21.4	18.8	17.8
23	12.3	11.9	13.6	12.7	17.9	16.1	23.8	21.4	23.1	21.6	18.7	17.7
24	12.3	11.5	13.8	12.8	18.5	17.0	23.9	21.8	23.0	21.7	18.3	16.9
25	12.7	11.3	14.7	13.3	18.5	17.4	23.9	21.6	22.7	21.4	17.9	16.5
26	13.1	12.2	15.7	14.3	17.9	17.4	24.3	21.8	22.3	21.3	17.5	16.2
27	13.5	12.5	16.1	15.1	18.1	17.5	23.9	22.1	22.3	21.0	16.8	15.8
28	12.9	12.3	15.7	15.1	19.8	17.8	24.1	21.7	22.1	20.9	16.7	15.6
29	12.4	11.9	15.3	14.5	20.3	18.4	24.3	22.2	22.1	21.0	17.1	15.8
30	12.9	12.2	14.9	13.9	20.8	18.8	24.3	22.2	22.0	20.3	17.6	16.2
31	---	---	15.5	14.5	---	---	24.1	22.2	22.0	20.0	---	---
Month	13.5	8.2	16.1	10.3	20.8	12.7	24.5	18.5	24.9	20.0	21.8	15.6
Year	24.9	5.0										

11530500 KLAMATH RIVER NEAR KLAMATH, CA—Continued

CROSS SECTION ANALYSES
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	DepthTo bottom at sample loca- tion, feet (81903)	Temper- ature, water, deg C (00010)	Loca- tion in X-sect. looking dwnstrm ft from l bank (00009)
Jan				
11...*	1345	5.45	6.1	150
11...*	1346	7.91	6.1	250
11...*	1348	10.4	6.1	380
11...*	1349	6.27	6.1	480
11...*	1350	5.45	6.1	525
Aug				
09...*	1405	3.06	23.8	150
09...*	1406	4.70	23.8	219
09...*	1407	5.52	23.8	286
09...*	1408	8.80	23.8	352
09...*	1409	6.34	23.8	418

* Instantaneous discharge at time of cross-sectional measurements: Jan. 11, 12,600 ft³/s; Aug. 9, 3,920 ft³/s.